THE CANADA LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

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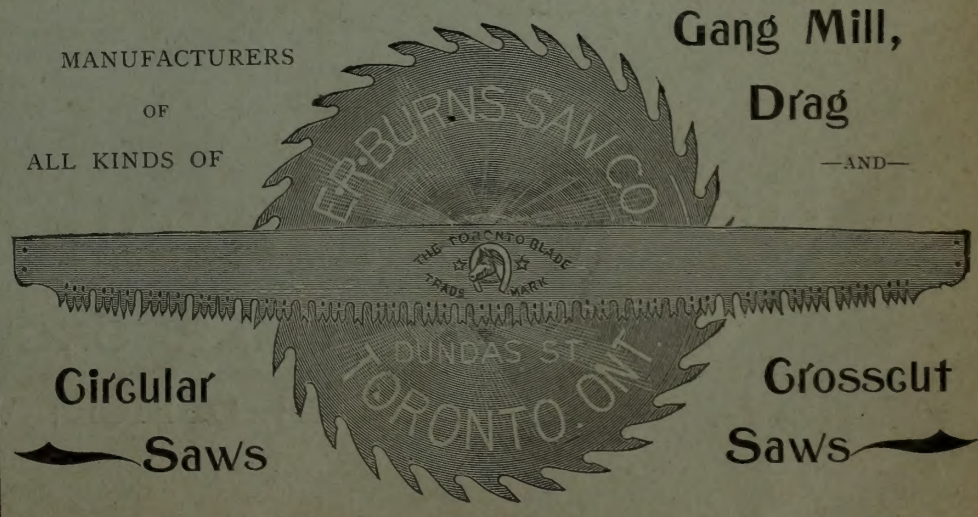

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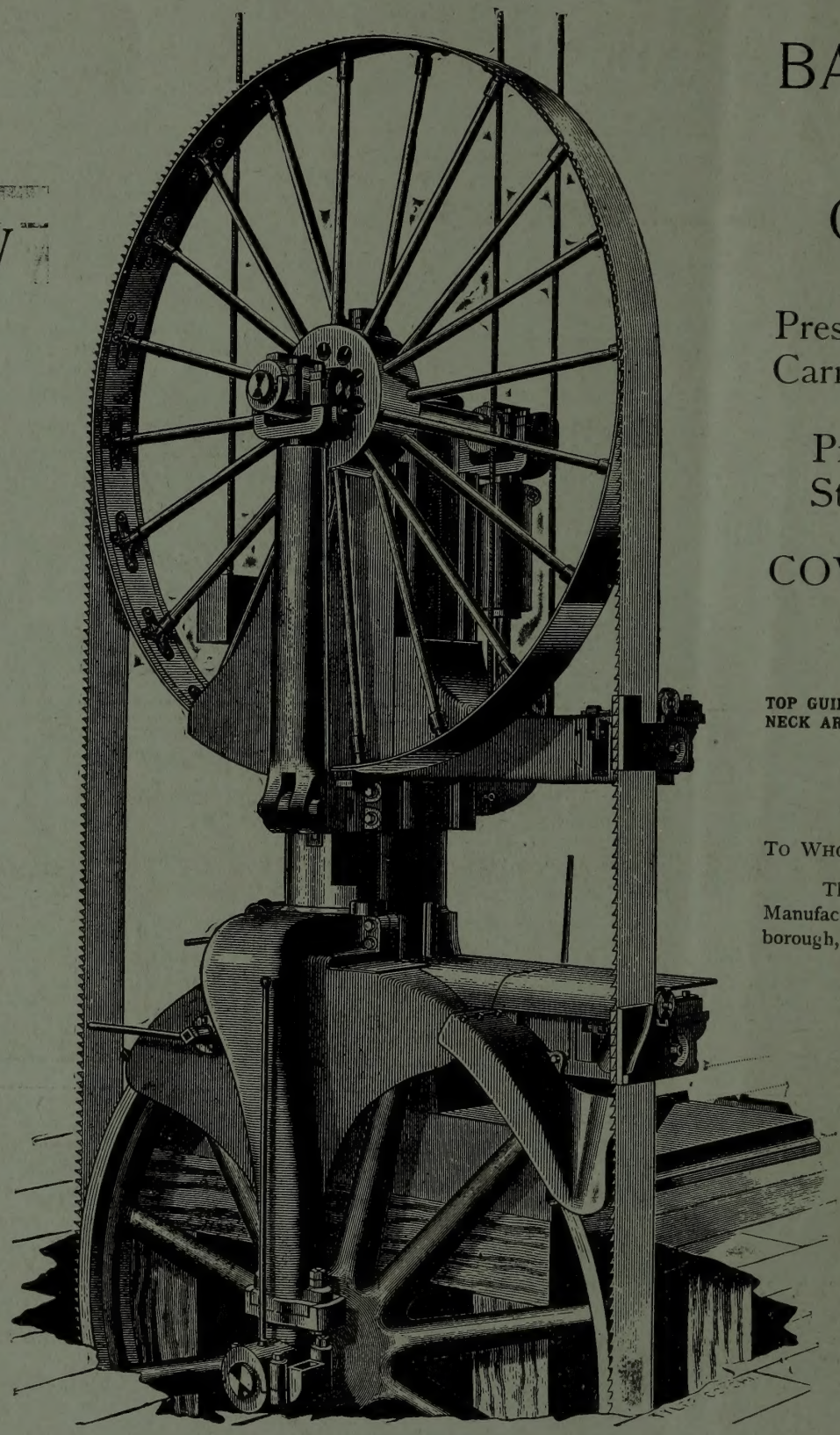

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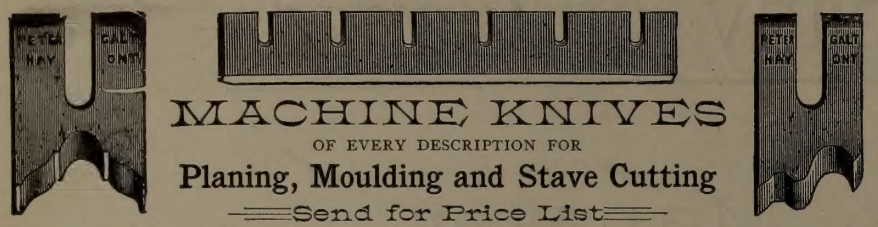

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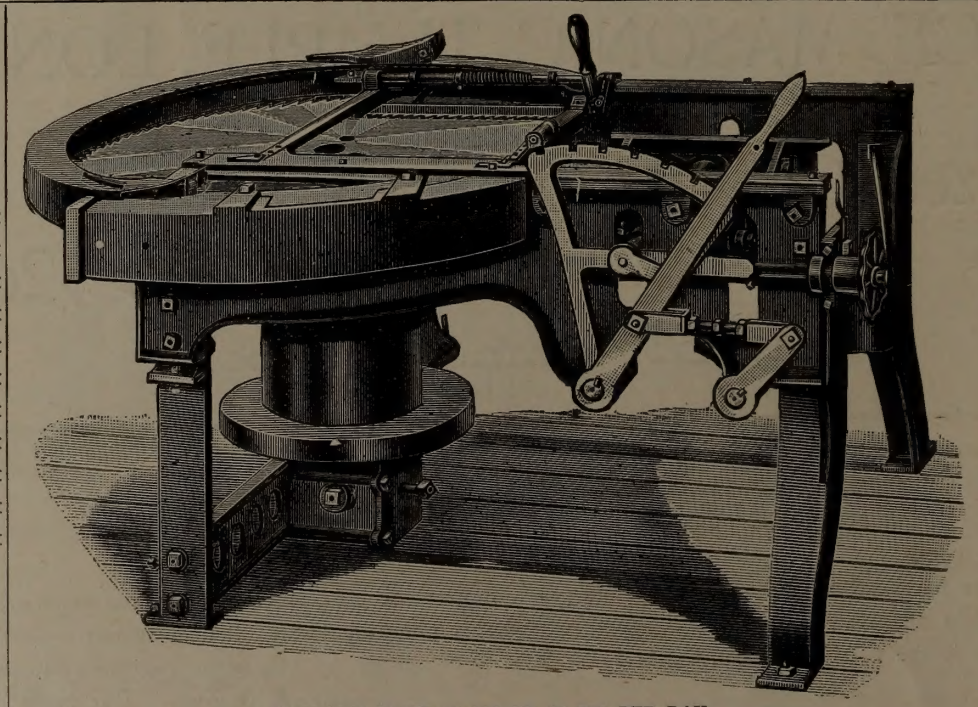

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THE CANADA LUMBERMAN

VOLUME XV. NUMBER 1. } TORONTO, ONT., JANUARY, 1894 { TERMS, $1.00 PER YEAR SINGLE COPIES, 10 CENTS

MORE TARIFF OPINIONS.

THE probability of free lumber, as outlined in the Wilson bill, now before Congress, continues the uppermost question of discussion among lumbermen, both in Canada and the United States. As will be noted from the views we here append opinions differ very widely as to the wisdom and outcome of the measure.

Voice of Canada's Finance Minister.

Finance Minister Foster interviewed in regard to the alleged combination that has been formed in the United States to lobby against free lumber, said that the Government were giving every attention to the matter and were carefully studying the question of re-imposing an export duty on logs as promised last session, should fair treatment not be accorded Canadian lumber exported to the United States.

Saginaw Valley Lumbermen Speak.

The proposed removal of the tariff on lumber, says a Bay City, Mich., dispatch, in the Wilson bill has but little terror for Saginaw valley lumbermen. There are few of them who are not interested in Canadian pine, and the business had reached the point where Canadian interests must receive some concessions from the United States or the saw mills of the valley would quit business. Since the export duty on logs was taken off by the Canadian Government, the valley mills have practically lived on Canadian pine. During the past year upwards of 300,000,000 feet of logs have been brought across Lake Huron and converted into lumber by the mills of the Saginaw river, and the shore towns. Canadian logs have furnished labor for the employes of fully fifteen large saw mills. Unless there is an export duty placed on logs this winter the amount brought over next summer will undoubtedly exceed that of the past year. Nearly all of the lumbermen have arranged for cutting as much, or more, during the winter. The business of rafting logs across the lake employs hundreds of men, who sort the logs and man the tugs which do the towing. One firm in Bay City, the Saginaw Bay Towing Association, has ten powerful tugs for the work. About half the output comes from Spanish river, and the remainder from French river and Little Current.

A Tonawanda Wholesaler's Opinion.

The lumber business, says a Tonawanda correspondent of the Timberman, is very dull in this market at present and we cannot view the future outlook as offering much encouragement for lumbermen. Not only are we suffering in consequence of general depression of business and many idle workmen, but an additional menace by the threatened reduction of duty on Canadian lumber by the Wilson bill, thereby opening another floodgate for cheap box lumber and coarse stock. Every lumberman knows that we get very little good lumber from Canada, and also that box lumber is always to be obtained at consuming points at about actual cost of production and transportation, and Canadian box only makes it harder to realize on an investment including the log run, and consequently adds to the price of better grades of lumber. It is the better grades of lumber which enters largely into use in house building, such as siding, doors, sash, mouldings and finishing grades. So the result of the Wilson bill will be to lessen the price of coarse lumber, largely used by box makers and manufacturers, and increase that portion of the stock needed by the laboring man who is striving to build a home. With this view of the situation I do not think the prospects are very jubilant of lumber trade or in fact any other industry that is affected by the bill now before Congress.

From St. John, N.B.

A despatch from St. John, N.B., says :—Hon. J. P. Bass and Asa Warren, of Bangor, Me., are in the city consulting the American colony here, with a view to working up opposition to the free lumber clause of the Wilson bill. Every sawmill but one at the mouth of the St. John river is owned by Americans, and the cut, which is supposed to be of logs from the State of Maine and floated down the St. John river to this city to be sawn, is admitted into the United States free of duty. It is notorious, however, that not more than one-third of the sawn lumber shipped from New Brunswick is cut in Maine, and the Cleveland Administration has had detectives at work recently looking up the figures. In view of the further fact that the chief American lumbermen here are Republicans and large contributors to the Republican campaign fund, it is not likely that the Democratic majority in Congress will pay much attention to their representations. Speaking to a reporter, Mr. Bass, who is a staunch Democrat, said the American residents of this city had a large amount of money invested in timber lands, mills, etc., which investments had been made in full belief that the duty would be maintained. If the free clause could not be recalled it was hoped a compromise might be effected in such a way as to gradually take off the duty, thereby giving the Americans time to work off their Canadian stocks and get out of their investments, if they so desire. Mr. Bass will report the result of his visit to the Bangor lumbermen.

Down in Old Virginia.

The saw and planing mill men of the Southern States have forwarded to Congress the following protest against the Wilson bill : "There is no other business where the capital is invested that pays so small a margin. It is only by the use of large capital, invested in all best labor saving and wood preserving appliances, that a profit is made. Especially is this the case in lumber operations of the south, owing to the grade of our timber ; while the ground upon which it grows and the season are more unfavorable for moving the logs than in the north, making the cost of manufacture more, and at the same time the lumber commands a less price than the lumber north of us in the United States and Canada. The removal of the tax on lumber will enable Canada to market her lumber at a price that we can hardly meet. Especially is this the case in our lower grades, upon which we have no margin. It will simply necessitate our losing that much more. Only about 50 per cent. of our lumber enters into a class of work that justifies prices that pay us any profits, the other 50 per cent. being a low grade flooring and box boards, and has to be sold at a price that does not pay, and the latter at a loss. At the same time it must be made. It therefore raises a question of our being able to work if the prices suffer a reduction by reason of a removal of tax ; and the suppression of this industry must necessarily bring distress upon a very large number of people. With the exception of the very small margin to the manufacturer under favorable circumstances, the value of the entire output represents labor and stumpage on timber."

Views of a Canadian-American Firm.

H. B. Shepard, of the Shepard-Morse Lumber Co., of Ottawa, Canada, and Burlington, Vt., said : "We think it is an advantage to the country to put lumber on the free list, because in the first place we feel very sure that the Michigan and Western pine men in general were instrumental in reducing the duty on pine when it was reduced from $2 to $1 a thousand. The reason for that was that the Canadian Government had imposed an export duty on logs, and the Michigan mills were unable to get logs in our own country, and, therefore, Westerners promised to reduce our duty on pine one-half, with the understanding that the duty on logs should be removed. If this restricted the production of this lumber in our country for the time being it would not be an injury to the country, but would enable our forests to grow and give standing lumber a much greater value and would deplete the Canadian forests. It was quite noticeable when the duty on lumber was reduced before that the price went up on good pine from $1 to $4 on a thousand. We don't attribute this rise in the price of pine to the removal of the duty, but it goes to illustrate that the law of supply and demand is a much greater element than the reduction of the tariff. Consequently we feel that if the duty should be taken off of lumber, and that if the demand was good next spring, it would not affect the price materially. But it would benefit the Michigan men and Westerners, because it would prevent Canada from imposing an export duty upon logs, and thus the Western mills would be kept running. The same argument will apply to spruce, inasmuch as our own spruce is being cut off very fast, and it wouldn't be any injury to allow our forests to grow and deplete the forests of Canada."

On the Pacific Coast.

Victor H. Beckman, associate editor of the Puget Sound Lumberman, of Tacoma, in a recent interview, said : "If the proposed measure passes Congress there is no question but the lumber industry of the Pacific Coast of the United States will suffer. The lumbermen of these states, irrespective of political affiliations, are on record as being opposed to putting lumber on the free list. Fifty million dollars in round numbers represent the capital employed in the lumber industry of the Pacific Coast. There are 840 sawmills and 404 shingle mills in the states of Washington, Oregon and California, whose output of lumber footed up last year 2,300,000,000 feet of lumber and 2,200,000,000 shingles, of the aggregate value of $27,000,000. The number of men employed in the logging camps of these states is 27,000, to whom are paid in wages annually $18,000,000. Naturally, this industry, the mainstay of at least Washington and Oregon, is vitally interested in the tariff question. British Columbia, which will compete with the three states above mentioned, possesses a greater lumber area than the three states combined. Last year Washington and Oregon shipped into California, which is a great lumber consuming state, 325,000,000 feet of lumber, and shipped eastward to the prairie states 150,000,000 feet and 1,100,000,000 shingles. It is conceded that British Columbia will cut seriously into the California trade, and perhaps compete to some extent with Washington and Oregon lumber in the Eastern states if lumber is placed on the free list. The large cargo mills of British Columbia employing Chinese and Kanaka labor, there being little or no restriction to the importation of alien labor there, are in a position to unload into California vast quantities of lumber in competition with the mills on this side of the line, which pay white labor higher wages than obtain in any other industry section in this country. As fully one-half the exports of lumber from Washington and Oregon find their way to California, this is a very serious matter. So far as the eastern trade is concerned, there is but little direct competition, the British Columbia mills not having found a market as yet, but directly a lot of cheap lumber gets into the prairie states via the lakes and on the Atlantic seaboard, it will naturally handicap the shipment of Pacific Northwestern fir, cedar and spruce by rail. British Columbia shingles cannot compete in the East with the Washington and Oregon product. Unlike a sawmill the bulk of the labor in a shingle mill is skilled, and as skilled mill labor commands the same renumeration in British Columbia as on Puget Sound, and as the cost of raw material is also about the same, there is no danger from that source. But the cheap shingles from Eastern Canada may do considerable harm in the prairie states and may naturally cause the demand for the really fine cedar article to drop off in a measure."

BAND SAW RUNNING.

By F. J. Harmon, in "Wood Worker."

GIVE a man a strange band saw, in a strange shop, and expect him to turn out a job of first-class sawing the first time. What must that man do to meet the conditions? He doesn't know whether the saw is in good condition, or whether it is'nt fit "to saw up turnips for a lot of cows."

The only way for this man to do is to test the saw, and if it is not right to make it so. First he will take off the saw and lay it aside for a few minutes. Then he will give a lift on both wheel axles to see if there be lost motion in the bearings. If there is, he will take it up before going further. The covering of the wheels is supposed to be in fair order, and he will pay no attention to that.

The saw should be laid on a table, or bench, coiled in three loops, if room is limited, but it is better if laid out singly. Go over the saw carefully, and pinch out the kinks and bends. Most of them can be removed by merely bending the saw between the thumb and forefinger of each hand, but hammering may be necessary to remove some of the worst kinks ; a mallet is the tool to do it with.

Lay the saw on a hard wood plank, or block, and a mallet will take out the kinks without bending the saw. This a hammer will not do. It bends the steel in one place by taking a kink out of another. Sometimes a saw is so badly kinked that the bad part must be cut out and the saw brazed up again.

Having made the straight saw, it is placed carefully on the wheels, and strained up. Then all the guides are removed, or at least set back so far that they do not touch the saw at all. This means, as stated, all the guides, and includes as well as the top and bottom ones, that one on the "going up" part of the saw. This "guide" should not fit the saw closely. It is only intended to prevent excessive vibration of the saw blade, which is apt to occur when a heavy cut is being taken.

The saw should be revolved by hand during, and a few times after, the removal of the guides, for the wheels may be out of line and the saw get a chance to run off, if running fast at the time. Be sure the little guide just above the lower wheel is out of the way. Then, with the saw running slowly, change the hang of the upper wheel until the saw runs fair on both upper and lower wheel. Sometimes a good deal of patience is needed to bring this about, but it can be done.

Stop the saw, set a try-square on the saw table and see if the saw agrees with front edge of the blade. Try the saw in two positions—sidewise and edgewise. The nicety of this adjustment is what makes a saw cut square. If the saw is fitted with a tilting table, it does not take long to adjust things. If the table is solid, the adjusting laterally must be done by either moving the bearings of one of the wheel shafts, or by putting on more or less thickness of rubber tire on the upper or lower wheel, as may be required.

The vertical adjustment, edgewise of the saw, must be done by putting the rubber tires in good condition, when a slight movement of the top adjusting screw will make the saw track back and forth on the upper wheel as desired. But if there be a lot of ridges and hollows in the wheels, the saw will run on one ridge until the top wheel has been tilted enough to pull the saw off its bed, then with a rush it will jump across the intervening hollow to the next high place.

As stated, if the wheel tires are in perfect condition, the saw adjustment is easy, but when the tires are out of shape, there is nothing to do but to fix them up before going further. After the saw has been made to run plumb both ways, take hold of the guides and adjust them to bear easily, yet very snugly, to the saw. If a patent top guide be used, see that it is clean and well oiled, also that it is sound and free from cut places where the saw has run while the guide stood still. By "patent" guide, I mean one set at an angle to the line of the saw so that the guide wheel runs very fast in its bearings, but the saw, instead of having to run in the same place (on the guide) all the time strikes clear across the guide pulley, which is about half an inch wide and slightly concave, like the blank gear of a worm wheel. This kind of guide is all right as long as it is not allowed to stick and thus stand still while the saw travels in one place over it ; when this happens, the hardened steel guide quickly has a slit cut into it by the back of the saw. Once get one of these guides cut in this way and it is useless for the purpose intended until ground up again. Therefore, if the patent guide be found cut or otherwise damaged, take it right off, put a hardwood plug in its place and send the guide wheel to be ground up again, forthwith.

I have run many different kinds of lower guides, but there is nothing I know of better than a bit of well-seasoned hickory wood, put in so the wear comes on the end of the grain. Probably three pieces of wood make the best lower guides, a casting being made to hold them all in place. The back or main bearing stripes should be, as stated, of end wood, having at least two inches of vertical bearing. Some very good forms of guide-holders allow a round piece to be turned up in a lathe, then slipped into the holder, but usually a square block is used, the casting being fitted to receive it.

The saw cut in end of bearing block should always be made with a narrower saw than the one which is to run in it. I like to make the cuts either by hand, with a fine hack saw, or else make up a number of bearing blocks and then put on a thin saw, with no set in it, and slot all the pieces at once.

The saw guides should be made to bear at an angle of 45 degrees. They ought to be flat and smooth on their upper edges, so as to carry down and off all the sawdust and small chips that happen to fall on them. In running upwards and coming together at an angle of 45 degrees, the side guides naturally turn away all sawdust, etc., and keep it from going between saw and pulley.

Having adjusted the guides nicely, take a piece of emery wheel, or an old file set into a block, and joint the saw enough to make all the teeth touch ; then set and file. After this has been done, replace the saw and with an ordinary oil stone, smooth up the sides of the saw, taking off the burr caused by filing. Next, oil the guides and saw with a rather thick oil. If sawing hard or yellow pine, it will be necessary to use kerosene oil freely to keep the pitch from gumming up the saw. In case of gum, use oil freely, then with a hard wood stick, get a bearing over the top guide and scrape off the gum as soon as the oil softens it.

A saw well sharpened, slightly set, and in the condition described as above, will cut square, smooth and true. A good test is to dress out a bit of two-inch plank about eight inches long and seven or eight inches wide, square one edge and set the block on the square edge, then run up to the saw and see if the cut commences clear across the whole side at once. If it does, the saw stands square. Then saw a half circle 1½ inches radius, out of the plank still standing on edge. The saw should cut it out so that when the core is reversed and laid back, it will fill all alike the whole width of the plank.

TEETH OF BAND SAWS.

THE usual shape and pitch of the teeth supplied by most makers of small band saws are of a very short pitch and sharp edged at the gullet so that when there is an undue strain on the saw it generally breaks, being deprived of its elasticity by the sharp angle, says an English journal. Breakages will often occur when the saw is revolving round the pulley without being in actual work, and the fractures always begin at the bottom of every second tooth. The reason of this is that when the saw runs over the pulley the teeth remain straight and form a number of edges, instead of adapting themselves to the shape of the pulley : and whenever this occurs there is a liability to breakage. By far the greater number of breakages occur through the saws being badly sharpened, which is often the case ; for many sawyers either do not take the trouble of doing it correctly or have not been sufficiently instructed in the matter. We have often seen saws rendered unfit for further use by bad sharpening, the original shape and pitch of the teeth being horribly mutilated, the bottom parts, which ought to be rounded, are converted into sharp edges, and the points which ought to have an equal distance apart and an equal height, are most irregular, the result being that the saw is broken by the first turn of the pulley simply because the uneven set of the teeth puts too great a strain on the saw blade, and it is sure to break at all those parts where the bottom of the teeth have been cut sharp. This can be demonstrated by taking a brass or steel square and drawing the two ends from each other, and it will at once be seen that the square can not possibly break in any other part but at the angles ; now as the saws work downwards, every tooth is resisted by the wood, and is acted on in a similar way ; therefore, where there are sharp angles, breakages must sooner or later occur. Attention is therefore called to the necessity of keeping the teeth even and rounding them at the bottom in sharpening.

SPLICING WOVEN BELTS.

MACHINERY, an English journal, furnishes the following : Everyone who has had any experience in the splicing of that class of woven belts which are now in such extensive use, is fully aware of the great difficulty which exists when it is necessary to piece them. The most common practice is to join the two ends by malleable iron fasteners, which are fitted with screwed shanks on which nuts can be placed. In what, is, perhaps, the most successful of these arrangements, the ends are turned up and belted together in this way. But it is obvious that, whatever may be the merits of such an arrangement, it is calculated to throw the belt out of balance while it is running, owing to the addition of weight at one point. This has not been objected to hitherto because of the general effectiveness of the fastening, but it is quite clear that a method which, while equally effective, is free from the fault named, will be of considerable value. Such a method has been introduced by an enterprising firm, who proceed by splitting the ends of the belts by suitable means. In lieu of this the belt may be woven in layers at the point where it is desired to join it, but this, of course, implies a foreknowledge of the length of belt to be required. Having obtained the necessary division, however, by any means, two of the four plys of tongues formed are cut away, and the two ends are then fitted into each other. Thus the finished joint is of practically the same thickness and weight as the rest of the belt. By means of suitable cement and glue, a perfect union is obtained, but it may be made more secure by the employment of laces, wire threads, or rivets. It is claimed that the belt pieced is not only as strong at the joining as any belt pieced in the ordinary method, but that, being of an even thickness throughout, it is in a truer balance, which in high speed machinery is a matter of some importance. The perfect interlocking of the two ends enables a secure fastening to take place, which renders the belt equal in strength at this point to any other portion of it.

PRESERVING BOILERS FROM GENERAL CORROSION.

SOME additional evidence is reported in the foreign journals of the success of the method announced a while ago for preserving steam boilers against pitting and corrosion. This is accomplished by fixing electrodes in the boilers and sending periodically currents of electricity through them, under definite conditions, adjusted and controlled by automatic action. When the current is passing from the anodes suspended in the boiler, to the shell, hydrogen is liberated on the shell and tubes, and oxygen on the anodes ; then, by means of the deploraizing apparatus the action is changed, most of this hydrogen and oxygen recombining, with the result that, during the first period, the hydrogen performs two distinct functions—first, it disintegrates mechanically, by its volume, the scale formed on the shell and tubes, and, second, some of the hydrogen combining chemically with the oxygen of the oxide of iron on the shell and tubes reduces this oxide to metallic iron, thus doing away with the oxidation of the boiler without wearing away the metal. The secondary action, in a word, is to facilitate the disintegration of the scale, hasten the mechanical action of the hydrogen in bursting it off, and prevent polarization of the shell and tubes—oxidation, it is well known, not being able to take place in the presence of hydrogen gas.

THE CANADA LUMBERMAN, $1 a year. Subscribe.

WHAT IS FREE LUMBER?

TO THE EDITOR OF THE CANADA LUMBERMAN:

SIR,—I notice from your December issue there are different opinions of the meaning of manufactured lumber. About three weeks ago, Wm. Bennett, M.P. for East Simcoe, called on me and wished to know my opinion of the Wilson Tariff Bill. I answered, it would be worth millions of dollars to Canada if we only secured half of what the pending bill calls for. Mr. Bennett wished to know if I understood that planed, or tongued and grooved, or other work on lumber would be admitted free. I answered, no. Mr. B. said many lumbermen claimed that unmanufactured lumber was as we find it piled at the mills, and manufactured lumber was after it had been planed, tongued and grooved, or other work put on it. I claimed unmanufactured lumber is as it exists before it is manufactured, and that is as you find it in the log; and this enters the United States free. Manufactured lumber is the product of the log after it has been cut up, and the duty on this, as recommended, will be 25c. per M. Lumber planed, tongued and grooved, or other work done on the same, is finished lumber, and the duty on it would probably average about the same as now.

With the United States and Canadian Government the principal thread woven into the tariff fabric is: to admit the raw material free, upon which labor by home artisans will be performed. To allow planed or finished lumber to enter the United States free, would be contrary and fatal to the main principle.

Mr. Bennett suggested that I write to the Hon. Wm. L. Wilson, Chairman of Tariff Committee, which I did, and enclose answer received.

Washington, D.C., Dec. 16, 1893.

C. H. CLARK, ESQ., Barrie, Ont.

Dear Sir,—I am directed by Hon. Wm. L. Wilson, Chairman of Committee on Ways and Means, to acknowledge receipt of your communication of December 14th, on the subject of rates proposed on lumber in the pending tariff bill. Sawed lumber has been made free and lumber planed or further finished, made dutiable at various rates.—Respectfully yours, HENRY TALBOT, Clerk Committee of Ways and Means.

This letter, it seems to me, makes clear, a matter concerning which lumbermen have been in doubt.—Yours truly,

Barrie, Ont,, Dec. 20, 1893. C. H. CLARK.

EXPORT DUTY ON LOGS.

TO THE EDITOR OF THE CANADA LUMBERMAN:

Sir,—I regret having to trouble you so frequently, but as the matter is of great importance I trust that you will pardon me, as it would appear that some of our people are not only willing to sacrifice their country's interests but even their own, if by any means they can make a point against the Government, for as you will observe, no sooner had the Hon. Mr. Foster announced the intention of dealing with the question of the export of sawlogs and pulp wood in a manner that would place our people on an equal footing with strangers who are now dependent on our timber to stock their otherwise worthless mills than they rush forward with the most absurd arguments to try and defeat this object. As a case in point I find the following statements made by Mr. Crannell, of Ottawa, and on account of its importance telegraphed to the Press: "The export duty on logs would mean a great loss to the Ottawa lumbermen, since a dollar per thousand would be added to the duty placed on sawn pine lumber entering the States from Canada. This loss it is estimated would reach about $250,000 as far as the Ottawa trade is concerned." Any one at all conversant with the conditions, and possessing any business intelligence must know that the re-imposition of the export duty would have exactly the contrary effect. It is of course with the lumber trade as with most other branches of trade, true, and within reasonable bounds supply and demand govern the price obtained for products, and unless the export duty would increase the amount of lumber manufactured, which is absurd, no such effect as pretended can possibly arise from a re-imposition of the export duty. Those directly interested in this trade say just the contrary, for you will see the Saginaw Board of Trade Review states: "The repeal of the export duty on saw logs exacted by the Canadian Government greatly stimulated the rafting of logs across Lake Huron to Michigan mills the past two years. In 1891 no less than 80,000,000 feet were brought to the Saginaw river and in 1892 a much larger quantity came over as figures below will show—184,500,000 feet." And for 1893 it is estimated this has been increased to about 250,000,000 feet to mills on the Saginaw river alone, without taking into account large receipts at Cheboygan, Alpena and elsewhere. Certainly, if the repeal of the export duty greatly stimulated the rafting away of the logs its re-imposition should enable the Ottawa lumbermen to get higher prices for their lumber instead of a less price as claimed. And when you consider that nearly every foot of lumber made from these expatriated saw logs comes directly into competition with the product of the Ottawa mills, and that the amount taken over free of export duty greatly exceeds the whole of pine lumber sent from the Ottawa river to the American market, a reduction in the amount of the export of saw logs would naturally add several dollars a thousand to the price of pine lumber at Ottawa, by reducing the supply to less than the requisite demand, so that more than the extra dollar of duty would be readily paid by the Americans in order to get the lumber, until such time as they come to their senses and removed the entire duty from lumber and pulp, to enable them to get the logs and pulpwood free. Even the extra price the logs would cost their manufacturers, having to pay the $2 export duty, would be at once added to the price they would ask for their lumber made from these logs in Saginaw, so that on this account alone the Ottawa lumber should sell, even with the extra dollar duty, $1 a thousand higher than under existing conditions. But it surprises me not a little to find any Canadian, or for that matter American, objecting to the proposal indicated by the Hon. Mr. Foster, for he does not even intimate that he purposes exacting more than "equivalent export duty on logs exported to any country which imposes heavy duties on Canadian lumber and pulp." Whereas the American lumberman has always, and do even now insist, that $2 a thousand feet is but a reasonable measure of protection to the sawmilling industry of the United States, so that we should be entitled to exact this amount in excess of any duty imposed on our lumber without protest on their part. And when we see a pack of these Michigan lumbermen, whose very existence depends on Canadian timber to stock their mills (their own being used up) meet in Toronto and with unseemly impudence unanimously decide on requesting the active co-operation of all operators to oppose the taking off, or any reduction of the American duty on Canadian lumber it appears to me it is about time to consider our own interests in this matter and ask the Government why it does not take a leaf out of their book and insist on exacting a rate of duty on the exported logs, as much higher than the American import duty on our lumber, as these gentlemen claim is necessary to protect the saw-milling industry of the United States. There is, however, one fortunate circumstance connected with the meeting of these gentlemen in Toronto that may be worth noting, that they at the same time declared their intentions, owing to the depressed condition of trade in the United States, to do little or nothing in their Canadian operations this winter, or we would be regaled later on with statements from them and others that it was owing to the remarks made by the Hon. Mr. Foster they restricted their operations.

Permit me also to say that Mr. Crannel is inaccurate in stating that loss to the Ottawa river trade would be $250,000 even if our people had to pay the extra $1 duty, which I insist they would not, for this supposes an export of 250,000,000 feet of pine lumber from there to the American market on which duty would be paid, for the whole deals and lumber is barely 450,000,000 this year; and deducting the deals and the lumber required for home consumption, the amount of pine lumber to be exported to the United States from this season's cut cannot much, if at all, exceed 200,000,000 feet, or about 80 per cent. of the amount of lumber to be made in the Saginaw river district alone from the free exported Canadian sawlogs. WM. LITTLE.

Montreal, Que., December 22, 1893.

THE LIMITATION OF ENGINE SPEED.

THE practical limitation to high rotative speed in stationary reciprocating steam engines, says wariter in Cassier's Magazine, is not found in the danger of heating or of excessive wear. The cause of both these, it is now well understood, is to be looked for in defects of design or construction, commonly of both, as they generally go together, and where these do not exist to a degree which is of practical moment, a bar to the proper employment of higher rotative speed appears long before a tendency to heat or wear is to be observed. Correct designs are now generally followed, in both the fixed and the moving parts of steam engines, and a high degree of truth is readily attained in their construction, so that it has come to be a simple matter to make engines which can be run at a very high speed quite free from either of these difficulties.

Contrary to the general belief, no objection to very rapid rotation is afforded by the development of centrifugal force in the fly-wheel or band-wheel. The wheel of high-speed engines have generally solid rims, and no case of their bursting has, I believe, ever been known. Disasters from this cause have been confined to engines not designed to be run at high speed, and have sometimes occurred when the speed was only slightly accelerated above the normal rate. In these cases the wheels have been built in segments, with surprising disregard of necessary strength in the flanges and bolts by which the segments were held together.

Again, an objection to very high speed is not found in a tendency to knock on the centers. In a properly designed and constructed engine, in which the valves are correctly set, and which is run by steam, high speed tends to silent running. Noise from bad design or bad work, from insufficient lead given to the valves, and from water in the cylinder, is excluded from consideration. It is admitted, with pride, that the bad consequences of these defects are aggravated by high speed. This revelation of them has wrought an entire change in engine construction, not yet completed, and even makers of slower speed engines have largely profited by it. But it is obvious that there is no excuse for their existence. The only legitimate cause of knock on the centers is loose boxes, and knock from this cause is softened as the speed is increased, and at extremely high speed will disappear entirely, owing to the force of the steam at these points being absorbed in overcoming the inertia of the reciprocating parts.

Vibration is not an objection to very high speed, because it is an easy matter to so design and construct an engine and balance the running parts that it shall be free from vibration at any speed whatever. Again, very high speed is not objectionable, per se. If an engine runs in silence, completely free from vibration, without any tendency to warm, and without wear of any running part, its very speed renders it an object of special admiration, even to those to whom such speed is new. Whenever extremely high speed in a steam engine has caused any other feeling in the beholder than that of admiration, it has always been the case that it has been attended with something annoying, a noise, or a jar, or some uncomfortable action which ought not to have existed.

All this being true, there still remain two considerations of a controlling nature, which require that the rotative speed of engines shall be kept within moderate limits. The first of these is, that engines ought not to be run as fast as they can be. It must, on reflection, be obvious to every one that an engine should be capable of running, and that, too, with entire satisfaction, so far as its motion is concerned, a great deal faster than it is run. This is the solid ground of security and confidence. It means peace and comfort, and helps to make men sleep well o' nights. It means long life to both engine and builder.

The second objection to the employment of extremely high speed is a very serious one indeed. It is the large amount of waste room in the port, which is required for proper steam distribution. It is in the important respect of economy of steam, the high-speed engine has thus far proved a failure. Large gain was looked for from high speed, because the loss by condensation on a given surface would be divided into a greater weight of steam, but this expectation has not been realized. Far from it. The performance of this class of engines shows, instead, a positive, and in some cases a large loss in economy. For this unsatisfactory result we have to lay the blame chiefly on the excessive amount of waste room. It has already been pointed out by Mr. Harris Tabor that the ordinary method of expressing the amount of waste room, in the percentage added by it to the total piston displacement, is a misleading one. It should be expressed as the percentage which it adds to the length of steam admission, and then every one would see what a serious thing it is. For example, if the steam is cut off at one-fifth of the stroke, eight per cent. added by the waste room to the total piston displacement means forty per cent. added to the volume of steam admitted. Under these circumstances it is obviously the duty, and for the interest, of builders of high-speed engines to adopt every expedient for reducing the amount of waste room that can be done consistently with proper admission and discharge of the steam. For this, the first requisite are modern piston speed and longer stroke.

Engines of four, five and six-foot stroke may properly be run at from 700 to 800 feet of piston travel per minute, but for ordinary sizes I would recommend and urge that 600 feet per minute be taken as the limit of piston travel, under all circumstances. This will give from 300 revolutions per minute with twelve inches stroke to 100 revolutions per minute with six inches stroke, with which purchasers ought to be satisfied.

I would ask builders, in their own interest, to resist the temptation to get the utmost out of a given engine, and to set their faces like a flint against the demand for short-stroke engines, which shall occupy but little room, and from which the required power can be got by speeding up beyond the limit here proposed.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

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J. S. ROBERTSON, - - - EDITOR.

THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

A WORD WITH SUBSCRIBERS.

THE January CANADA LUMBERMAN goes to a large number of subscribers with bill enclosed for subscriptions that fall due at the new year. The amount in most cases is not more than one dollar, and, even where arrears are owing, the indebtedness to the individual is only trifling. But 2,000 such accounts mean anything from $2,000 to $3,000 to the publisher, and money is much needed by him at the present time. It costs a heavy outlay each month to produce a journal of the completeness and character of the LUMBERMAN. Subscribers, we have reason to believe, appreciate these efforts to give them a first-class trade journal. Our desire is to make further improvements during 1894. Saying this much, we believe we can rely upon subscribers responding favorably to the present request to remit promptly the amounts now due.

KEEPING QUIET ON THE TARIFF.

A NEWSPAPER editor has seldom any occasion, in the present day, to enter an apology for the publication of the most complete information obtainable bearing upon any subject which is within the province of his journal to discuss. There was a time when it was interesting to quote Milton, for example, on the liberty of the press, but that day has gone, we fancy, not to return again. The general experience is that subjects, even those of a technical and class character, lose nothing by discussion. The whole truth will come out in any case sooner or later.

Still the question does not entirely die. Ever and anon the right of reporters to enter the precints of some committee room, of, perhaps, church or state, is questioned; and it is only a few months since that the question was raised by a trade journal, whether it was wise, in discussing market conditions of the various trades, for the representative journal of these particular trades to always publish all that might be known of the conditions of the market. The inference was that it might pay sometimes, in order to gain a temporary advantage, to suppress certain information in the possession of the editor. The trade press of the country quite generally took up the question, and the almost unanimous opinion was against a policy of concealment, as hurtful to the best interests of commerce and a reflection on the intelligence of the business men of the country.

We have been led into this line of thought at the present time through the receipt of a letter from an esteemed correspondent, and one of the large lumbermen of the Province, doubting the wisdom of the newspaper press, the CANADA LUMBERMAN not excepted, in publishing so freely the opinions of Canadian lumbermen and others on the proposed tariff changes, making lumber going into the United States free. The contention is that it will be a good thing for the lumber trade of Canada—though our correspondent weakens his argument on the necessity of Canadians keeping quiet, because they are the gainers, by adding that the United States will also be benefited by the passing of the bill—if the Wilson bill becomes law, but we are only prejudicing our case, it is said, in the eyes of Americans when publishing this fact, and "giving tariff reformers a chance for argument, as it is not likely the Americans make these tariff reforms in order to benefit Canada, nor any other foreign country."

It may be remarked here, that lumbermen, both of Canada and the States, are quite free and open in expressing their views on the tariff question. They know when they talk to newspaper representatives that they are talking for publication, and whilst some are more reticent than others in expressing an opinion, it is plain from the much that has been said, that the trade do not as a whole consider that silence in this case is golden.

So far as there is any force in the argument of our correspondent to "keep quiet,," it is based on the theory that lumbermen are of one opinion on the Wilson bill. This is not altogether the case. A considerable number believe it would be helpful to the lumber interests of Canada, but as is shown by a study of the interviews, and articles from the trade, that have been published during the past few months, a contrary opinion is held by at least a fair section of the trade.

The letter closes with a statement that a newspaper editor is not likely to allow to pass unchallenged. Condemning newspapers for writing so much on the tariff question the writer interprets their motives in doing so in these words: "But I suppose newspapers are not particular as far as the interests of their country are concerned, as long as they give their subscribers something to read." This, it may be said, is indeed the "unkindest cut of all," coming from a generous and big-hearted lumberman. Newspapers, like lumbermen, have a very considerable interest in the welfare of their country. Our correspondent, as a public man, as well a lumberman, would not forget, we are sure, were he to tell us of the progress and vitality of his own local section, to give credit to the press of his town for what it has done to advance the best interests of that section. Not unlikely it is due to the press of that community that they have as their chief executive officer a man of sterling qualities both as citizen and mayor.

A newspaper needs to be particular what it gives "its subscribers to read." Any-something will not do. Newspaper readers are critical of the dish that is set before them daily, weekly or monthly. One reason why newspapers to-day are paying so much attention to tariff matters is because their readers want to learn all they can about the question, and especially what the leaders in the various lines of commerce think of it. Because the CANADA LUMBERMAN is a live, up-to-date journal, and it has carefully studied its readers' desires, is why just now we are giving considerable space to a discussion of the tariff, as affecting lumber, presenting fairly, we believe, both sides of the question.

EDITORIAL NOTES.

ASSUMING that cedar shingles of Brititish Columbia may some day take possession of the Ontario shingle market, the question was asked of an Ontario lumberman if such an event would be a serious blow to Ontario manufacturers, and the answer was an emphatic "No." This lumberman claims that years ago he discovered that he could make three dollars a thousand more by converting his logs into lumber than by cutting them into shingles, "and other lumbermen are fast learning the same lesson."

ONE whose duty it has been to report the lumber market has often been puzzled to understand the distinction between "hard" and "soft" woods. In a rough way the trade has designated stocks other than pine as hardwoods. It has remained for a sharp Yankee wood seller to get the matter decided by the courts. He had contracted to deliver hardwood and tendered poplar. The courts held he was justified in that all trees that bear a leaf are "hard," the distinction being drawn between the leaf-bearing and the evergreen varieties.

AN article of considerable length on "Free Lumber and Pulp," which appeared in a late issue of the New York Journal of Commerce, has been reproduced in a number of trade journals, and has called forth liberal comment from several. Supported by generous quotations and evidence from those who are believed to have made a careful study of the question the main argument is for a greater preservation of the forests both of the United States and Canada on the ground that in the two countries they are becoming rapidly depleted. The writer quotes Professor Sargeant as showing that the amount of spruce in 1880 in the New England states was barely sufficient to last for ten years, and would be pretty well harvested by this time. The contention is that Canada can well afford to go slow in disposing of her pine and spruce.

The British Columbia Shingle Manufacturers' Association has finally become an accomplished fact, all the shingle manufacturers in the Province having enrolled themselves in the membership. There has been considerable cutting of prices in shingles on the coast, of late, both in British Columbia and Washington Territory, and the hope is that the present organization will end this practice, and furthermore result in an advance in prices, leading manufacturers claiming that there is no profit made at present prices. Any attempt at a combine that would lead to an exorbitant increase of profits is to be condemned in the best interests of trade. It is quite noteworthy, however, that whilst there is on the one hand a strong tendency in nearly all branches of commerce towards centralization and combination for monopolistic purposes, that, perhaps, at no time were bankrupts being made faster by reason of the opposite evil, of cutting prices until business is carried on in many cases at an actual loss. A happy medium is the desired millenium in this case.

AUSTRALIAN colonists are hopeful, that the great durability of certain of their woods over the softer woods of America will cause a demand for them in this country for paving, railway ties and like purposes where undoubted durability is a first essential. We have pointed out on several occasions the extent to which wooden pavements are the vogue in London and in other European cities. To some extent Australian woods are used in these countries, and have given, apparently, good satisfaction. At least wooden pavements do not lessen in popularity there as they do in this country. Greater care is certainly exercised in laying pavements in English cities, and in this particular there is a lesson for the people of this country. One difficulty that would seem almost insurmountable, however, to the use of Australian woods in Canada for paving purposes in competition with vitrified brick and asphalt, is pointed out by the Canadian Architect and Builder, and that is the great distance and consequent expense in freight rates. But "it might be possible," suggests our contemporary, "to find a market here for certain kinds of interior finishing woods, which might be partially manufactured in Australia and shipped so as not to occupy much space on steamers and cars. There seems a probability that an exchange of materials can profitably be carried on between Australia and the Province of British Columbia, and that a market could be found in Canada for certain Australian timbers which are specially adapted for railway ties. When the average life of a railway tie on the C. P. R. is from six to nine years the grey-gum wood, it is said, of Australia, will endure for forty years for this purpose."

NEWS AND NOTES.

Snow in the Georgian bay district is about 14 inches deep and good progress is being made in skidding.

Mr. Ed. Furnette, while working in the Muskoka Mill and Lumber Co's. camps, had the misfortune to cut his foot.

John Burr, foreman of the Columbia River Lumber Company, B. C., was shot in the face a few days ago, whilst engaged in an altercation with a provincial constable.

Ewan Cameron, Desert, Ont., has assigned. He was a pulp wood contractor, but started a general store in December 1892, without previous experience, succeeding one, Geo. Alderson.

A fire destroyed the lumber camp of Charles Angus, Cedar Lake, north of Kingston, on Jan. 1st. Wm. McLeod, a young man, was suffocated and burned to death. Some others were badly burned.

Mrs. Mackay, widow of William Mackay, lumber merchant, Ottawa, died a few days ago, after a week's illness. Mrs. Mackay resided at the Capital for nearly sixty years and leaves a large circle of relatives and friends, by whom she will be greatly missed.

F. Atkinson, saw mill, Ailsa Craig, Ont., is financially embarassed and seeking an extension of time. Liabilities direct $1,600 ; indirect $200 or $300 ; assests $3,000 to $3,500, nominally. He was formerly a cooper, and started his present business a few months ago.

Fifty years ago twenty-five per cent. of the logs entered at the large sawmills in the State of Maine was returned to the rivers as waste in the state of slabs. Now there is scarcely a foot of it wasted. Modern inventions have found a way to utilize everything, and the surplus seldom gets in advance of the demand.

In the course of a week a vessel will leave Vancouver for East London, South Africa, and the cargo of lumber which she carries will be the first from Vancouver to the dark continent. Three ships destined thereto have already left Puget Sound, but the Talbot is the pioneer from Vancouver in the new avenue for exportation.

Mr. John Sykes, of Oshawa, who called on the LUMBERMAN the other day, says he is doing a large trade with the cedar shingles of British Columbia. He is able at present prices on the coast to lay them down here at a close figure. Mr. Sykes is of the opinion there is an increased trade to be done in the manufacture of doors, sash, and blinds.

It has been affirmed that 1,100 years or more before Christ, some ingenious Chinamen invented the mariner's compass. A writer to the China Review, who has been investigating the subject, now asserts that the first unmistakable mention of the compass in the Chinese records is not earlier than the twelfth century of our era, and the instrument undoubtedly became known in Europe before the return from China of Marco Polo, who is fabled to have brought it in his baggage.

An effort is being made by Mr. A. R. Sutton to enlist support for a company, which he says is ready to undertake to secure charters from the Canadian and United States governments for ship canals between Canadian and American waters. He proposes to construct a ship canal between Welland canal and Niagara river, below the falls, and another system that shall connect St. Lawrence river and the Hudson by way of Lake Champlain. He has recently been to Washington in connection with the proposed work.

An Ottawa news item says : "Barnes & Co., who carried on an extensive box shook business in this city several years ago, and afterward removed to Rouse's Point, disposed of their business at that place a few days ago to the Mallard Lumber Company. John McFarlane, of the latter company, was in the city yesterday. The box business was quite a profitable industry in Ottawa until the United States tariff on manufactured lumber put an end to it. The imposition of the duty obliged Mr. Barnes to close down here, and when he did so he removed to Rouse's Point, N. Y. There is some prospect of the business being revived here under the new Wilson tariff, which imposes a lower duty on dressed lumber."

H. H. Spicer, of Vancouver, B. C., one of the largest shingle manufacturers of the Pacific Coast, anticipates a new trade with Honolulu and Australia. and will send trial shipments of shingles to these countries. He places his chief reliance for trade, however, on the home market, only regretting that desperate competition has of late made this trade unprofitable. The new association of Coast shingle manufacturers may be a means of remedying this evil. As an outcome of over production of shingles in 1892, very little was done in 1893 as the existing surplus was amply sufficient to supply the demand. The competition of the Soo Pacific Railway, however, opens up a possible market in the district of Ohio. etc., though a duty of 30 cents per M. constitutes a serious obstacle seeing that 30 cts. is often enough the full amount of profit dealers calculate upon receiving upon the same quantity. The largest quantity of shingles ever shipped to the East, beyond Winnipeg, was made by Spicer & Co. this summer and consisted of 15 car loads or about 15,000,000 shingles.

Alonzo Wright, familiarly known from one end of the Dominion to the other as the "King of the Gatineau," died of pneumonia the early days of the present month. Deceased was born in the month of February, seventy-one years ago, in the village of Hull, which was founded by his grandfather, Philemon Wright, who was one of those patriots who refused to remain in Massachusetts after the revolutionary war and came to this section, the sight of Hull being then an Indian trading post. He later on bought the Farmer mill and went extensively into lumbering operations, but fortune played him false, and for many years he had much to grieve his spirit owing to financial inability to meet his demands. In after life all this difficulty was removed, and succeeding good luck enabled him and his partner to lend a helping hand to those who were in distress to an almost unlimited extent. His grandfather was originally a member of the Lower Canadian Assembly and to this body deceased was returned in the year 1862, remaining a member of parliament until the general election of 1890 when he retired.

THE MAN AND THE MACHINE.

THERE was a former time when an issue was made in the minds of working people principally in the form of "Men vs. Machines," and a labor saving invention was believed to be entirely antagonistic to the interests of manual labor, says the Metal Worker. In mechanical processes especially brains were popularly considered a less important factor than muscle, and men clung to primitive ways because they were old, and to their limited views, satisfactory. Happily, that time of obstinate ignorance is past, the prejudice against machines has largely abated, and the trials of inventors have taken a different form. It is probably that the triumphs of steam have so settled opposition that its competitor and possible successor, electricity, will have less to contend against. We have learned that the man and the machine are not in opposition, but are both important factors in the world of industry.

We would call attention to what may be termed the teaching of machinery, meaning the attempt to learn from its operations, if possible, a way of working which the artisan may copy to advantage. The machine, while it is on duty, so to speak, attends strictly to business, carrying on processes of construction assigned to it, whether simple or complex, in a consecutive, orderly, and perhaps monotonous manner. We do not imply that the man should be a mere automaton, but that the head and the hands should both be interested. If the labor is such that the hands do it nearly independently, the head may be seeking a method of helping them. In this manner inventions are generated and the machine is made which does the work faster and better than it was previously done. In those constructive operations where the machine has not replaced the man, experience has taught that the doing of the right thing at the right time, or "machine fashion," is productive of the best results. The discipline of soldiers, which is largely effective in producing a reliable fighting machine which moves at the will of a controlling mind, is illustrative of that attention to routine and detail which the young mechanic will find a good rule to work by. The machine has come to stay, and the man must adapt himself to it, learning the lesson that undivided attention to the work in hand, with a systematic progression, from start to finish, will make him successful both as a man and a machine.

WOOD-WORLD WAIFLETS.

A QUEER drum is in use among the Najas of India. It is formed from the trunk of a large tree, hollowed and elaborately carved and painted in front, after the manner of the figure-head of a ship, and furnished at the other end with a straight tail. The drum is raised from the ground on logs of wood. It is sounded by letting a heavy piece of wood fall against it, and by beating it with double-headed hammers.

There are 30 varieties of bamboo, the smallest six inches and the largest 150 feet tall.

Gutta-percha is no longer obtained by cutting down the trees producing it. M. Rigol claims to have invented a process for extracting the material from leaves and prunings, so that the trees will no longer be sacrificed. A plantation near Singapore is about to be worked on the new method.

The period of growth in various trees has been ascertained by counting the number of rings in a horizontal section of the trunk. By this it appears that the elm lives 300 years ; ivy, 325 ; maple, 516 ; larch, 576 ; orange, 630 ; cypress and olive, 800 ; walnut, 900 ; oriental plane, 1,000 ; lime, 1,100 ; spruce, 1,200 ; oak, 1,500 ; cedar, 2,000 ; and yew, 3,200.

One-sixth of the surface of Belgium is taken up by wood and forest. This is surprising, in the face of the manufacturing character of its industrial population and its being the most densely peopled country of Europe.

STEAM BOILER INSURANCE.

WE take pleasure in directing the attention of the owners of boilers to the advertisement of a London Boiler Inspection and Insurance Company which appears on the sixteenth page of this issue. Judging from the large number of disastrous explosions which have taken place in Canada and the United States, it is about time that steam users were awakened to the fact that an insurance company with a heavy monetary interest in the boiler and premises will see that the boiler is in a safe condition, and that the man in charge of the engine is capable and trustworthy. It is better that the responsibility should be assumed by a company that has a staff of trained engineers, than by the owner of the boiler, who, except in a few cases, is not capable of judging of the condition of his steam plant. Within the last two weeks there were four explosions of steam boilers in Canada, all of which resulted fatally to those in charge of and in the immediate vicinity of the boilers, to say nothing about the loss through damage of the property. The subject of boiler inspection is receiving more consideration to-day than it has for a long time.

HIGHLY COMPLIMENTARY.

WHEN Mr. John A. Reinhardt, the manager for Washington Territory of the Northwestern Mutual Life Insurance Co., was spending his holidays a few weeks ago with friends in Strathroy, he took a policy on his brother with the Ontario Mutual Life Assurance Co., on the twenty payment life, twenty year survivorship distribution plan. On the receipt of the policy he wrote to the company's agent as follows :

"DEAR SIR,—Your favor enclosing my brother's policy was received this morning ; accept thanks. I have read it over carefully and am entirely satisfied with the contract. It is just as you represented it, and strikes me as extremely liberal—but not too much so.

"For a young man I think it is the best policy written, and I believe your company writes the best contract on that plan offered to the insuring public to-day.—I am, yours respectfully, J. A. REINHARDT."
Spokane, Wash., Sept. 7th, 1893.

MR. SEAMEN, of Seamen & Newman, of Wiarton, Ont., when renewing the firm's subscription to the CANADA LUMBERMAN, a week ago, said : "We appreciate the LUMBERMAN very much, and would not want to be without it."

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE lumber trade is enjoying holiday quiet just now. Until late on in January no activity in making sales is anticipated. The completion of stock-taking and balancing up of the year's business will be one of the early operations of the new year. It is thought, that all things considered a fairly satisfactory year's trade will be the record. In regard to work for next season that is now being pushed ahead in the woods, whilst we learn from those who have been out among the shanties that there are large gangs of men at work, yet it seems quite certain that the number of logs cut this winter will be less than last season. Of square timber, it is stated, that the total would not exceed 1,000,000 cubic feet, or not over one-third of what was taken out last season. The owners of limits are not disposed to turn their trees into timber, as it pays better now to cut them into lumber. Those who own limits are disposed to leave the trees standing for a time in the hope of prices advancing as the limits nearer home are cut over.

AMONG THE SHANTIES.

Captain J. O. Blondin, of the steamer Clyde in the employ of Messrs. Gillies Bros., lumbermen, of Carleton Place, plying on the waters of the Temescamingue, who reached the Capital a few days ago, reports all the shanties up the river and lake in full swing and employing as many men as in any other recent season. Gillies, he says, have over 500 men at that part of their extensive farms not including jobbers. There also are equal numbers of men at work in that district for Messrs. McLachlan Bros., the Moore company, Klocks, and Bronson and Weston. The weather up to date has been most suitable for cutting and drawing, raising the anticipation of a large yield this season so far.

INDIFFERENT LENGTHS.

An addition will be put up this winter at the side of the old Perley & Pattee saw mill rebuilt this year by Mr. J. R. Booth. The addition will run the entire length of the present building and will be forty feet in width. It will be used as a splitter mill, but several lath machines will be placed in it.

Mr. R. J. Davidson, after twenty years' service, has severed his connection with R. Thackeray's planing mill. On the eve of his retirement a week ago he was waited on by the contractors, builders and employees of the mill and presented with an engrossed address and handsome gold watch.

Work has commenced on the old McClymont saw mill in New Edinburgh, recently purchased by W. C. Edwards & Co. Its new owners will fit it up for a combined planing mill and sash and door factory on much the same plan as the old McLaren factory was run. The requisite machinery will be put in this winter so that work may be commenced next season.

OTTAWA, Can., Dec. 26, 1893.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THERE is no large trade being done in lumber at the present time, and yet the Hastings mill in Vancouver, is working over-time on export orders, and the Brunette mills, here, are also very busy. We are watching with interest the outcome of tariff regulations in the neighboring country and will be quite satisfied to find the Wilson bill give us free lumber.

General logging operations are dull. Steam logging machines have worked a great change in trade in many parts of the coast. There are four of these machines in operation in the Province. The British Columbia Iron Works, of Vancouver, are now manufacturing two more on orders recently received. It is believed that they will eventually supplant all other methods of logging in British Columbia, as they are especially adapted to the needs of this class of timber. It is a matter of comparative ease for the steam logger, with his steel cable and powerful engine, to yank the huge logs off the Pacific Coast into the water over ground where oxen could not go. Although the machines are extremely dangerous to those who run them, owing to the liability of the cable to get kinked, but few accidents have thus far happened from their use. They require experienced men to operate them and first class wages are necessarily paid.

THE NICARAGUA CANAL.

A recent telegram from Managua states that a British Syndicate is endeavoring to secure from the Nicaraguan government a transfer of the canalisation rights originally possessed by the American company, now wholly or partly insolvent. The syndicate's representatives have been informed in reply, that before any such transfer can be made, it must be shown that the original company is unable to fill its contract. The lumber trade here have no small interest, as has been pointed out in the LUMBERMAN columns before, in the completion of the Nicaragua canal, and would like to see British capitalists take hold, as the belief is that the Canadian interests would be better protected were this so. There is at the same time a feeling that John Bull through over-cautiousness has allowed himself to be forestalled by others.

COAST CHIPS.

Tait's shingle mill, Vancouver, B. C., was nearly destroyed by fire early this month.

The Golden Lumber Co., Ltd., of British Columbia, has been incorporated with a capital of $100,000.

The total cut in British Columbia this season is estimated at 60,000,000 feet, of which 3,000,000 goes to Puget Sound.

Mr. C. M. Beecher, of the B. C. M. T. & T. Co., has returned from a lengthy visit to Eastern Canada, on business.

W. A. Tait, of Orillia, Ont., has been visiting here with his brother, Mr. W. L. Tait, who is conducting a prosperous shingle business at Vancouver.

Work has commenced on a canal to connect the Brunette and Fraser rivers at a point a little above Laidlaw's cannery. The Brunette Saw Mill Company have undertaken the enterprise.

It is reported that the Moodyville Saw Mill Company has sold out its mill near New Westminster to an Australian syndicate. The mill is the oldest and one of the largest in British Columbia.

Rumor has it that the MacLaren-Ross mills may change hands almost immediately and become the property of a syndicate of English and American capitalists. This is one of the finest of modern saw mills, and it is unfortunate that it has remained idle so long.

The Shuswap Milling Company has been formed and incorporated, with a view to take over the business of the Shuswap Milling Company, the Kamloops Water Works Company, and the Greeley Creek Shingle Mill Company. The capital stock authorized will be $100,000, in $250 shares.

It has been learned recently that several ships have been chartered to load at Tacoma, with Washington fir for Germany, consigned to the German Government for bridge building. The cargoes are ordered by a London firm, who have a contract from the French and German Governments to supply them with lumber used for national purposes. Seeing that this lumber goes through British hands, the question is asked here: Why not B. C. fir for Germany rather than Washington?

NEW WESTMINSTER, B.C., Dec. 22, 1893.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN].

HUMPHREY & TRITES, of Petitcodiac, will re-build on the site of the old mill, destroyed a short time since by fire.

Snow is plentiful this year, running from 18 inches to nearly 3 feet deep. Logging operations are impeded because of the hard crust that has formed in some sections.

Lumber shipments from the Miramichi for the season show a decrease of 11,519,216 feet compared with the previous year. There were 111 cargoes this year and 134 last year.

In India, and in Central and South America the white ant and other insects cause serious damage to railway ties. It is believed that New Brunswick red hemlock contains an acid poison that is proof against these pests. The St. John Board of Trade, hoping to develop a satisfactory lumber trade by virtue of this fact, will send samples of red hemlock to India and British Guiana, and have the matter put to test.

A YEAR'S BUSINESS.

The exports of lumber from the Miramichi river, shows a falling off for 1893, as compared with a previous season. The deal trade shows a decrease of more than eleven million feet, viz., from 94,907,523 superficial feet in 1892 to 83,391,307 this year. Taken as a whole, in the opinion of the Chatham Advance, "the season's business has been disappointing. The deals wintering seem to be about the same quality as last winter, but operations in the woods for the winter upon which we are entering are put down at fully one-third less than last season." Palings show an increase of export of 220,000 pieces, equivalent to nearly ten per cent, and spool woods of 200,000, but these are not a large element in the year's transactions. The main facts stand thus: Against 134 vessels of 103,500 tons which carried deals across the Atlantic last year, there were only 111 vessels of 87,736 tons. The American Spool and Bobbin Company, which last year shipped 1,109,000 pieces, spool wood, does not appear to have shipped any this year. The trans-Atlantic shipments from Chatham for the year are thus given:

Shippers, 1893.	No. Vessels.	Tons.	S. F. Deals.
J. B. Snowball	36	25,169	22,081,347
W. M. McKay	21	18,621	18,084,380
F. E. Neale	11	12,847	13,519,604
D. & J. Ritchie & Co.	20	10,964	10,606,238
Wm. Richards	9	8,530	7,334,813
E. Hutchinson	10	7,974	7,109,925
G. Burchill & Sons	4	3,631	4,601,000
Total	111	87,736	83,391,307

Shippers, 1893.	No. Vessels.	Tons.	Pieces.
Clark, Skillings, & Co.	2	1,609 spool wood	793,083
S. W. Bennett	1	739 "	503,439

ST. JOHN, N.B., Dec. 26, 1893.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

A DIFFICULTY is experienced in ascertaining exactly the number of logs rafted to these shores from Canada because of the unwillingness, in some cases, of the receivers to furnish particulars. It is believed, however, that the following figures may be taken as representing very nearly the export of the season now closed:—

To Cheboygan	19,038,188
Alpena	29,000,000
Tawas bay and Saginaw river	155,000,000
Total	203,038,188
" 1892	184,500,000
" 1892	80,000,000

Of the logs shipped to Cheboygan, Thompson Smith's Sons, received 7,081,758 feet; Pelton & Reid, 6,106,454; Cheboygan Lumber Company, 5,223,976; W. & A. McArthur Company, limited, 626,000. To Alpena: 4,000,000 feet belonged to George N. Fletcher & Sons; 11,100,000 feet to Albert Pack, and the remainder to Fletcher, Pack & Co., Fletcher & Gilchrist and to Gilchrist, Burrows & Rust. The chief shipments to Tawas bay and Saginaw river went to the Holland-Emery Lumber Company, Sibley & Bearinger, Saginaw Lumber & Salt Company, Green, Ring & Co., Fisher & Turner, Pitts & Co., Spanish River Lumber Company, A. T. Bliss, Wm. Peter, J. W. Howry & Sons, S. G. M. Gates, Saxe Bros., and one or two other concerns. Our lumbermen here consider this trade has not been without considerable advantage to Canada. In the first place it has meant the investment of a large amount of American capital in Canada; employment has been given to a large staff of hands, and at better wages than had previously prevailed for similar labor, and besides a market has been found for certain grades of Canadian lumber that had hitherto been a drug in the market.

CURTAILMENT OF TONAWANDA SHIPMENTS.

The changes in shipments of lumber from Saginaw river to Buffalo and Tonawanda in 1893 furnish subject for thought and comment. It is not many years past since Bay City and Saginaw furnished a very heavy percentage of the receipts of the pine products at the points named. This trade, however, has been gradually diminishing, until to-day the results strike the thoughtful lumberman with hard significance. In 1886 the Saginaw river shipments were as follows: To Buffalo, 129,236,000 feet; to Tonawanda, 240,639,000 feet. In 1893 our shipments were as follows: To Buffalo, 29,002,000 feet; to Tonawanda, 58,239,000 feet. Rail shipments during this period have increased but not to the extent of nearly covering the diminution of trade shown in the figures here given.

AN OPINION ON FREE LUMBER.

W. J. Beardsley, of Bay City, presents a view of the tariff question, so far as lumber is concerned, that is entertained by not a few lumbermen of this State, and which may not be without interest to the trade in Canada: He says:

"Unless Canadian pine finds a market in this country, it may as well stay in the forests; at least two-thirds of it; and it is in the markets of the United States that they expect to sell their lumber when cut. It costs $1.50 per thousand feet to get the logs from Canada to the Saginaw valley, and costs no more to put the lumber after it is sawed from points like Toledo, Cleveland, etc., on the lake ports, while from this valley to the same ports the cost of delivery of lumber is just as much as from Canada points, which means that with lumber on the free list, that all logs sawed in this valley cut from Canadian pine, sold in competition with lumber at Lake Erie ports, must be sold at $1.50 per thousand feet less profit than the manufacturer who cuts his lumber in Canada, provided that lumber can be manufactured as cheap there as here, and that this can be done, we do not think anyone will dispute. With free lumber, if the manufacturer of lumber in the Saginaw valley sells his stock without having to "shrink" this $1.50 paid for towing his logs to the mills here from Canada, it will mean that the manufacturer who cuts his lumber in Canada raises the price there just this amount, because he has the chance to do it, and if this is done wherein will the "dear people," for whose benefit the framers of this bill are so awfully solicitous, be benefited by free lumber. Lumber placed on the free list means

that three quarters of the labor that is employed in the manufacturing of this product in this valley will be compelled to look elsewhere for work, and with this thing brought about, it means that paying property now in this valley that is now not for sale, can, inside of two years from the time this bill takes effect, be bought for 50 cents on the dollar, and signs of "to rent" will be thicker than the flees on the proverbial dog."

BITS OF LUMBER.

Business is said to be exceptionally dull in Bay City.

The death of O. P. Burt, at Albany, N. Y., a former well-known lumberman of Saginaw, and a relative of Hon. W. R. Burt, is announced.

F. E. Bradley & Co., at Bay City, experimented with running their salt block with coal for fuel, but abandoned the undertaking as too expensive at the present price for the saline product.

I. Billingsley, of Quebec, who paid a visit to Manistee lately, says that the deal trade has been quiet this season. Of a cargo of Michigan deals they purchased last season they have still more than half on hand.

Charles Lee, Saginaw's veteran pioneer lumberman, has just celebrated his eighty-second birthday. He is the father of twenty-one children and his grandchildren number twenty. Mr. Lee's life has been one of ceaseless activity, he being at one time interested in seven planing and saw mills, one in Detroit and two up the shore and three in Saginaw.

The Cook Shingle Mill Company will this winter operate a shingle mill, six miles from Coleman. Mich. The company is composed of Colonel Bliss, A. F. Cook and A. T. Bliss. Colonel Bliss owns a large tract of hardwood, pine and hemlock timber land in that vicinity, and has laid out the village of Blissville there purposing to build up industries and develop the property.

The new officers of the Saginaw Lumber & Salt Company are: President, R. A. Loveland; vice-president, Otis Shepard; secretary, R. H. Roys; treasurer, D. L. White, Jr. The company's mill at Crow Island manufactured the past season 21,000,000 feet of lumber, 3,560,000 lath and 1,200,000 staves and 52,711 barrels of salt. It has 6,800,000 feet of lumber on the docks and 11,000,000 feet of graded lumber in yard for the car trade.

The lumbermen of Alpena closed the season fairly well satisfied with the trade done. The prospects for next year are considered good. All of the mills which were in operation this year will have a full stock of logs. About 35,000,000 feet of Canadian logs will be brought to this port next season, being 6,000,000 more than this year. There is about 50,000,000 feet of lumber on the docks, the largest stock ever carried over. Many cedar camps are in operation, and more cedar will be got out this winter than in any former year. The shipments this year are about one-third less than in 1892.

SAGINAW, Mich., Dec. 26, 1893.

PERSONAL.

Mr. C. Beck, Mayor of Penetanguishene, and big lumberman of the north, has left on a trip to Germany.

Wm. Merrier, partner with H. Veri, in saw and planing mill at Norwich, Ont, died a week ago of La Grippe.

Mrs. Frost, wife of Mr. C. B. Frost, of Frost & Wood, planing mills, Smith Falls, died at Brockville. a week ago.

Mrs. J. B. Coates, wife of the proprietor of the stave mill, at Blenheim, Ont., fell dead a fortnight ago, while in the act of crossing the dining room at her residence.

Wm. D. Lovitt. the millionaire ship owner of Yarmouth, N. S., died on New Year's day. He caught a severe cold while overlooking the repairs of one of his ships in Halifax, and this developed into pneumonia with fatal results.

TRADE NOTES.

The Waterous Engine Works Co., Brantford, Ont., report business brisk. Recent orders include four large marine boilers. Besides these: "Four complete circular saw mills, from 30 to 75 h. p. each; four single sets of saw irons, ten chopping mills, three under running mills, one Prescott direct acting steam feed and three Allis band mills, with their attendant machinery; one Veneer machine, two shingle machines, one pulp wood outfit, and a number of export orders. The company have also made arrangements with the W. E. Hill Co., of Kalamazoo, to manufacture their steam mill specialties."

WE have a notion that the man is about right who said: "Luck is ever waiting for something to turn up; labor turns things up for itself."

THE NEWS.

CANADA.

—A stave factory is under contemplation to be built at Guelph, Ont., by D. S. Clemens.

—An attempt was made a few nights since to burglarize the safe of F. F. Rumball, lumber merchant, London, Ont. The thief was caught red-handed.

—Agents for Nova Scotia lumbering firms are busy hiring teams in New Brunswick. They offer $40 per month, which is above the average paid there this winter.

—John Howard, who started a lumber yard in Whitby two years ago, and in March last assigned, is again in financial difficulties. The business has been conducted since in the name of his wife.

—D. Campbell, formerly of the box factory, Midland, Ont., has taken possession of the shingle mill, lately run by Carruthers & Shaw, Penetang. Mr. Campbell intends adding box machinery in the spring.

—The French River Boom Company, with a capital of $40,000, has applied to the Ontario Legislature for a charter. The company is organized for the purpose of facilitating the transmission of lumber down the French river.

—The Huntsville Lumber Company write, that they are putting in an Allis band mill, it being the first of that kind made by the Waterous Engine Co. Lumber operations in the bush, they report, are well advanced, so far, at least, as their section is concerned.

—It is stated that the largest amount of lumber that has arrived at Oswego, N. Y., in any one day since that city became a port, reached there on December 5th. It consisted of more than 4,000,000 feet of Canadian lumber, and was for the Standard Oil Company.

—The lumber mill of Moffat & McGregor, in Essex county, Ontario, has purchased 4,200,000 feet of logs near Tilbury Centre, in addition to a 1,300 acre tract of timber land in Tilbury East, and will employ several hundred men and many teams in getting the lumber out to be shipped on the lake Erie and Detroit River Railway.

—The mills round and about Fesserton, Ont., have all shut down and most of them have had a good run. The Point mill cut about three million feet of lumber and three million shingles. Mr. Martin's mill, four million shingles; Mr. Kean's mill, four million shingles; McPherson & Laidlaw, about two and a half million feet of lumber; Mr. Carter's mill, about the same.

—Parrsboro is the banner port of Nova Scotia for deal shipments. During the past season 40,792,476 feet were shipped. Of the total Capt. N. C. Norby shipped over 25,000,000 feet for George McKean, of St. John, and M. L. Tucker over 15,000,000 feet for W. M. Mackay. It went to British ports. The total is over 8,000,000 above that of last year. Other ports in the same country (Cumberland) sent large quantities.

—The Manchester Ship Canal (Eng.), was formally opened on New Year's day with a procession of vessels, headed by the barque Sophie Wilhelmine, from Parrsboro, Nova Scotia, laden with lumber. This vessel has been at Garston since November 27th, waiting for this public opening. The directors of the canal will pay her £100 for the delay she incurs in wating for the public opening of the canal, for lowering her masts to pass under the bridges, etc. Her captain will receive a gold watch as a memory of the occasion.

—Judge Davidson, of Montreal, has rendered judgment in the case of Robert Graham vs. the Casselman Lumber Company, Peter Larmouth, as equal, intervenant. The action was to recover damages for alleged loss of profit resulting from the Casselman Lumber company's failure to deliver a certain quantity of wood ordered by Graham. The company had become insolvent since the taking of the action, and the liquidator, Peter Larmonth, had intervened. His honor had estimated the damages at five hundred dollars and rendered judgment accordingly.

—A deputation of lumbermen, including J. R. Booth, of Ottawa, W. J. Poupore, for Pontiac county, R. R. Dobell and H. M. Price, of Quebec, called upon the members of parliament in session at Quebec, December 21st. It was stated that the lumbermen desired to have red pine placed on the same list as spruce for license and stumpage dues, claiming that it is not of more value than spruce. They also asked for a continuance of the present order-in-council, extending to logs 11 inches in diameter the reduced scale of charges for small logs. Mr. Flynn, for the government, stated in reply that the order-in-council privilege would probably be continued for some time, but that the representations respecting red pine would have to be considered.

FIRES AND CASUALTIES.

FIRES.

—The saw mill and sash and door factory of A. W. Hepburn, Picton, Ont., was destroyed by fire during the past month. Loss about $15,000.

CASUALTIES.

—Charles Angus, an employee in Burnett's shanty, at Cedar lake, Ont., was burned to death in his shanty a week ago.

—A young man named James Lafranchise, of Hull, Que., better known as James Michael, was accidently killed in a shanty on the Deux Rivieres by a falling tree.

—Arthur Coone, watchman at the Kelowna saw mill in the Okanagan, B. C., has been so badly crushed by a rolling log that it is feared that he will succumb to his injuries.

—John Featherson, of Bracebridge, Ont., while at work in one of the Muskoka Mill and Lumber Co.'s camps, about eight miles above Muskoka mill, was struck with a falling tree, receiving injuries that will likely prove fatal.

—H. B. Mitchell, a well-known lumberman, who is this winter making a big cut of logs north of Lake Winnipeg, had a narrow escape of drowning a few weeks ago. Accompanied by an Indian, he was driving across the lake, when his ponies disappeared from view in a hole in the ice. Mr. Mitchell lost both his horses, but considered himself lucky in that he and his guide escaped.

—A sad accident occurred near Aylmer, Ont., by which Mr. Henry Hadyen, a young married man, lost his life. He was working in the woods alone cutting wood. Two trees were lodged together, held by a limb. He cut this limb, and it springing back struck him in the neck, breaking his collar-bone. The trees unfortunately came together, crushing him in the chest and killing him instantly. The trees had to be sawn apart before the unfortunate man could be released. He leaves a wife and two children.

NO MORE BELTING!

A NEW Belgian factory, according to a correspondent in that country, uses electricity to transmit its power instead of belting, and a brief description of his advice may prove of interest. The dynamo is 500-horse-power and forms the fly-wheel of the compound Corliss engine. The shop is supplied with 16 motors, and among them are ten 16-horse-power, one 21-horse power and one 37-horse-power motors. Their average efficiency is 87.2 per cent. On some of these motors the load is very variable, and several are exposed to dust and dirt, so that with 90 per cent. efficiency of the dynamos, 98 per cent. of the conductors, 87 per cent. of the motors, the net result is 76.6 per cent. power delivered. As the lost work in belt-driving is practically a constant quantity for all loads, or at least is usually considered to be, the power required to turn the shafting and pulleys, when no work is being done on the machines, it follows that taking 79.4 per cent. as the final output in two cases, one of electrical and the other of mechanical transmission, we find that at a load of 20 per cent. the electrical system would still give 47.2 per cent. useful effect, and the mechanical nothing at all. From careful experiments which have been made in actual practice it has been clearly proved that to drive all the idle machines requires more power than to drive the shops in ordinary course of work; whereas, 11 electrical horse-power is required when driving all the idle tools, only about seven electrical horse-power is needed in ordinary work, of which four electrical horse-power is used to drive the shaft and belts, alone; this shows how small a part of the power produced by the engine is actually used in useful work by the tools. Such satisfactory results of the application of electricity to factory driving must attract attention and will lead to great changes in transmission. Whether in the case of large machine-tools it would not be better to discard shafting and belts altogether, and supply a special motor to each tool, is a question which must be settled for each individual case which may arise; the current would be switched on or off just as easily as the belt is now thrown from the loose to the fast pulley, and vice versa.

A WRITER gives an illustration of the progress of electricity as a mechanical power. He says that twenty-five years ago it was unknown, and that $900,000,000 is now invested in various kinds of electrical machinery.

TRADE REVIEW.

Office of CANADA LUMBERMAN,
January 2, 1894.

THE GENERAL SURVEY.

IT is difficult to enlarge to any extent on the business situation because there is not, as a matter of fact, much business doing. The lumber world over, all the quietness that comes of the holiday season, and the opening days of the new year, is here in larger volume, we fancy, than for many previous seasons. Buyers and sellers are both resting. Here and across the border lumber remains in status quo, to not a small extent, pending the result of tariff legislation, and the trade of the coming spring in the two countries will be regulated, doubtless, by the fate of the Wilson tariff bill.

Local trade in Ontario is as dull, we would suppose, as it well can be, whilst in the city there is practically nothing doing.

From the provinces, British Columbia, Quebec and the Maritime provinces, the reports are of little business.

Following our regular custom the February CANADA LUMBERMAN will contain our annual review of the lumber trade of the Dominion, giving details in as complete form as the information obtained from our correspondents will permit.

UNITED STATES.

The work of balancing accounts and books for the year just closed is being completed by the lumber trade generally throughout the country, and they are just now in a retrospect mood. It can hardly be said that the conclusions reached throw a very large measure of sunshine on the lumber business of the past months. The volume of business done has fallen below expectations and profits are certainly not what had been hoped for. Mills of the country are more generally closed down, says the Northwestern Lumberman, and less lumber is in transit than for ten years previous at this period of the year. It is considered not unlikely that stocks will have to be sold before the year is out at prices showing a reduction on the figures that have been taken into the stock-taking inventory. What next? This is what is concerning lumbermen most. A quiet confidence is felt in the future. It is believed the spring will open out with improved conditions, and at the same time it is noticeable that no great buoyancy exists as to the extent of this looked-for improvement. Our Chicago cotemporary puts it thus: "It will do no good to sulk in our tents; it will greatly help the situation to rise up out of the ashes of despondency and go forward cheerfully."

FOREIGN.

Farnworth & Jardine, of Liverpool, Eng., report in their January wood circular that continued dullness is the order of the trade. "Imports with one or two exceptions have been moderate, still the stocks of all articles are quite ample, in a few instances too heavy. Spruce deals are a little lower, and with this exception there is no change in value to record. Canadian woods: There have been no arrivals during the month; the deliveries of waney and square have been fair, and the stock although sufficient is in a more favorable position than at same time last year; there is no change in value to report. Red pine is in poor demand and there is no change in value, but the stock is sufficient. Oak has not been imported from Canada, there is rather more enquiry, but the stock (which to a large extent consists of United States wood) is still too heavy; there is no change in value to report. Ash has been imported too freely, prices are easier, and the stock is too heavy. Pine deals have moved off more slowly than during the same month the past two years, and the present stock is still too heavy; prices, however, are firmer, although not much advance has yet been established. New Brunswick and Nova Scotia spruce and pine deals: The import has been much too heavy, viz., 7,744 standards, against 1,506 standards in 1892, and 4.112 standards in 1891 for corresponding time, the deliveries have been correspondingly large, but these figures include several consignments which have gone direct up to Manchester. The stock, viz., 18,322 standards, against 15.148 standards in 1892, and 16,478 standards in 1891 same time, is too heavy. Values have declined about 5s. per standard during the month. Pine deals have not been imported, and there is no change in value." Denny, Mott & Dickson, London, Eng., say: "The tone of business has improved owing to the settlement of the coal strike, and the expectation of general trade being favorably affected by the pending tariff legislation in America. Actual consumption has not yet had time to be appreciably increased by these circumstances, which, however, may serve to close the year under less depressing conditions than were recently apprehended. The demand for oak and elm continues dull and stocks are sufficient. Square and waney yellow pine have been little enquired for. An exceptionally fine parcel of about 250 loads of the latter came to hand during the month, and was welcome, owing to there being no good waney left in first hands, and the stocks in second hands being very small for the likely winter needs.

TORONTO, ONT.

TORONTO, January 2, 1894.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1X10 and 12 dressing and better	20 00	22 00
1X10 and 12 mill run	16 00	17 00
1X10 and 12 common	13 00	14 00
1X10 and 12 spruce culls	10 00	11 00
1X10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch	2 50	2 60
XX shingles 16 inch	1 50	1 60
Lath, No. 1		2 15
Lath, No. 2	1 80	1 85

YARD QUOTATIONS.

Mill cull boards and scantling	$10 00	
Shipping cull boards, promiscuous widths	13 00	
" stocks	16 00	
Scantling and joist, up to 16 ft	14 00	
" " " 18 ft	15 00	
" " " 20 ft	16 00	
" " " 22 ft	17 00	
" " " 24 ft	19 00	
" " " 26 ft	20 00	
" " " 28 ft	22 00	
" " " 30 ft	24 00	
" " " 32 ft	27 00	
" " " 34 ft	29 50	
	23 50	
" " " 36 ft	31 00	
" " " 38 ft	33 00	
" " 40 to 44 ft	37 00	
Cutting up planks, 1 and thicker, dry	25 00	28 00
" board	18 00	24 00
Dressing blocks	16 00	20 00
Picks Am. inspection.		30 00

F. M.		
1 1-2 in. flooring, dres'd	26 00	30 00
" " rough	18 00	22 00
" " dres'd	25 00	28 00
1 1-4 in. flooring, undressed, B.M.	16 00	18 00
1 1-4 in. flooring, dres'd	18 00	20 00
" " undres'd	12 00	15 00
Beaded sheeting, dressed	20 00	35 00
Clapboarding, dres'd.		12 00
XXX sawn shingles per M.	2 60	2 70
Sawn lath		2 60
Red Oak	30 00	40 00
White "	37 00	45 00
Basswood, No. 1 and 2	28 00	30 00
Cherry, No. 1 and 2	70 00	90 00
White ash, 1 and 2	24 00	35 00
Black ask, 1 and 2	20 00	30 00

HARDWOODS—PER M. FEET CAR LOTS.

Ash, white,	1 to 2 in.	$18 00	$20 00	Elm, soft	1 " 1½	$11 00	$12 00
" "	2½ to 4	20 00	24 00	" "	2 " 3	12 00	13 00
" black,	1 " 1½	16 00	18 00	" rock	1 " 1¼	14 00	16 00
Birch, sq.,	1 " 4	17 00	20 00	" "	1½ " 3	15 00	18 00
" "	4x4 " 8x8	20 00	22 00	Hickory	1½ " 2	28 00	30 00
" red	x " ½	20 00	22 00	Maple	1 " 1½	16 00	17 00
" "	2 " 4	22 00	25 00	"	2 " 4	17 00	18 00
" yellow	1 " 4	14 00	15 00	Oak, red, p'n	1 " 1½	28 00	30 00
Basswood	1 " 1¼	15 00	16 00	"	2 " 4	30 00	32 00
"	1½ " 2	16 00	18 00	" white	1 " 1½	28 00	30 00
Butternut	1 " 1½	23 00	25 00	" "	2 " 4	30 00	35 00
"	2 " 3	25 00	28 00	" quart'd	1 " 2	48 00	52 00
Chestnut	1 " 2	25 00	30 00	Walnut	1 " 3	85 00	100 00
Cherry	1 " 1½	50 00	60 00	Whitewood	1 " 2	32 00	36 00
"	2 " 4	60 00	65 00				

OTTAWA, ONT.

OTTAWA, January 2, 1894.

Pine, good sidings, per M feet, b.m.	$32 00	40 00
Pine, good strips, " " "	27 00	35 00
Pine, good shorts, " " "	20 00	27 00
Pine, 2nd quality sidings, per M feet, b.m.	20 00	25 00
Pine, 2nd quality strips, " " "	18 00	22 00
Pine, 2nd quality shorts, " " "	15 00	18 00
Pine, shipping cull stock, " " "	14 00	16 00
Pine, box cull stock, " " "	11 00	13 00
Pine, s.c. strips and sidings " " "	11 00	14 00
Pine, mill cull	8 00	10 00
Lath, per M	1 60	1 90

QUEBEC, QUE.

QUEBEC, Jauuary 2, 1894.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	14 @	18
For fair average quality, according to average, etc., measured off.	16	20
For good and good fair average, " " " " "	23	27
For superior " " " " "	28	30
In shipping order " " " " "	29	35
Waney board, 18 to 19 inch " " " " "	30	36
Waney board, 19 to 21 inch " " " " "	37	40

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	45	51

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	30	34

BIRCH.

16 inch average, according to average and quality	20	23

TAMARAC.

Square, according to size and quality	17	19
Flued, " " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $37 to $42 for 3rd quality.
Bright spruce, according to mill specification, $40 to $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality.

BOSTON, MASS.

BOSTON, Mass., Jan. 2.—Were lumbermen to rest their hopes for the future on the trade of the past year they would surely be disappointed. Lumber was dull in 1893, the records showing a reduced volume of trade and profits. But better things are expected despite the record of the past, and it is believed that an improved trade will be ushered in with spring.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$11 00	12 00	¾ inch	$ 9 50	10 00
Coarse No. 5	16 00	16 50	11-16 inch		9 00
Refuse	11 00	12 00	⅝ inch	8 50	9 00
Outs		9 00	Clapboards, sap ext.	52 50	55 00
Boxboards, 1 inch	11 00	11 75	Sap clear	47 00	50 00
⅞ inch	10 00	11 00	Sap, 2nd clear	38 00	40 00
			No. 1	20 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in.	$52 00@54 00		Fine com., 3 and 4 in	42 00	46 00
1¼, 1½ and 2 in.	52 00	55 00	No. 2, 1 in. Fine com.	28 00	30 00
3 and 4 in		60 00	1¼, 1½ and 2 in.	29 00	31 00
Selects, 1 in.	45 00	46 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in.	48 00	50 00	No. 2	36 00	37 00
3 and 4 in.		51 00	No. 3	28 00	30 00
Moulding boards, 7 to 11 in. clear	36 00	38 00	Cut ups, 1 to 2 in.	24 00	32 00
60 per cent. clear	34 00	36 00	Coffin boards	21 00	23 00
Fine common, 1 in.	40 00	41 00	Common all widths	22 00	26 00
1¼, 1½ and 2 in.	41 00	43 00	Shipping culls, 1 in.	15 00	15 50
			do 1¼ in.	15 50	16 50

SPRUCE—BY CARGO.

Scantling and plank, random cargoes	$14 00@15 00	Coarse, rough	12 00@14 00
Yard orders, ordinary sizes	15 00 16 00	Hemlock bds., rough	12 00 13 00
Yard orders, extra sizes	16 00 18 00	" " dressed	12 00 14 00
Clear floor boards	19 00 20 00	Clapbds., extra, 4 ft.	29 00 30 00
No. 2	16 00 17 00	Clear, 4 ft.	30 00 31 00
		Second clear	23 00 24 00
		No. 1	12 00 16 00

LATH.

Spruce by cargo	2 50@2 75

SHINGLES.

Eastern sawed cedar, extra	$3 00	$3 25	Eastern shaved sawed cedar, 1st quality	5 00	
clear	2 50	2 75	2nd quality	4 75	
2nd's	2 00	2 35	3rd "	3 85	4 00
extra No. 1	1 50	1 75	4th "	3 00	3 25
			Spruce No. 1	1 50	

OSWEGO, N.Y.

OSWEGO, N. Y., Jan. 2.—Winter quietness has settled down on the lumber trade for the present. What the future may be it is a little difficult to predict just yet.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$47 00@49 00		
Picking " "	39 00	40 00	
No. 1, cutting up, " "	34 00	35 00	
No. 2, cutting up, " "	24 00	25 00	
In strips, 4 to 8 wide, selected for moulding strips, 14 to 16 ft.	32 00	34 00	

SIDING.

1 in siding, cutting up picks and uppers	32 00@39 00		1¼ in selected	35 00@42 00	
1 in dressing	19 00	21 00	1¼ in dressing	19 00	21 00
1 in No. 1 culls	14 00	15 00	1¼ in No. 1 culls	14 00	16 00
1 in No. 2 culls	12 00	13 00	1¼ in No. 2 culls	12 00	13 00
			1 in. No 3 culls	10 00	11 00

1X12 INCH.

12 and 16 feet, mill run	21 00	24 00
12 and 16 feet, No. 1 and 2, barn boards	19 00	20 00
12 and 16 feet, dressing and better	27 00	31 00
12 and 16 feet, No. 2 culls	15 00	16 00

1X10 INCH.

12 and 13 feet, mill run, mill culls out	21 00	23 00
12 and 13 feet, dressing and better	26 00	28 00
1X10, 14 to 16 barn boards	18 00	19 00
12 and 13 feet, No. 1 culls	16 00	17 00
12 and 13 feet, No. 2 culls	15 00	16 00
14 to 16 feet, mill run mill culls out	21 00	23 00
14 to 16 feet, dressing and better	26 00	28 00
14 to 16 feet, No. 1 culls	17 00	18 00
14 to 16 feet, No. 2 culls	15 00	18 00
10 to 13 feet, No. 3 culls	11 00	12 00

1¼X10 INCHES.

Mill run, mill culls out.	$22 00@25 00	No. 1 culls	17 00 18 00
Dressing and better	27 00 35 00	No. 2 culls	15 00 16 00

1X4 INCHES.

Mill run, mill culls out	17 00 21 00	No. 1 culls	14 00 15 00
Dressing and better	24 00 30 00	No. 2 culls	13 00 14 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20 00 25 00	6, 7 or 8, No. 1 culls	16 00 17 00
6, 7 or 8, drsg and better	25 00 30 00	6, 7 or 8, No. 2 culls	14 00 15 00

SHINGLES.

XXX, 18 in pine	3 70	3 90	XXX, 18 in. cedar	3 50	3 71
Clear butts, pine, 18 in.	2 70	2 90	Clear butt, 18 in. cedar	2 50	2 71
XXX, 16 in. pine	3 10	3 30	XX, 18 in. cedar	1 90	2 00
Stock cedars, 5 or 6 in.	4 50	5 00			

LATH.

No. 1, 1¼	2 30	No. 2, 1¼	2 25
No. 1, 1 in.	1 80		

BUFFALO AND TONAWANDA, N.Y.

TONANAMDA, N. Y., Jan. 2.—Dealers are winding up stock-taking and preparing for the trade of the new year. This advantage exists in Buffalo and Tonawanda that well assorted stocks are held in the yards better than for several years, making it quite possible to nicely complete such orders as may come along.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in.	$47 00	50 00	Shelving, No. 1, 13 in and up, 1 in.	31 00@33	00
2½ and 3 in.	55 00	57 00	Dressing, 1¼ in.	26 00	28 00
4 in.	58 00	60 00	1¼x10 and 12.		28 00
Selects, 1 in.	38 00	40 00	1½ in.	24 00	25 00
1¼ to 2 in.	40 00	42 00	2 in.	26 50	28 00
2½ and 3 in.	50 00	52 00	Mold st'ps, 1 to 2 in.	33 00	35 00
4 in.		54 00	Barn, No. 1, 10 and 12 in.	23 00	24 00
Fine common, 1 in.	35 00	38 00	6 and 8 in.	22 00	23 00
1¼ and 1½ in.	37 00	38 00	No. 2, 10 and 12 in.	18 00	19 00
2 in.	39 00	40 00	6 and 8 in.	18 00	19 00
3 in.		45 00	No. 3, 10 and 12 in.	14 00	16 00
4 in.		45 00	6 and 8 in.	14 50	15 50
Cut'g up, No. 1, 1 in.	28 00	30 00	Common, 1 in.	16 00	18 00
1¼ to 2 in.	35 00	36 00	1¼ and 1½ in.	18 00	20 00
No. 2, 1 in.	18 00	20 00	2 in.	20 00	22 00
No. 2, 1¼ to 2 in.	24 00	26 00			
No. 3, 1¼ to 2 in.	18 00	19 00			

BOX.

1x10 and 12 in. (No 3 out)		14 00	Narrow	13 00@14	00
1x6 and 8 in (No. 3 out)		13 50	1¼ in.	15 00	18 00
1x13 and wider.	15 00	17 00	1½ in.	15 00	18 00
			2 in.	15 00	18 00

SHINGLES.

18 in. XXX, clear.	3 75	4 00	16 in., *A extra.	2 60	2 70
18 in. XX, 6 in. clear.		2 85	16 in. clear butts.		2 10

LATH.

No. 1, 4 ft.	2 50	2 60	No. 1, 3 ft.		1 10
No. 2, 4 ft.		1 95			

ALBANY, N.Y.

ALBANY, N. Y., Jan. 2.—There is not much stir among lumbermen here at present. They are taking things easy. Trade is dull, though indications point to at least a fair trade later in the year.

PINE.

2½ in. and up, good	$56	$60	10-in. common	$15	$16
Fourths		58	12-in. dressing and better	28	34
Selects		50	Common	15	17
Pickings		45	1¼-in. siding, selected, 13 ft.	40	45
1¼ to 2-in. good	52	55	Common	15	17
Fourths	47	50	1-in. siding, selected	38	42
Selects	42	45	Common	15	17
Pickings	37	40	Norway, clear	22	25
1-in. good	52	55	Dressing	16	18
Fourths	47	50	Common	11	15
Selects	42	45	10-in. plank, 13 ft., dressing	c.	c.
Pickings	37	40	and better, each	42	55
Cutting-up	22	27	10-in. plank, 13-ft. culls, each	23	25
Bracket plank	30	35	10-in. boards, 13 ft., dressing		
Shelving boards, 12-in. up	30	32	and better, each	28	32
Dressing boards, narrow	19	21	10-in. boards, 13-ft. culls	17	21

LATH.

Pine		$2 40	Spruce	$2 30	$2 40

SHINGLES.

Sawed Pine, ex. xxxx	$4 40	$4 54	Bound butts, 6x18	$5 90	$6 00
Clear butts	3 15	3 25	Hemlock	2 15	2 30
Smooth, 6x18	5 50	5 60	Spruce	2 20	2 30

SAGINAW, MICH.

SAGINAW, Mich., Jan. 2—It is useless to say trade is good, because it is not. Lumbermen are quietly resting and taking note of tariff affairs and anything else that is likely to affect the business of the future.

FINISHING LUMBER—ROUGH.

Uppers, 1, 1¼ and 1½	45 00	Fine common, 1 in.	35 00
2 in.	46 00	1¼ and 1½ in.	36 00
Selects, 1 in.	40 00	2 in.	36 00
1¼ and 1½	41 00	C, 7, 8 and 9 in.	30 00
2 in.	41 00		

SIDING.

Clear, ½ in	24 00	C, ½ in.	19 00
⅞ in.	48 00	⅞ in.	34 00
Select, ½ in.	21 00	No. 1, ½ in.	13 00
⅞ in.	40 00	⅞ in.	23 00

TIMBER, JOIST AND SCANTLING.

2x4 to 10x10, 12, 14 and 16 ft.	$11 00	20 ft.	13 00
18 ft.	13 00	22 and 24 ft.	15 00

For each additional 2 ft. add $1; 12 in. plank and timber $1 extra; extra for sizes above 12 in.

SHINGLES.

XXX 18 in. Climax	3 65	18 in. X (cull)	1 00
XXX Saginaw	3 40	XXX shorts	2 25
XX Climax	2 25	XX	1 50
18 in. 4 in. c. b.	1 25		

LATH.

Lath, No 1, white pine	2 25	Lath, No. 2, W. pine, Norway	1 65

NEW YORK CITY.

NEW YORK, Jan. 2.—Only dullness can be written of the lumber market here. The year just closed was full of discouragements, and its effects are being carried to some extent into 1894. Still the trade are hopeful that the new year will throw off the shadow ere long.

WHITE PINE—WESTERN GRADES.

Uppers, 1 in.	$44 00@45	00	Coffin boards	20 00	22 00
1¼, 1½ and 2 in.	46 00	47 00	Box, in	$17 00@17	50
3 and 4 in	55 00	58 00	Thicker	17 50	18 50
Selects, 1 in.	40 00	41 00	Ccil'g, base, fig. No. 1	40 00	42 00
1 in., all wide	41 00	43 00	No. 2	35 00	37 00
1¼, 1½ and 2 in.	43 00	44 00	No. 3	24 00	26 00
3 and 4 in.	52 00	53 00	Shelving, No. 1	30 00	32 00
Fine common, 1 in.	36 00	37 00	No. 2	25 00	27 00
1¼, 1½ and 2 in.	38 00	40 00	Molding, No. 1	36 00	37 00
3 and 4 in.	46 00	48 00	No. 2	34 00	36 00
Cutting up, 1 in. No. 1	28 00	30 00	Bevel sid'g, clear	22 50	23 00
No. 2	21 00	23 00	No. 1	22 00	22 50
Thick, No, 1	29 00	32 00	No. 2	20 00	20 50
No. 2	24 00	26 00	No. 3	16 00	17 00
Common, No. 1, 10 and 12 in.	22 00	23 00	Norway, c'l, and No. 1	23 00	25 00
No. 2	20 00	21 00	No. 2	20 00	22 00
No. 3	17 00	18 00	Common	18 00	19 00

A REPRESENTATIVE of the Burrard Inlet Red Cedar Lumber Co., of Port Moody, B. C., referring to an interview in this page says: "We notice an item in your December issue in which Mr. W. J. Brooks, of Grimesthorp, Algoma, claims to have an idea that the shingles of British Columbia will not be liable to enter into competition with pine shingles manufactured in Ontario. He bases his conclusions on the assumption that, according to his opinion, the cedar shingles are injured by kiln drying. To us this is an original assumption, as we have yet to learn how lumber, especially cedar shingles, rift or quarter sawn, as these are, has been injured by the process of kiln drying. The fact is we believe it to be a benefit, for the reason that kiln dried shingles shrink no more after being laid, while the pine shingles of Ontario, which are not kiln dried, will shrink, leaving openings quite sufficient to cause leaks. We have seen British Columbia cedar shingles which had been on a roof for thirty-five years. These were as sound as the day they were laid. This, we think, speaks volumes for the superiority of British Columbia shingles."

* * * *

J. D. Leary, a New York lumberman, who attained some familiar connection with the Joggins' raft, when in Montreal a few days ago said to an interviewer in answer to a question as to whether there was anything new in the lumbering business there, "No, the Maritime provinces are dead, or might as well be dead. Of course the towns are all right, but in the country" (Mr. Leary gave a highly suggestive shrug of the shoulders), "why, I have lumbermen, sixty or seventy of them, working for twenty-five or twenty-six dollars a month, and glad to get it. They are well fed, of course. There is no business doing down there though." He intends visiting the provinces shortly.

* * * *

In the opinion of Mr. T. Charlton, of the firm of J. & T. Charlton, of Tonawanda, N. Y., with whom I chatted the other day, the Wilson tariff bill in most leading particulars is likely to undergo radical changes before it becomes law, if this should ever be the case. "The interests even of the Democrats themselves are so varied, local conditions causing members of the same party to take entirely opposite views on particular clauses, that I can see no liklihood," said Mr. Charlton, "of a majority agreeing on the bill as it is now framed. So far as lumber is concerned the opposition from the Southern States and also from the Pacific coast is strong and aggressive, and there will be no free lumber if these sections can carry any important influence. If the bill does become law I do not anticipate that it will make any difference in price of lumber. Part of saving in duty will go to stumpage, and the rest will be absorbed in freights and other expenditures." Mr. T. Charlton, as our readers will likely know is a brother and partner of John Charlton, a member of the House of Commons, and the firm do business both at Little Current and Tonawanda.

* * * *

Among the callers at my sanctum the early part of the year was Mr. R. Simpson, of Collingwood, who is home for a short period from Newfoundland. Mr. Simpson is engaged in saw mill building in the sister colony, having during the past year erected several modernly-equipped mills. He tells me there is a considerable quantity of timber in Newfoundland, though little effort has been made to develop a lumber business there. The prevailing timber is a wood that compares somewhat with our poplar or basswood. Lumbering is more difficult there than in Canada from the fact that the forests are scattered. Besides, skilled labor, even in bush work, is hard to secure. The natives are a well meaning people, but they are indolent and entirely wanting in ambition. Little else, Mr. Simpson tells me, is to be expected from them because of the conditions under which they exist. They are quite bereft of the spirit of independence, being practically under the domination of the merchant-classes, who are the real rulers of the country, pay them what they choose for their labor, and keep them constantly in their debt. "I surprised a young man last summer," said Mr. Simpson, "who had done some work for me. When I tendered him his wages in cash, the young fellow said, 'I have worked steadily for eight years, and never before had my wages paid in money.' All wages are paid in accounts at the stores, and prices, I need hardly say, are not the lowest." A new railroad is being built through the country at the present time to strike a point that will help to shorten the ocean route. Mr. Simpson tells me that this work is having an influence in creating a demand for lumber, and is resulting in the breaking up of forest lands hitherto untouched.

* * * *

Pen pictures of the men who have made their mark in some of the various walks of life have a peculiar interest for almost anyone. We are even prone to read of the fellow who has become notorious because of his bad deeds. Perhaps his life is the most interesting to not a few. But we do not find these sort of chaps in the lumber business, so anv suggestion, on these lines, is not pertinent in the premises. A racy little sketch of Alex. Gibson, New Brunswick's lumber King, written by "Salmagundi," or in more intelligible terms, now that he has revealed his own identity, Mr. Met. L. Saley, the presiding editorial genius of the Northwestern Lumberman, has come under my notice. Were you to meet Mr. Gibson on the street there would be nothing, we are told, in his appearance to lead you to think that he was one of Canada's most successful business men; or, indeed, that he was a man of any particular prominence. He is 65 years of age, or thereabouts, inclined to heaviness, with white hair, mustache and beard. One of his chief characteristics is that he minds his own business. The commercial agencies rate him at over $1,000,000, and with a credit that would buy the earth if he wanted it. This man came from the ranks of the laborers, and there isn't a man who works harder than Gibson did, or, probably, who is poorer than he was. A sprig of nobility visited Marysville, Gibson's home, and having been shown over the town and through the industrial establishments, asked the proprietor how he had attained such marvellous success in life. Without a word the old man threw his hat down, stripped off his coat and took his place at the edger, and having edged four or five deals he turned to the visitor, and with fire in his eye and a glow in his cheek, answered the question: "By hard work, sir!" If there is a man in New Brunswick who is bound to have his way it is this so-called "lumber king." He means always to be right, and having arrived at a conclusion, nothing short of death would stop him from carrying out his plans. He is a very devout Methodist, and a difference arose between him and some of the members of the church, as to church management. "Very well," he said, "you run your church to suit you and I will have one and run it to suit myself." He built a church at a cost of $15,000, placed a fine pipe organ in it, and then he was lacking an organist. Hearing of a German professor, who was playing in a church down at St. John, he went to see him, and asked him how much of a salary he was getting. "Six hundred dollars," said the musician. "Come up to Marysville and play in my church, and I'll give you twelve hundred," said Gibson. He went, and for three or four years was the organist in Mr. Gibson's church; but doing something that lead his employer to think he was getting "too big for his boots," he was discharged as quickly as he had been employed. The old lumberman has a soft place in his heart for music; he has a piano and pipe organ in his house, but does not play. It is said that about the nearest route to the old man's soul is through the channel of music. Marysville, a few miles above Fredericton, is Mr. Gibson's town. It was built by him and is run by him. The place has about 2,000 inhabitants, mostly employed in the Gibson mills and factories.

THE MATTER-OF-FACT VIEW.

THE Boston Manufacturers' Gazette advances some very practical views touching the question of forest management, taking the middle ground between the sentimental and the material question of forest preservation. As our New England contemporary remarks, "the sturdy lumberman who owns one hundred acres of timber growth, and whose business in life is to convert the same into logs and wood, must needs study the practical side of the forestry question. He has but little appreciation of the poetic side of the tree, its foliage and scenic effect. He must be approached, if he is to be converted from the error of his ways, by practical arguments in favor of a more modern, rational and intelligent management of his property."

The lumberman or timber-land owner has the undoubted legal right to destroy every stick of timber in his woods, if he so please, but convince him that it is for his interest to cut only the matured and full-grown timber, and leave the young trees to grow, and he may be converted to the Old-World science of forestry. If all a man's capital be invested in timber lands, and he cannot sell the land, he may be compelled to realize on the stumpage and convert the growth into cash.

The Gazette reasons thus: That while the owner of mature trees in the forest loses money in permitting them to stand after their growth has ceased, the lumberman is also unwise who makes a clean cut of his forest growth, when the young and immature trees left to nature will pay him far greater profits than if destroyed at the same time the mature specimens are marketed.

The lumberman may cut fitly to one hundred ripe trees from an acre and still leave twice as many immature trees growing for future cullings.

In either the æsthetic or the practical view, it is the part of common sense to simultaneously thin out and preserve—to harvest the lumber crop under proper conditions and at the proper times. The lumberman does not always realize the future value of his forest trees. He works for the future alone. Capitalists, and those who are willing and able to wait, should be induced to invest in forest lands from a financial standpoint, with the expectation of large profits in the crop, and with the prospect of advancing values as the supply diminishes.

SAFEGUARDS FOR WORKING ELECTRICIANS.

THE announcements that a means has been invented of rendering any wire charged with electricity instantly dead opens up the question recently discussed in an English electrical journal of the better protection against accidents from heavy currents of workmen in electric light and power stations. It is suggested, among other improvements, that the insulation resistance of the rubber gloves and boots worn by men engaged in high pressure works should be periodically tested. Rubber gloves and boots are subject to wear and tear, and however good the insulation may be when new, it rapidly deteriorates. It is stated that gutta-percha molded boots, with no irons in them, are more reliable than rubber boots, as they retain their insulating properties much longer. It is suggested that all high pressure bars, switches and fuses shall be boxed in, so that the opening of the box would cut off the current and render it impossible for it to be turned on while the box was open. Again, manufacturers are compelled to securely fence in all belts, wheels and other machinery, and high pressure terminals, bars or switches should be placed under similar restrictions. What is wanted is a simple signal to indicate to the most ignorant workman when a bar, or terminal or switch is charged and so warn him off, Such a device would excellently well supplement the use of the newly-invented electric "cut-off" in increasing the safety of workmen in electric light stations.

DIFFERENT WOODS COMPARED.

IN a lecture recently delivered before the Railway Institute, New South Wales, on the values of different timbers used for railway purposes, it was stated that timber, when perfectly dry, lost about one-third of its weight and shrunk in breadth in drying, as follows:

English Oak	1–12
Riga fir	1–32
Dantzic	1–38
Elm	1–24
Yellow pine	1–38
Pitch pine	1–40

In the comparisons, English oak was taken as the standard of measure of the qualities of strength, stiffness, and toughness, and the following table presented as a result of the experiments:

Variety.	W't cu. ft.	Strength.	Stiffness.	Toughness.
British oak	45 to 58 lbs.	100	100	100
Baltic Riga oak	43 to 54 lbs.	108	93	125
American oak	37 to 47 lbs.	86	114	117
Dantzic Oak	42 to 53 lbs.	107	117	99
Elm	35 to 46 lbs.	32	78	86
Pine or fir	26 to 42 lbs.	80	114	58
Poplar	33 lbs.	86	66	112
Mahogany	35 to 53 lbs.	96	93	99
Tamarac	32 to 40 lbs.	102	80	130
Walnut	50 lbs.	90	70	110

WITHIN the Brule river woods, Wis., are located eight large camps, and the output of logs is expected to be the largest on record.

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TORONTO - ONT.

LUMBER SEASON AT TONAWANDA.

THE Herald, of Tonawanda, N.Y., which is credited with presenting every year a very correct summing up of the trade of that important lumber centre, makes the following statement of the business for the year now closed:

"The falling off in the volume of receipts of lumber and forest products this year is attributable partly to local causes, such as the labor strike, which diverted to other ports many cargoes that would otherwise have been handled here, and partly to the decline in the forwarding business with Albany, which has hitherto been an important factor in swelling our aggregations. Indeed, the ratio of decrease is in exact proportion to the lots of stock for re-shipment to that particular point. The demonstration is obtained by comparing the custom house reports on both sides of the creek with those of last year. The receipts in the Niagara district vary but 1,500,000 feet, while those in the district show a discrepancy of over 66,000,000 feet. The amount of lumber delivered and handled in this port for actual trade purposes is therefore practically as large as last year, which was considered an unusually active and profitable one. This showing is encouraging in the face of more or less supposable adversity, and is convincing evidence of the stability of the white pine trade, for which Tonawanda is the head centre for the entire eastern market. It also speaks well for future prospects, as prices have retained a firmness through it all of which few other commodities can boast.

"The receipts of lumber at this port from all sources, lake and rail, during the past 12 months, will aggregate 460,605,000 feet. This is 66,000,000 feet less than in 1892.

RECEIPTS FOR A SERIES OF YEARS.

	LUMBER.	SHINGLES.	LATH.
1873	104,909,000	1,112,000	1,258,000
1874	144,754,000	10,822,000	1,506,000
1875	155,384,805	13,088,000	6,559,200
1876	207,728,327	18,907,500	6,137,700
1877	221,867,007	23,249,400	5,126,000
1878	206,055,122	21,435,500	3,629,300
1879	250,699,043	30,122,000	5,606,400
1880	323,370,814	22,920,000	1,249,600
1881	415,070,913	24,271,000	282,000
1882	433,241,000	38,312,000	419,030
1883	398,871,853	55,217,000	6,031,870
1884	493,268,223	66,185,000	16,367,000
1885	498,631,000	52,004,000	7,652,000
1886	505,425,400	52,825,000	17,886,000
1887	501,237,000	53,435,000	4,096,000
1888	569,522,850	64,903,000	16,617,000
1889	676,017,200	68,712.000	11,563,000
1890	718,650,909	52,232,300	13,039,600
1891	505,512,000	52,561,000	6,209,800
1892	498,005,000	42,809,300	6,153,245
1893	430,249,000	35,257,499	12,292,600

"The receipts of lumber by rail foot up 30,356,000 feet, of which the New York, Lake Erie & Western brought in 12,480,000 feet, the New York Central & Hudson River 17,161,000 feet, and the West Shore and Lehigh Valley 715,000 feet."

Duties collected on foreign lumber amount to $8,048,59.

A GENERAL dealer and wood merchant of Hudson, Que., Albert Vipond, who had branches at Vars and Wendover, Ont., is in embarrased shape, owing to his wide-spread condition, and has been interviewing Montreal creditors with the view of getting a compromise at the rate of 60 per cent. secured. Liabilities foot up to about $20,000 direct, and $8,000 indirect. He shows a nominal surplus, but of very unrealizable character.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 27th of each month to insure insertion in the following issue.

WE WANT ALL KINDS OF HARDWOODS. Will pay cash. ROBERT THOMSON & CO., 103 Bay Street, Toronto.

FOR HEMLOCK, DIMENSION LUMBER, hardwood flooring, cedar shingles, piles, sawdust, etc., write J. E. MURPHY, lumberman, Hepworth station, Ont.

WANTED

BASSWOOD LUMBER, BY CAR OR CARGO. Offers invited. Address "Baswood," care of CANADA LUMBERMAN.

LUMBER AND SHINGLE MILL FOR sale in the Village of Dundalk; this is good new 50-horse power mill; will run lumber and shingles at same time; plenty of stock can be bought in the locality for four or five years at a reasonable rate. Apply to JOHN IRWIN, Brampton, Ont.

WANTED SITUATION

AS BAND SAW FILER, NINE YEARS' EXperience; also thoroughly practical on Rotarys. Steady and temperate; good references. Best offer in December for next season and earliest to work, gets me.—H, HOWE, South Boardman, Mich.

SAW MILL CAPACITY 15,000 FEET

BEST WATER AND RAILWAY FACILITIES for shipping. Hard and soft wood limits in connection. Will be sold cheap. Address "W," CANADA LUMBERMAN.

COMMISSIONS

THE ADVERTISER CAN SECURE BIG prices for black ash, basswood, elm and maple in New York and surrounding markets, best of references given. Send lists of stock on hand. No shipment on consignment. Bona fide orders sent you before shipment.

Address "Commissions," care of CANADA LUMBERMAN.

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About three miles of 25 lb. T-Rail; 12 Logging Cars complete, and a Shay Locomotive

IN GOOD CONDITION, FOR SALE ON ADvantageous terms.

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I Baldwin, 3-foot guage, 18-ton Locomotive and Tender, in good order.

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Photographs, prices and full description mailed on application.

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THESE LOGS ARE THE FIRST CUT FROM new timber limits; choice quality; are cut principally 16 feet long, and average from 5 to 6 logs per 1,000 feet, and can be delivered in the Georgian Bay by the 1st of June, 1894.

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NEW AND SECOND-HAND STEEL AND iron rails for tramways and logging lines, from 12 lbs. per yard and upwards; estimates given for complete outfit.

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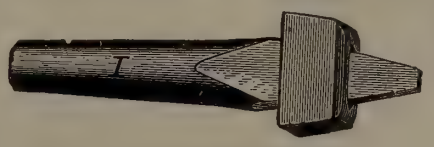

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Ottawa, Ont	Ottawa	Booth, J. R.	Lumber, Wholesale and Retail	Steam, Circular and Band Mill
Ottawa, Ont	Ottawa	Bronson & Weston Lumber Co.	2 Sawmills, White and Red Pine, Wholesale	Water, Gang and Band, 450m
Ottawa, Ont	Ottawa	OTTAWA LUMBER CO.	Lumber, Pine, Spruce, Hemlock, Wholesale	
Parry Sound, Ont	Utterson	Conger Lumber Co.	Lumber, Wholesale and Retail	
Parry Sound, Ont	Parry Sound	Parry Sound Lumber Co.	Saw, Shingle and Lath Mills, Pine, Wholesale	Water, Gang, Circular, Saw 90m, Shingles 70m, Lath 30m
Muskoka Mills, Ont	Midland	Muskoka Mill and Lumber Co., Head Office, Arcade, 24 King st. w., Toronto	W. Pine Lumber, Lath and Bill Stuff, all lengths.	2 Mills, Water, 1 Band, 2 Gangs and 3 Circulars.
Alexandria, Ont	Alexandria	McPherson, Schell & Co.	Cheese Box Factory, Pine, Spruce, Cedar	
Almonte, Ont	Almonte	Caldwell, A. & Son	Sawmill, Pine, Lumber, Hemlock, Hardwoods	Circular, 3m
Barrie, Ont	Barrie	Dymont & Mickle	Sawmill, Pine, Spruce, Cedar, Hardwoods	Steam, Circular, 40m
Barrow Bay, Ont	Wiarton	Barrow Bay Lumber Co., Limited	Saw, Shingle and Heading Mill, Pine, Cedar Oak, Oak Railway Ties, Paving Blocks	Steam, Circular, 16m
Blind River, Ont	Blind River	Blind River Lumber Co.	2 Saw, Sh. and Lath Mls., Pine, Hem., Bl. Birch	Stm., Band, Cir., S. 75m, Sh. 60m
Bobcaygeon, Ont	Fenelon Falls	Boyd, Mossom & Co.	Lumber, Wholesale and Retail	
Barrie, Ont	Barrie	Burton Bros.	Lumber, Wholesale and Retail	
Waubaushene, Ont	Waubaushene	Georgian Bay Consolid. Lumber Co. Hd. office arcade 24 King st. w., Toronto	Pine only.	Waubaushene mill, stm., 200m; Pt. Severn mill, water, 120m
Calabogie, Ont	Calabogie	Carswell, Thistle & McKay	Lumber, Wholesale and Retail	
Callander, Ont	Callander, G.T.R.	John B. Smith & Sons Head Office, Strachan Ave., Toronto	White and Red Pine Lumber, Bill Stuff, Lath and Shingles	Steam, 2 Circular, 80m
Collins Inlet, Ont	Collins Inlet	Collins Inlet Lumber Co.	Lumber, Pine, Oak, Ash, Birch, Whol. and Ret.	
Glammis, Ont	Pinkerton	McIntyre, N. & A.	Saw, Shingle and Lath Mill, Timber Lands, Hemlock, Pine, Lumber, Hardwoods	Steam, Cir., Saw 14m, Sh. 20m
Hamilton, Ont	Hamilton	BRADLEY, MORRIS & REID CO.	Lum., Tim., Pine, Hem., Hwds., Whol. and Ret.	
Huntsville, Ont	Huntsville	Heath, Tait and Turnbull	Sawmill, Pine, Spruce, Hemlock, Hardwoods	Steam, Circular, 25m
Hamilton, Ont	Huntsville and Katrine	Thomson, Robert & Co.	Sawmill, Pine, Spruce, Hardwoods	Steam, Circular, 4m
Keewatin, Ont	Keewatin	Dick, Banning & Co.	Sawmill, Pine, Hardwoods, Wholesale	Steam, Circular
Keewatin, Ont	Keewatin	Keewatin Lumber & Mfg. Co.	Saw, Lath, Sh. and Pl. Mill, Moving Posts, Pine	Water, Band and Circular, 100m
Lakefield, Ont	Lakefield	Lakefield Lumber Mfg. Co.	Lumber, Wholesale and Retail	
Little Current, Ont	Sudbury	Howry, J. W. & Sons.	Lumber, Wholesale and Retail	
London, Ont	London	Gordon, James	Exp. and dlr. in Am. Hwds, made to specification	
Longford Mills, Ont	Longford	Longford Lumber Co.	Saw and Plan. Mill, Tim. Lands and Logs, Pine	Steam, Band and Circular, 100m
Norman, Ont	Norman	Minnesota & Ontario Lumber Co.	Lumber, Wholesale and Retail	
Louise, Ont	Elmwood, G.T.R.	S. B. Wilson & Son	Hardwoods, Shingles, Lath, Handles	Steam, Circular, 20m.
Toronto, Ont	Warren, C.P.R	The Imperial Lumber Co., Limited	Pine	80 M. per day, Stm., 2 Cir. Saws
Toronto, Ont	Cache Bay, Ont.	Davidson, Hay & Co.	W. Pine, Lath, Shingles, Dim. Timber, Car Sills	Stm, 2 Band, Cir. & Gang, 140m
Toronto, Ont., Mill: Stony Lake	Lakefield	S. J. Wilson & Co.	Pine and Hardwood, Wholesale	Steam, Circular, 15m.
Toronto, Ont	Toronto	F. N. Tennant	Lumber, Wholesale	
Toronto, Ont	Toronto	Donogh & Oliver	Lumber, Wholesale	Com.
Toronto, Ont	Toronto	Victoria Harbor Lumber Co.	3 Saw, Shingle and Lath Mills, White Pine, Whol.	Stm., Cir., Gang and Band, 140m
Toronto, Ont	Toronto	W. N. McEachren & Co	Lumber, Wholesale	Com.
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Wiarton, Ont	Wiarton	Miller, B. B.	3 Sawmills, Lumber, Barrel Heads	Stm., Wr., Cir., Port. & Sta., 10m
Buckingham, Que	Buckingham	Ross Bros.	2 Sawmills, Pine, Spruce, Hardwoods	Circular, Gang and Band, 180m
Toronto	Toronto	DeLaplante & Bowden	Pine and Hardwood Lumber, Whol. and Retail.	
Montreal, Que	Montreal	Dufresse, O. Jr. & Frere	Sawmill, Pine, Spruce, Hemlock, Hdwds., Whol.	Steam, Circular and Band, 50m
Montreal, Que	Montreal	SHEARER & BROWN	4 Sawmills, Oak, Ash, Elm, Pine, Hem., Dim.	2 Stm., 2 Wat., Band, Cir., 40m
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New Westminster, B.C.	New Westminster	Brunette Sawmill Co.	Saw and Planing Mills, Sash, Doors and Blinds, Fir, Cedar, Spruce, Hardwoods	Steam, Gang and Circular
Canterbury, N.B	Canterbury Stn.	James Morrison & Son	Sawmill, Pine, Hardwoods	Steam, Circular, 38m
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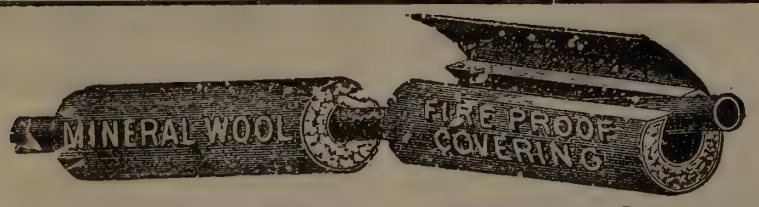

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Yours truly,
(Signed) N. H. STEVENS

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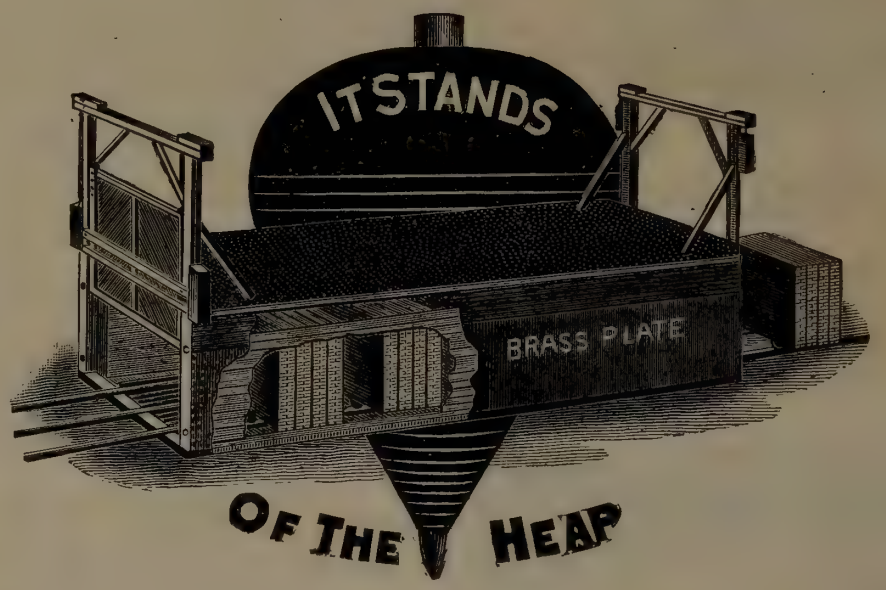

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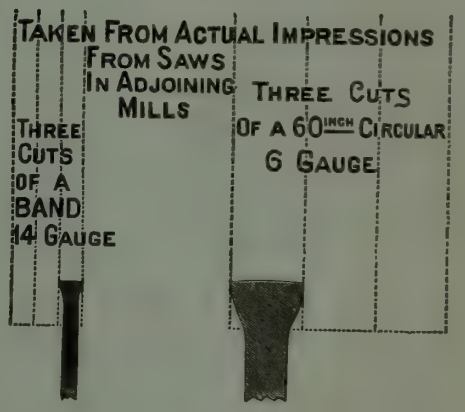

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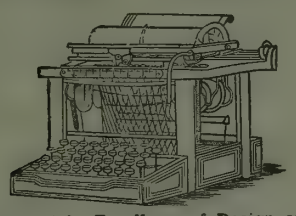

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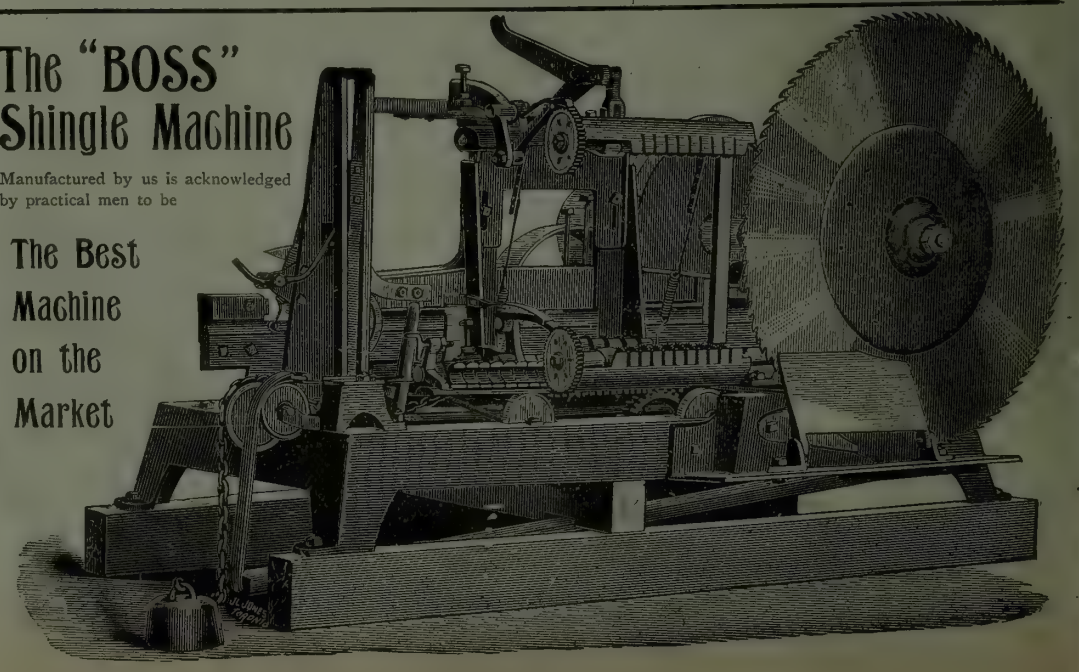

THE CANADA LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XV. NUMBER 2. | TORONTO, ONT., FEBRUARY, 1894 | TERMS, $1.00 PER YEAR SINGLE COPIES, 10 CENTS

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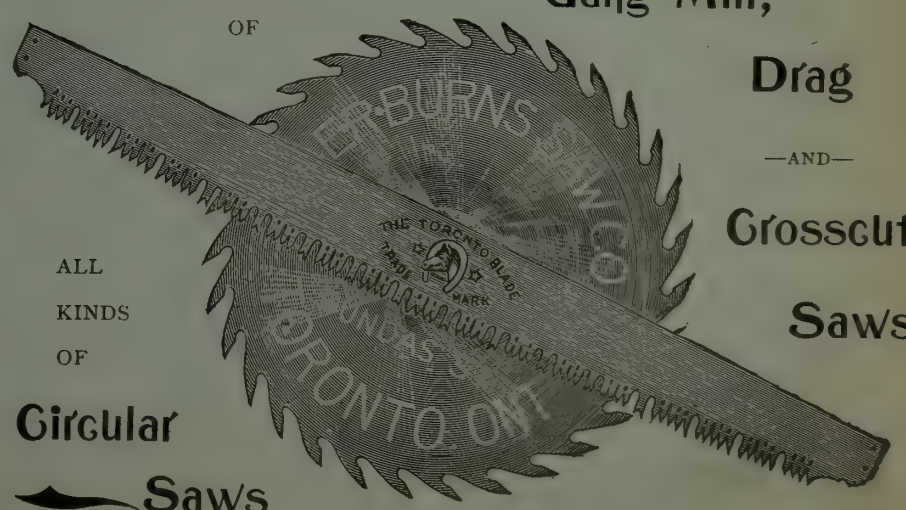

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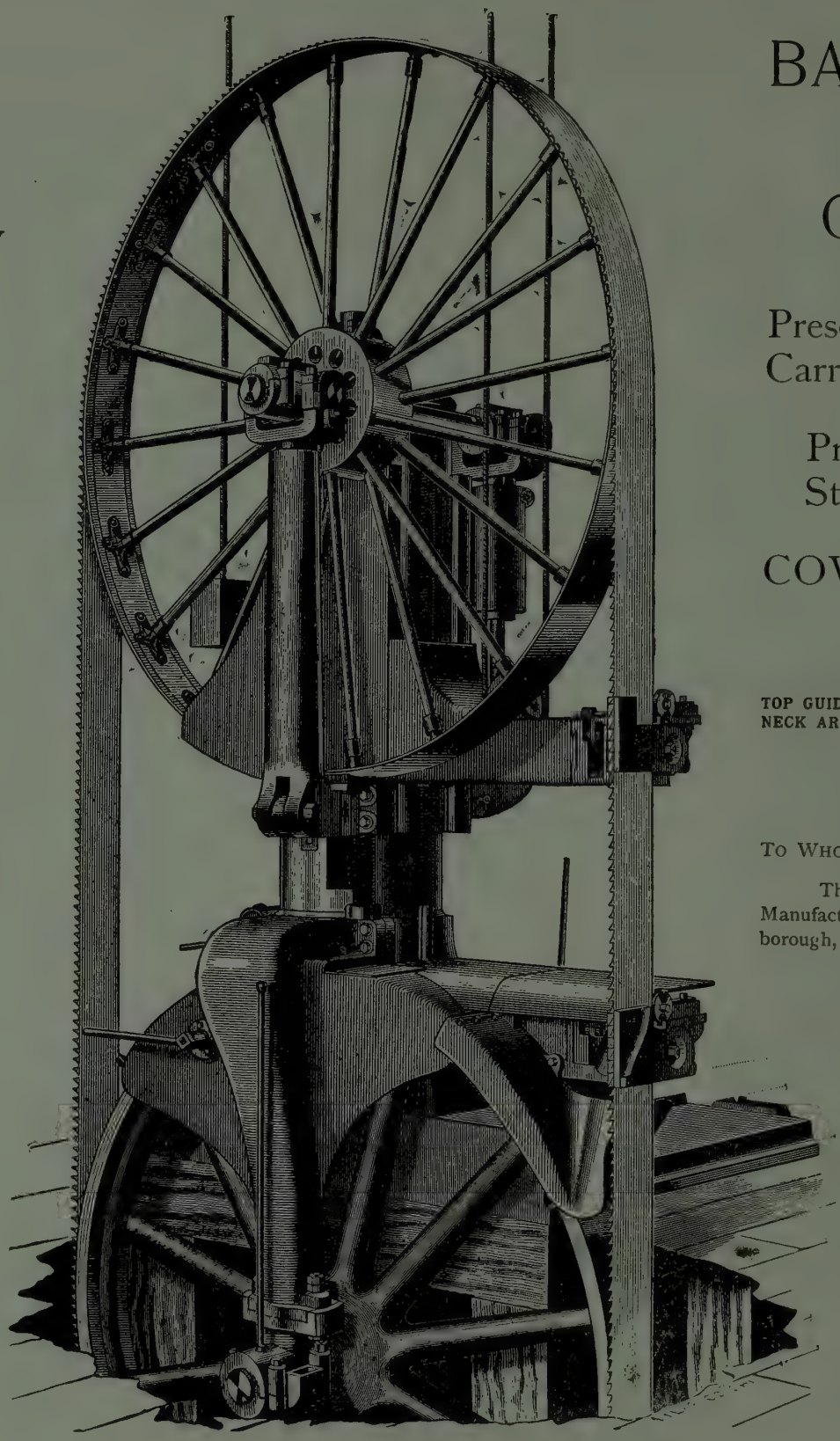
Yours truly,
PERLEY & PATTEE.



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THE CANADA LUMBERMAN

VOLUME XV.
NUMBER 2.

TORONTO, ONT., FEBRUARY, 1894

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RATIONAL FORESTRY.

By O. S. WHITMORE, Editor "HARDWOOD."

THE time is rapidly approaching when rational forestry must command the attention of every lover of his country. But before that time arrives there must be a better knowledge disseminated as to what the science of forestry really means, or perhaps, what is more important, what it does not mean. The popular idea has apparently been that it consists of two propositions: first, the suspension of further cutting of the forests of the country as far as possible to do so, by congressional or legislative action, and by moral forces; second, the indiscriminate planting of trees, with the half-formed idea that in some way or somehow this will pay in the dim future.

It must further be taught that the Creator did not clothe the earth with forests from any mere sentimental or æsthetic motive, but for the good of His creatures who were to inhabit it to the end of time; therefore, that the forests are grown to be cut for the benefit of mankind for fuel with which to cook his food and to warm him in winter, and for lumber with which to build a shelter over his head. These are the actual necessities of humanity, if it would be in any degree above a savage; if man would not continue to eat his food raw, dress in skins or woven grass and dwell in caves.

These wants of the human animal mark the first step in mental and moral development. The next step, the production of food other than the wild game of the forest, presupposes the cultivation of vegetable products suitable for his nourishment. This cannot be done in the uncut forests; and as man's first wants compel his living in a wooded area, he must destroy a portion of the forest that the ground it occupies might be turned into fields, and ultimately into pastures for tamed beasts suitable for food, as the dependence upon wild game became more precarious and the chase irksome; his development carrying this a point further to include domesticated beasts of burden.

Had man been content to go down the ages satisfied with the gratification of these simple wants, the inroads upon the forests, even to this day, would be small. But the Great Designer of his destiny decreed otherwise. It was necessary to man's perfect development that the finer, the æsthetic part of his nature should be cultivated. This demanded something better than a hut of bark or logs. With this demand came the one for better tools than were found in the stone axe and the saw shark's teeth. The metals lay in the earth at his feet. But to utilize them required the further destruction of the forest to feed the smelting furnace and the forge. The development of the human race, beginning slowly, increased rapidly for a time, then ebbed almost back to barbarism, again flowing forward, sometimes almost stationary, but always forward to the culmination of the 19th century. The log cabin gave place to the cottage, the cottage to the mansion and palace. The forest trail gave place to a bridle path, the path to a road, the ford to a bridge, the canoe and paddle gave place to the ship with sails, and finally the apotheosis of progress came with the modern railway and the Atlantic steamship.

Each step upward in the human scale has made its demands upon the timbered area.

In all ages the husbandman has been the great destroyer of the forest, and logically so. He has ever been the pioneer. He must first advance into the wilderness and create a demand for a town as a market center, and a demand for lines of transportation. The city is born of the wants of a given territory. Primarily the settler has cut down the forest, first to make a shelter for himself and family and his various belongings, and for fuel, and secondarily to make room for fields and pastures. Incidentally some portion of the fallen timber has been utilized for economic purposes outside his immediate wants. It has gone to build the town that has grown up behind him, to build ships, railways, bridges and vehicles of transportation and fuel for towns and manufactories.

Speaking specifically of our own country, it is only within little more than half a century that lumbering as a special industry has begun to destroy the forest simply for the sake of merchandising its products. But that half century has wrought such a violent change in the states where lumbering as a special business has been followed, that it has roused the thoughtful to ask the question: What will the end be if the present destruction continues with no attempt made to modify its wastefulness? That there has been wastefulness by both lumbermen and farmers is beyond question. But the past is behind us. We may deplore its extravagance, but we must admit that there are extenuating circumstances. Artificial wants of modern civilization often made the farmer settler extravagant in his treatment of his woodland, while the professional lumberman has been impelled to the same thing by the necessity of making a profit from his operations. The enormous demand for lumber from non-lumbering sections has forced the production, while costly transportation to market has obliged him to leave all the coarser and low-valued products unutilized, not more than 20 per cent. of actual bulk of the forest growth ever producing any profitable return.

It is a fact that only quite recently has science discovered the means of utilizing forest waste by converting it into by-products of great value in small bulk, thus overcoming the problem of transportation to market at a profit. Until recently the only use of lumbering waste has been to convert it into small completely finished articles of every day use, and this could only be done in the older portions of the country where the market was contiguous, transportation charges small, and lumbering carried on on a small scale. But to-day there is less excuse for waste. Nevertheless all discussion of rational forestry must begin with the proposition, which is akin to an axiom, that forests were given by the Almighty to be cut for man's benefit, and that lumbering is a business for profit as much as raising wheat and cotton. It must also be granted that the owner of a tract of forest land in fee simple has as much legal right to harvest his crop of trees as the owner of a cultivated farm has to harvest his crop of corn when it becomes ripe in the fall. The state, having once granted the fee to land, cannot control the usufruct except by enactment in the original deed of conveyance, which must be understood and assented to by the grantee. But methods of usufruct can and should be controlled by the state. Our hurried, feverish national growth has caused this point to be greatly overlooked. Should the state act upon it at once, the further destruction of forests by fire could be practically prevented. To accomplish this should be work for practical, rational forestry.

Such points can only be barely suggested in this paper, but they include all methods of both lumberman and pioneer farmer, which in any manner imperil the interests of others; while outside of the mere legal questions there are great moral obligations, relating to the general welfare of the commonwealth, which must be discussed by forestry advocates, and up to which all classes must be educated. And these moral obligations relate not only to the present but to the future, to generations yet to come. Methods that affect climatic conditions, the water supply, destruction of navigable waterways by producing arid conditions; all these may be legal or simply moral questions. It is the legitimate province of rational forestry to determine this by careful discussion and examination, and having done so to pursue the remedy.

This is a utilitarian age. Man works for the profit there is in it. The most practical part of rational forestry relating to existing forests is to convince the owner of a forest, be he a lumberman or a farmer that it is for his interest to improve upon his present methods of treating it. When he shall be made to see plainly that it will pay him and his children to handle his timber as a periodical crop, to be preserved with care, to be cultivated in a certain sense, to be protected from everything that might endanger it, as he would protect his cornfield from weeds and insects; then will rational forestry have performed its great mission. The work of that branch relating to the mere planting of trees and the reforestation of denuded areas is play in comparison.

THE INVENTION OF THE MATCH.

HISTORY does not give to any one man the credit of inventing the match. That useful article reached its present state of perfection by a long series of inventions of various degrees of merit, the most important of which resulted from the progress of chemical science. Starting from the tinder-box and fyrstan of the Saxons, the first attempt to improve on the old sulphur match was made in 1805 by Chancel, a French chemist, who tipped cedar splints with a paste of chlorate of potash and sugar. On dipping one of these matches into a little bottle containing asbestos wetted with sulphuric acid, and withdrawing it, it burst into flame. This contrivance was introduced into England after the battle of Waterloo, and was sold at a high price, under the name of Prometheans. Some time after a man named Heurtner opened a shop in London. It was named the Lighthouse, and he added the inscription to the mural literature of London:

"To save your knuckles, time and trouble,
Use Huertner's Euperion."

An open box, containing fifty matches, and the sulphuric acid asbestos bottle were sold for a shilling. It had a large sale, and was known in the kitchen as the Hugh Perry. Heurtner brought out "vesuvians," consisting of a cartridge containing chlorate of potash and sugar and a glass bead full of sulphuric acid. On pressing the end with a pair of nippers, the bead was crushed and the paste burst into flame. This contrivance was afterward more fully and usefully employed for firing gunpowder in the railway fog-signal. The next was Walker. He was a druggist at Stockton-on-Tees, and in 1827 produced what is called "congreves," never making use of the word "Lucifer," which was not yet applied to matches. His splints of potash paste, in which gum was substituted for sugar, and there was added a small quantity of sulphide of antimony. The match was ignited by being drawn through a fold of sandpaper, with pressure; but it often happened that the tipped part was torn off without igniting, or, if ignited, it sometimes scattered balls of fire about. These matches were held to be so dangerous that they were prohibited by law in France and Germany. The first grand improvement in the manufacture took place in 1833, by the introduction of phosphorus into the paste, and this seems to have suggested the word "Lucifer," which the match has ever since retained. When phosphorus was first introduced to the match-makers, its price was $21 per pound; but the demand for it soon became so great that it had to be manufactured by the ton, and the price quickly fell to $1.25 per pound. Many inventors then entered the field, and matches were sent in shiploads to all parts of the world.

THE CARE OF A PLANER.

By N. A. Curtis, in "Wood Worker."

ON entering a mill to run a planer, a new hand should first examine the machine to see that everything is all right ; more particularly should he try the bolts that fasten the knives to the cylinder---for, not knowing the circumstances under which the man before him left, there is no telling what damage might be caused by starting it up before examination.

Should the knives need grinding, it is a good idea to start the machine and run it a short time, to find out how it works. While you have it running, get a piece of hard wood that will dress 1¾ inches thick by two inches wide, about four feet long ; dress it both sides, being careful when running it through the last time to keep it straight in the machine, so as to make it one thickness the entire length.

You can then take the knives off. Before grinding, try them on a knife balancer. Finding the lightest one grind it first, then grind the others to it. A word here to knife makers : If you were more careful in cutting slots, making them all of an even width and depth ; that is, in making a set of knives, either to order or standard size, make all the rest in the set like the first one, it would assist wonderfully in keeping the knives in balance, as they could be ground to an equal width by grinding the narrow one first.

When a knife is put on the grinding machine, take the point of a pocket-knife blade and make a mark along the back edge of the knife ; also mark on the slide the position when the knife was ground. It can be taken off and the next one put on, being careful to put the back edge just to the mark made for the first one. Then in grinding care should be taken to only grind enough to bring the marks on the slide together. After grinding, whet the knives to put on a keen edge.

If there is none on the cylinder, you should put a single thickness of writing paper under the back edge of each knife, to prevent shavings working under the cutting edge. You may find knives that need more paper than this, but if the cylinder and knives are all right, this is sufficient ; too much paper will cause the bolts to spring the knife and do more harm than good.

Before putting the knives on, take the piece you have dressed, cut in two in the centre, put the two pieces on the bed of the machine, under the cylinder, one on either side, about three inches from the end. Having measured the exact thickness of the piece, run the head down or the bed up, as the case may be, until the finger points to a trifle full thickness on the gage. Then put the first knife on, leaving all bolts loose, except the second bolt from each end ; these tighten just enough so you can move the knife by tapping it with a hammer. Then turn the cylinder slowly until the knife touches the pieces or passes over them, being careful not to cut a shaving off. In case it is out too far, by the use of a hammer you can set the knife in or out until both ends just touch the pieces. Then tighten the second bolt from each end as tight as you want it ; the rest of the bolts may then be tightened about as tight as the two were when setting the knife. Do not draw each bolt as tight as you want it the first over, but go over them three times, drawing them a little tighter each time until tight enough. You can rest assured that if the knife was straight before on, it is on the cylinder straight.

If you can see the knife touch the pieces, it is best to rub some chalk on them, then set knife to just clean the chalk off. It is a double surfacer, the lower knives can be set by taking a piece about a foot long with one smooth, straight edge, laying it on the back bed plate (that is, the part that receives the lumber after passing over the lower head) and setting knife out until, by turning cylinder forward slowly it will catch the piece and draw it forward not more than ¼ inch. Try the piece on each end of the knife, so the ends will be set alike.

Having the knives all set, the next thing to look after is the oil holes. Look the machine over carefully and find them all. If they have plugs in them it is not always safe to trust to the plugs to keep the dirt out, for no matter how careful you are, there will from time to time a little drop in while you are oiling, and if there is no attention paid to it the hole will become so filled that in putting in the plugs the dirt will be packed so tight in the holes that no oil can get to the bearings.

Should there be no plugs in the holes, whittle some, or have the turner make you some ; but by all means have plugs for all of them. Then get a piece of stiff wire, sharpen it at one end, and with this clean the holes out every few days. A whisp broom is a good thing to have handy when oiling, to brush the dirt from around the plugs.

Should your belts become loose enough to slip on an ordinary cut, don't get mad, jerk them off and cut an inch or two out of them the first thing, but use some judgment. See first if the pulley side is free from dust and dirt. If it is coated with dirt, take it off, get an old plane-bit or broad chisel and scrape the dirt off clean, then put the belt back on and try it ; if it still slips, put a little castor oil on it. Never use resin on a belt. When a belt becomes so loose that castor oil will not keep it on the pulley, it is then time to cut it, but don't cut a belt when you are out of humor with it, for nine times out of ten you will take out too much ; if you had stopped to think how much it needed out, you would have guessed closer. You will be surprised to see how long a belt will run without cutting at all if you will give it a scraping once in a while, keep it clean, and occasionally apply a little castor oil. This renders it pliable and causes it to adhere to the pulleys closely. Belts should not be allowed to remain strained on the pulleys from Saturday night until Monday morning. Short feed belts should be released from strain every night. It only takes a minute to do it, and lengthens the belt's life.

The operator should have among his tools a sharp hatchet, to cut the lugs from the ends of boards, knock out loose, dead knots and raft pins, etc., before putting the board through the machine. Nor should the care of a machine be confined exclusively to the operator. It should be given a thought outside. The yard foreman should see that the lumber taken from a pile or shed is not allowed to strike on end on the ground. All hands should be given to understand that there must be a piece of old board laid on the ground for the ends of boards to rest on. If there is no yard foreman, these orders should be given from the office, for one board run into the machine that has the end filled with sand and small gravel, will ruin the knives for nice work until they are ground again.

None but an operator who is concerned in the appearance of his machine and the nice work that can be done on it, knows the hard work it takes to keep a planer in good running order.

JOSIAH ALLEN AS AN EXPERT IN FORESTRY.

WALL seein' we wuz right there, we thought we would pay attention to the Forestry Buildin'.

And if I ever felt ashamed of myself, and mortified, I did there ; of which more anon.

It was quite a big buildin', kinder long and low—about two and a half acres big, I should judge.

Every house has its peculiarities, the same as folks do, and the peculiar kink in this house wuz it hadn't a nail or a bit of iron in it enywhere from top to bottom—bolts and pegs made of wood a-holdin' it together.

Wall, I hadn't no idee that there wuz so many kinds of wood in the hull world, from Asia and Greenland to Jonesville, as I see there in five minutes.

Of course I had been round enough to our woods and the swamp to know that there wuz several different kinds of wood—ellum and butnut, cedar and dog-wood, and so forth.

But good land ! to see the hundred and thousand of kinds that I see here make anybody feel curious, curious as a dog, and made 'em feel, too, how enormous big the world is—and how little he or she is, as the case may be.

The sides of the buildin' are made of slabs, with the bark took off, and the roof is thached with tanbark and other barks.

The winder-frames are made in the same rustic, wooden way.

The main entrances are made of different kinds of wood, cut and carved firstrate.

All around this buildin' is a veranda, and supportin' its roof is a long row of columns, each composed of three tree trunks twenty-five feet in length—one big one and the other two smaller.

These wuz contributed by the different States and Territories, and by foreign countries, each sendin' specimens, of its most noted trees.

And right here wuz when I felt mad at myself, mad as a settin' hen, to think how forgetful I had been, and how lackin' in what belongs to good manners and politeness.

Why hadn't I brung some of our native Jonesville trees, hallowed by the presence of Josiah Allen's wife ?

Why hadn't I brung some of the maples from our dooryard, that shakes out its green and crimson banners over our heads spring and fall ?

Or why hadn't I brung one of the low-spreadin' apple-trees out of Mother Smith's orchard, where I used to climb in search of robins' nests in June mornin's ?

Or one of the pale-green willows that bent over my head as I sot on the low plank foot-bridge, with my bare feet a-swingin' off into the water as I fished for minnies with a pin-hook.

The summer sky overhead, and summer in my heart.

Oh, happy summer days gone by—gone by, fur-back you lay in the past, and the June skies now have lost their old light and freshness.

But poor children that we are, we still keep on a-fishin' with our bent pin-hooks ; we still drop our weak lines down into the depths, a-fishin' for happiness, for rest, for ambition, for Heaven knows what all—and now, as in the past, our hooks break or our lines float away on the eddies, and we don't catch what we are after.

Poor children ! poor creeters !

But I am eppisodin', and to resoom.

As I said to Josiah, what a oversight that wuz my not thinkin' of it !

Sez I, "How the nations would have prized them trees !" And sez I.

"What would Christopher Columbus say if he knew on't ?"

And Josiah sez, "He guessed he would have got along without 'em."

"Wall," sex I, "what will America and the World's Fair think on't, my makin' such a oversight ?"

And he sez, "He gussed they would worry along somehow without 'em."

"Wall," sez I, "I am mortified—as mortified as a dog."

And I wuz.

There wuzn't any need of makin' any mistake about the trees, for there wuz a little metal plate fastened on each tree, with the name marked on it—the common name and the high-learnt botanical name.

But Josiah, who always had a hankerin' after fashion and show, an talked a sight to me about the "Abusex-celsa," and the "Genus-salix," and the "Fycus-sycamorus," and the "Atractylus-gummifera."

He boasted particular about the rarity of them trees. He said they grew in Hindoostan and on the highest peaks of the Uriah Mountains ; and he sez, "How strange that he should ever live to see 'em."

He talked proud and high-learnt about 'em, till I got tired out, and pinted him to the other names of 'em.

Then his features dropped, and sez he, "A Norway spruce, a willer, a sycamore and a pine. Dum it all, what do they want to put on such names as them unto trees that grow right in our dooryard ?"

"To show off," sez I, coldly, "and to make other folks show off who have a hankerin' after fashion and display."

He did not frame a reply to me, he had no frame.—From "Samantha at the World's Fair," by Josiah Allen's wife.

A MOVING SPIRIT.

"What is your line of business?" whispered the editor to a man he was about to introduce to northern capitalists.

"I hauls furniture," huskily came the reply.

"Here, gentlemen, continued the editor, 'is Mr. Jones' one of the moving spirits of our city."

FULL of his usual fire and vigor was Mr. Peter Ryan when I met him a week ago, shortly after his return from Ottawa, where he had been putting in some of his best knocks at the Perley & Pattee lumber sale. Toronto's Registrar is a well-known character among nearly all classes of the community, in city or out of it. His tall, erect, and always genial bearing makes him a marked man, wherever he may go. A long experience in trade, and especially as a trade auctioneer, has made his name and face familiar to hosts of business men everywhere. Besides who does not know Peter Ryan as one of the cleverest stump speakers in the Province? Everyone may not agree with all that Peter may tell them, though he is a pretty level-headed chap, but they enjoy his talk, nevertheless, and he is as good a knocker, and he has knocked many an opponent out, on the public platform, as when making the knocks ring from his auctioneer's hammer. Try to trip Peter Ryan up with interruptions from an audience, and if with his ready Irish wit he cannot give as good as one may give him then call my name Dennis. Mr. Ryan takes a very intelligent interest in lumbering operations. The Provincial Government may give him credit for not a little of the success of their last timber sale, when Mr. Ryan was master of ceremonies with the hammer. He has handled this little weapon in not a few other instances where lumber has been the article to be knocked down to the highest bidder. Mr. Ryan did not forget to say that he was an out-and-out free trader "We want no restrictions in trade," said he—and of course he would like to see free lumber.

* * * *

S. W. Osgood, of the Whitehall Lumber Company, of Cheboygan, Mich., has this to say in regard to the lumber business of Cheboygan and of lumber matters in general: "Shipments of lumber during the past season from Cheboygan have amounted to 100,000,000, several of the mills are running nights to work up the stock. Lumber operations will be somewhat curtailed both in Canada and other points where Cheboygan mills go for their supply. Alger, Smith & Co. are putting 10,000,000 feet of logs into Spanish river and Georgian Bay, Canada, to be towed to Cheboygan next season. It is estimated 250,000,000 feet of logs were towed from Canada to Michigan points last season, principally to Saginaw, Bay City, Alpena, Cheboygan, and Manistique."

* * * *

Senator Snowball, of Chatham, N. B., is of opinion that free lumber, as given by the Wilson tariff bill, which to all appearance is to become law, will indirectly benefit the north shore of New Brunswick by attracting the trade of the southern ports to the United States and leaving more of the British market for the northern counties, who would be handicapped in the American market by heavy freights. The senator points out that Spain and Mediterranean ports took more of our lumber last year than usual. Last year the Miramichi dealers shipped 6,000,000 feet to Spain, 5,000,000 feet to France and 1,500,000 feet to Africa ports, besides 40,000,000 feet to Great Britain and 31,000,000 feet to Ireland. So far as present trade is concerned this extensive lumberman says it is in an unsatisfactory condition owing to its prevailing low prices for fish and lumber.

* * * *

In answer to the enquiry, "How is logging this winter?" Mr. R. Cook, Manager of the South River Lumber Co. (Ltd.), South River, Ont., said, "that operations were being impeded by the heavy snows, and if these continued they would not be able to get out as large a cut as had been anticipated. Mr. Cook's company have been manufacturing a considerable quantity of shingles. I asked him, if he anticipated that red cedar shingles from British Columbia would prove a serious competitor in Ontario with white pine shingles. "During the present year," Mr. Cook replied, "I believe that British Columbia shingles will come into active competition with shingles here. There was a fair quantity of these shingles sold in the province last year at about $2.75, as against $2.25 for pine, and so far as my enquiries have gone they have given good satisfaction. But the matter does not give me any great concern. I am under the impression that we have lately been cutting up for shingles a grade of white pine that it would have paid better to have manufactured into lumber." Mr. Cook informs me that United States lumbermen have been active in cutting spruce in the Parry Sound section, and at a loss, he thinks, to our lumber interests. Spruce is one of our best timber resources, but it is not having the protection from the Government that ought to be the case. Hemlock in no inconsiderable quantity is being sacrificed in the northern woods through the farmers destroying the logs for the sake of the bark. The time will come, Mr. Cook believes, when we will see the foolishness of this waste. Mr. Cook formerly carried on lumbering at Dashwood, in Huron Co., and had been in that section a week ago. In place of an excess of snow there he found mud. Hemlock is now the chief timber in Huron, but it is fast being cut out. There is yet a fair stock of hardwoods.

* * * *

Standing fully six feet in height, I would say, and of genial countenance and pleasant manner, is Mr. H. H. Spicer, of Vancouver, B.C., who has been a week or so in the city in the interests of his shingle business. Mr. Spicer is one of the largest red cedar shingle manufacturers on the coast. The past year, he says, was not without its vicissitudes in shingle manufacturing in his province. The shingle men of Washington Territory, adjoining, have been in a pretty demoralized condition, and whilst this would not be a fair term to use in speaking of the trade in British Columbia, yet the shingle trade there was also somewhat overdone, and prices broken. I suggested to Mr. Spicer that the newly-organized shingle manufacturers' association, in connection with which he is a moving spirit, would probably remedy this evil. He replied, "Yes, he hoped so. But, right here, I would like to say," added Mr. Spicer, "that this association has not any idea of creating a corner, or fixing a combine, in shingles that would unfairly raise prices. All we want is a reasonable profit, and we are not likely to get more than this, as the shingle trade is to-day. A more important object is to protect ourselves against the unwise and reckless cutting that has to some extent been the case in the past. I agree thoroughly with the editorial in the LUMBERMAN of last month, in which you point out that whilst a combine that means an unjust monopoly of trade should be condemned by any sensible man, that at the same time there is also another evil, that in justice to the honest trader needs to be guarded against, viz.: that phase of competition that so ruins prices that the inevitable end is bankruptcy." Mr. Spicer would like to see free trade in shingles, but does not anticipate that in the meantime, at any rate, British Columbia would reap any direct benefit owing to the overstocked nature of the Washington Territory market. Mr. Spicer expects Ontario to prove a profitable field for operations in the future.

* * * *

From various interviews and observations that have found a place in this page, it will have been noticed that quite an interest is taken in the question of placing the Red Cedar shingles of British Columbia on the Ontario lumber market. In the judgment of some the plan is unworkable, heavy freight rates, a dearer shingle, and other conditions adding to the unpracticability of the scheme. Then Ontario is the great pine province of Confederation, and is the natural home of the white pine shingle. The Red brother from the west is looked upon as an intruder on preserves that belong to some one else, forgetful of Bobby Burns' refrain, that we're a' brothers for a' that. Suggested by considerations of this kind, our friend H. G. Ross, of New Westminster, B. C., has given us his views of the situation from his point of view. This is what Mr. Ross has to say: "The growth of the trade in British Columbia red cedar shingles with Ontario is probably worthy of notice and will interest some of your readers. In 1892 probably not more than 20 cars left British Columbia for Ontario, last year it jumped up to about 300 cars, and the trade is now regarded as fairly introduced. Mr. A. Tait, of Orillia, who was in this Province recently, looking up the shingle interests, said that although he had been running his shingle machines night and day in the past, he would make but few pine shingles in future; he regards our shingles as the coming article. Lumber, he said, had in the past fifteen years doubled in value in Ontario, while to-day pine shingles were not bringing any more than they were fifteen years ago. He had made a number of tests and had satisfied himself there was no money in running stock, no matter how poor it was, into shingles. A number of practical tests, he said, were to be made this season by Ontario mill men, and he was convinced the results would surprise many of them. We have heard others express the same opinion as Mr. Tait and are convinced that the only man who has not found this out for himself is the man who does not figure. The British Columbia mill men therefore feel that the invasion of Ontario by British Columbia red cedar shingles need place no hardship on the shoulders of their eastern brethren. Apart from that, the people are the judges and they recognize British Columbia cedar shingles are the best and will buy them accordingly, so the Ontario pine man may as well govern himself accordingly. Among the comparative points of merit are: Our shingles will last more than twice as long as pine, will shrink and swell less with heat and moisture, consequently are not as hard on the nails; they are cut from clear stock; are a wider shingle than pine and can therefore be laid faster and cheaper and will not warp or split when laid. We can show you out here roofs thirty and forty years old as water tight as when laid. Some of the Ontario people not familiar with red cedar complain of the dark streaks in the shingles. This is purely the nature of the wood, is no indication whatever of rot and occurs just as frequently in live green trees that are sound to the heart as it does in hollow-hearted trees. The fact that they are kiln dried, we see commented on unfavorably. This is done purely to save freight in precisely the same manner as pine shingles intended for long shipment are dried in Ontario, Michigan, and Wisconsin, and red cedar as it contains no gum and is but very little subject to expansion and contraction with heat and cold will come through a heat without injury that would ruin pine. It has been found that eight to ten days in a hot air kiln at a maximum temperatue of 170 degrees will reduce the weight tolerably well without any injury to the fibre of the wood, and when it is considered that at least $1 per M is saved in freight to Ontario the necessity for kiln drying is apparent. We have too much rain here to dry naturally excepting during three or four months of the year. Most of the mill men here are Ontario lumbermen, many of whom have already put in several years of patient struggling and waiting, realizing that the time must come when this magnificent wood would find a market. There is a total mill capacity in this Province of fully eight hundred million shingles annually. These shingles will probably find their way into every corner in Ontario next season, that is if the consuming public will realize their value and will be willing to pay a price that will enable the manufacturers to pay wages and live, and if the mills can be run to even one half their capacity and dispose of their product it will be much better than they have done yet.'

* * * *

An interest in the curious is natural to almost everyone. In this respect we are all children, and it is by retaining this simplicity, this readiness to receive, that we can often pick up much that is useful. Two tid-bits in the line of lumber, that have come under my notice, I give place to here: (1) At Mongtze, in China, there is a timber mine. The trees have been buried under sandy soil to a depth of six to twenty-five feet, and they are well preserved. Apparently they have been overwhelmed by an earthquake at some immemorial time. They are of the pine trees called "Nain Hou" by the Chinese, and contain a preservative essence, hence the wood is employed in making coffins. (2) In manufacturing some of the smallest wooden articles, millions of feet of timber are annually consumed. One match firm is said to be the largest consumer of white pine in the country. A company in Sweden is said to consume several millions of feet of spruce each year in making small turned wooden boxes for druggists.

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Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

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Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

A WORD WITH SUBSCRIBERS.

THE current CANADA LUMBERMAN goes to a large number of subscribers with bill enclosed for subscriptions that fell due at the new year. The amount in most cases is not more than one dollar, and, even where arrears are owing, the indebtedness to the individual is only trifling. But 2,000 such accounts mean anything from $2,000 to $3,000 to the publisher, and money is much needed by him at the present time. It costs a heavy outlay each month to produce a journal of the completeness and character of the LUMBERMAN. Subscribers, we have reason to believe, appreciate these efforts to give them a first-class trade journal. Our desire is to make further improvements during 1894. Saying this much, we rely upon subscribers responding favorably to the present request to remit promptly the amounts now due.

POSSIBLE CAUSE FOR STRIKES.

IT is feared by those who have given some study to the matter, and who are rather more considerate in these affairs than others, that there will be an unusual number of strikes in the wood working trades in the United States so soon as spring trade revives. The cause of this will be in the movement, already being put into operation, to reduce wages, the likely passage of the Wilson bill being made to furnish the excuse for this step. It is stated by those who have been watching these matters from a sociological point of view, that when the duty on lumber was reduced to $1.00 per thousand, the same cry went forth about the destruction of business and the reduction of wages, and yet lumber in the States has sold for a higher price since the reduction than it ever did before. After the depression of the past six months it would be a thousand pities, if, on the threshold of the spring season, the lumber business should meet with the set-back of a succession of strikes at different points. If through change in legislation, or from other justifiable cause, it becomes needful, because of an increase in the cost of production to curtail expenses, at some important point, and wages are brought under the knife, reasonable men will not object to this course. On general principles, however, and we believe the closest observation will verify the fact, wages ought not to be reduced except as a last resort. We would not suggest anything radically socialistic in dealing with the wage question, but the more closely employer and employee can come into touch with one another, and the feeling be allowed to grow that there is a mutual interest to be served, fewer strikes will be heard of, and the general welfare of both will be advanced. Contrawise, it is not infrequently the case that employers will make a proposed change in tariff, or other like cause, simply a scarecrow to reduce wages, when as a matter of fact the influence of the change is sometimes in an opposite direction. The Scotch bard was not without an intimate knowledge of human nature when he sung so pathetically of "Man's inhumanity to man."

EDITORIAL NOTES.

THE large increase in the lumber traffic of Duluth and Superior, contrasted with a steady and growing decrease on Lake Huron and Lake Michigan, furnishes another illustration of the rapid depletion of the forests of this once-great white pine state. Michigan lumbermen are seeking other fields for operation, Canada to wit, as well as Duluth, because the lumber of their own state is vanishing.

ACCORDING to a statement furnished by the United States consul general, the value of white pine lumber exported from the Ottawa district to the United States during the December quarter increased from $139,000 to $834,000 as compared with the corresponding quarter of 1892; the value of shipments of white pine lumber in bond from this district to the United States for export increased from $59,000 to $96,000. In the export of pickets, shingles, timber and wood pulp, a considerable increase is also shown.

THE Oregonian's "Handbook of the Pacific Coast" estimates the standing timber of the state of Oregon at 266,893,225,000 feet. The extent of this timber wealth can be appreciated when it is stated that the forests of Minnesota, a great lumbering state, contain only 12,749,526,000 feet of lumber, while Michigan, another great lumbering state, contains 100,000,000 feet less timber than is represented in the forests of Coos and Curry counties of Oregon alone. The forests of those two counties cover 1,050,000 acres, and it is estimated that they contain 24,200,000,000 feet of timber.

DISCUSSING the subject of evolution in grades the Timberman remarks that "Millmen are very widely divided on the question as to whether the multiplying of grades should be encouraged from their standpoint. Many argue that the fewer grades they sell the better in actual results; while others, with much plausibility, that the more grades there are the better for the manufacturer as well as the dealer, as with minute grades there is less chance for the wholesaler to profit thereby at the expense of the manufacturer. Certainly, if the manufacturer wishes to get close to the consumer, and to get all profit out of lumber that there is in it, he must adopt a close system of grading."

THE European consumption of teak for 1893 is given by Denny, Mott & Dickson, of London, Eng., as some 50,000 loads, as compared with an average consumption of some 48,000 loads for the last seven years. In face of a falling off of nearly 32 per cent. in the world's shipbuilding of the year, this maintenance of consumption is considered most striking, and points conclusively to the fact that the low prices of the year have helped to force this valuable wood into more general consumption. The growing practice of sheathing war ships with teak has increased the demand for naval purposes, H. M. Admiralty having bought 7,200 loads of teak during the year, and, further, contracted for some 9,000 loads to be supplied within about the next six months.

UNDER the most favorable conditions the rafting of logs is beset with many risks. But when something of the magnitude of the Joggins' experiment is tried, we begin to learn how great are the risks that some men are prepared to take in this department of work. A recent illustration is given in the case of the scheme of rafting logs on the Pacific ocean during the winter months. What is known as the Coos Bay raft has gone to pieces during a gale off the California coast, and caused severe financial loss to all concerned. It is not improbable that the scheme of rafting logs to San Francisco may be profitably carried out during one or two months of the summer, when there are but few storms, but any attempt to convey logs in the raft during the balance of the year is sure to meet with failure. Unfortunately the Pacific ocean is pacific only in name when it comes to log rafting.

IN the agitation that is waged ever and anon for the re-imposition of the export duty on logs going into the United States, the forces in favor do not come alone from lumbermen. The fishermen of the North Shore have all along had a hand in the fight, contending that in the rafting of logs to the Michigan side the bark peels off, injuring the nets of the fishermen of that locality, and besides that, the accumulation of this bark is proving hurtful to fish culture in these waters. An object lesson on these lines is to be seen in Ottawa, there being on exhibition in the office of the Minister of Marine a fishing net taken from the waters of Georgian bay, completely interwoven with bark that has peeled off of logs, while being towed from the Canadian side over to Michigan. It is likely that if this question should come before the Commons this net will be made to do argument for Mr. Little and those who hold with him for a re-imposition of log duties.

IN the event of the Wilson bill becoming law, and lumber is made free, Mr. R. H. Alexander, manager of the Hasting's saw mill, Vancouver, B. C., does not anticipate that the British Columbia lumber industry will be greatly benefited. Lumber connections with the Puget Sound territories could not bring any gain, for it would be like shipping coals to Newcastle to send lumber there. Business with more distant points, however, he thought, might be increased owing to the superior quality of British Columbia lumber. As to helping prices, Mr. Alexander was of opinion that if the bill passed it would not have that tendency, as the American market was protected by a $2 per 1,000 feet tariff, and which, if taken off, would have the effect through competition from this side, of lowering the present prices asked. As a whole, matters would practically be about the same as at the present time, but a little extra business might be done in disposing of odds and ends and in some lines this Province makes a specialty of.

THE past month has been one of several visits of lumbermen to the Parliament buildings here. Elsewhere reference is made to the purpose of at least two of these visiting deputations. A third deputation, and one that gave rise to some unnecessary gossip in the daily press at the time, was composed of Mr. James Conmee, M. P. P.; Walter Ross, secretary of the Rat Portage Lumber and Milling Company; Mr. D. C. Cameron and Mr. J. W. Chadwick, president of the Rat Portage Board of Trade. The members of the government present to receive the deputation were Sir Oliver Mowat, Hon. Mr. Hardy, Hon. Mr. Dryden, and Hon. Mr. Harcourt. The conference was of a private nature, and it was this fact, we suppose, that excited the curiosity and widened the imagination of the interposing scribes of the local press. A discussion took place, we believe, in regard to certain fishing rights and privileges affecting the interests of the people in that territory. There is some lack of uniformity in the system of log measurement in the Rat Portage territories from the fact that limits sold by the Dominion Government before the territory came under the jurisdiction of the Ontario Government are under different regulations to those limits sold by the government since then. It was also suggested to the government that it would be in the interests of the local mills to bring on a sale of limits as the mills could to advantage handle more logs. One daily paper remarks that Mr. Conmee and his friends came out of the conference smiling, and it is taken for granted, of course, that the government must have given some reasonable heed to their wishes. What a tell-tale is the human face!

NEWS AND NOTES.

F. E. Shaw has purchased the Cooper sawmill, near Elmvale, Ont.

A man named Pettyplace, of Greenock, Ont., had his arm broken while engaged sawing logs.

Moore & Vandusen's sawmill at Lion's Head, Ont., was burned a week ago. Partly insured.

Hermann Kemkers, of Hanover, Ont., has 1,000 sawlogs piled up in one pile, and is evidently proud of the feat.

The boiler of a steam sawmill, near Eganville, Ont., exploded the other day seriously injuring the engineer, John Possette.

John Richardson, of Windermere, Ont., was accidentally killed through a falling log striking him on the head and crushing him in a frightful manner.

John A. Humphrey's steam sawmill, about two miles from Moncton, N.B., was burned on the 8th inst. Loss, $15,000; no insurance. The mill will be re-built at once.

The Cosmopolitan for February introduces a famous European author to its readers—Valdes of Madrid, and the artist, Marold, of Paris, well known as a French illustrator.

Robert Riddle has cut near Kincardine, Ont., four logs measuring 2,816 feet, all out of one tree. One log alone, twelve feet long, made 800 feet of lumber. Such a cut in that vicinity is an unusual thing in these days.

The Halifax Critic, which is a creditable exponent of the mining, manufactory and commercial interests of the Maritime Provinces is to be hereafter known as the "Canadian Colliery Guardian-Critic," giving some attention to the iron and steel trades.

Armstrong Bros., Markdale, Ont., are sawing large quantities of elm and maple logs. The timber is said to be exceptionally fine. The elm is made into cheese boxes and fruit baskets, and used throughout Ontario. The maple is cut into mangle rollers, and is shipped chiefly to Liverpool, Eng.

A new industry has been started on the Chaudiere in the shape of a factory for the manufacture of material for wooden boxes. It is a little over a month since a Philadelphia firm represented by Mr. Hamilton made arrangement for leasing a portion of the old Grier property in the rear of Merrill's foundry. The old forge and other furniture which was at that time in the building has since been removed and a planing machine with several saws substituted. The equipments are now almost ready to commence work. The factory will be under the supervision of Mr. W. S. Mayo, formerly over the E. B. Eddy's company's box factory in Hull. All the lumber used will probably be taken from the Chaudiere piling grounds and will consist for the most part of heavy deal. The lumber will be cut into size for boxes, and will in this shape be shipped to the company's factory in Philadelphia. The motive power for driving the machinery is supplied by a small waterwheel of fifty horse power. This new industry will give employment to a number of men, and will be advantageous on account of its running all the year round.

A deputation composed of Messrs. A. H. Campbell and J. H. Main of the Muskoka Mill and Lumber Company; Messrs. A. P. Cockburn and J. S. Playfair of the Muskoka Navigation Company; Messrs. Mickle & Dyment, of Gravenhurst, and Mr. John Waldie waited on the Ontario Government, recently, with reference to the work which the Gilmour Co., are doing at Hollow lake to divert some of the waters to the Gull River waters. The objection is taken to the work of the Gilmour Co. because it is feared that the diversion of the waters in the manner proposed will lower the Muskoka waters, and thus interfere with navigation and lumbering operations. The Gilmours have already completed their work at a cost of $50,000, and asked to be given the opportunity for at least one season of demonstrating that Muskoka interests have nothing to fear. The Free Grant Gazette, commenting on the case, expresses a degree of disappointment over the prospect of seeing such a large quantity of Muskoka pine transported athwart the upper Muskoka and Black waters to the Trent waters, instead of being brought down by the natural waterways of Muskoka.

LUMBERMEN DISPUTE.

TOWARDS the end of last year an application was made to the Ontario Government for a charter of incorporation of Messrs J. T. Hurst, L. S. Moore, A. H. Fleming, Temple Emerey, Nelson Holland and H. O. Fleming, well-known United States lumbermen, for a company to be called "The French River Boom and Rafting Company, limited." The objects of the company were to acquire, construct and maintain any and all dams, slides and other works necessary to transmit timber down the French river, to raft upon the said river and adjacent waters, and to widen river, remove obstructions and build boats and other equipments for the purpose of carrying on their business at a proposed cost of $30,000. The capital stock of the proposed company is to be $40,000, and it is proposed to bring down the river 10,000,000 feet of lumber each year for five years to come, and to charge a rate of 35c. per 1.000 feet for their services in so doing.

When this application was referred to Hon. Mr. Hardy, Commissioner of Crown Lands, several firms interested in the matter strongly opposed its being granted. A week ago a deputation waited on Mr. Hardy in reference to the application. The following firms were represented, either by one of their members or by counsel:—The Beck Manufacturing Co., the Ontario Lumber Co., the Victoria Harbor Co., Burton Bros., the Georgian Bay Co., Cook Bros. and Arthur McLeod.

The application was opposed on several grounds. It was stated by the deputation that the application was in reality for a boom and tug company, and not for a timber slide company; that the river did not in any way come under the jurisdiction of the Province, being a navigable river; that no improvements in the river were necessary, and that it was not the intention of the proposed company to improve the river, but that they would simply block the operations of any other company that might not join in with them, and that the proposed cost of the suggested improvements was ridiculously high, as not more than $5,000 could be necessary. The proposed tolls was also described as excessive.

The deputation were in consultation with Mr. Hardy for several hours, and the question was very fully discussed. Mr. Hardy promised to look into the matter, and as early as possible to give a decision.

B. C. SHINGLES IN ONTARIO.

THE manufacture of red cedar shingles in British Columbia has reached a point where those engaged in this branch of lumbering must look beyond the borders of their own province for a market. At home and throughout Manitoba and the Northwest one finds the shingles of this sister province in large demand, relatively, for it must be remembered that the population of these territories has not yet attained a volume where the consumption will run into very large figures. So it is, that we find the shingle manufacturers of the Pacific Coast, looking to Ontario to supply a new field for consumption. Last year fair numbers of these shingles were sold in Ontario, sufficient to pave the way for a larger trade. One manufacturer, probably the largest in British Columbia, Mr. H. H. Spicer, has arranged through Mr. F. N. Tennant, a well-known lumberman of the city, to specially push his red cedar shingles throughout Ontario. Mr. Spicer has spent some time in the city during the past fortnight perfecting arrangements, and his announcements over the name of Mr. Tennant will be found on another page. The price at which these shingles will be sold, for the present, though perhaps not very long, will be close, both for the purpose of introduction, and further because the output of the British Columbia mills is of such a size that to secure a trade low prices becomes necessary. Of the quality and main characteristics of the red cedar shingles nothing needs to be said here as these are points fully discussed elsewhere in the LUMBERMAN pages.

THE EBONY TREE.

A GREAT deal of difference in color exists in the trunk of the exogen between the alburnum and the true wood. In no case is it more apparent than in the ebony tree, for here the true wood is of an intense black, while the alburnum is of a light grey. The contrast between the two is very great, and it is the black part that is so much esteemed as an article of commerce. The deep jet of the ebony has passed into a proverb, and "as black as ebony" is a similitude sometimes heard among us. Ebony is a handsome material for carving and for the manufacture of ornamental articles, and is most effective when used for inlaying furniture, in contrast with box or other white wood. The rosaries of the Roman Catholics are sometimes of ebony; and chess boards and chess men, and rulers, and walking sticks, and numberless fancy goods are made of it. There are several species of the tree growing in different parts of the tropics, and even beyond their range, as far north as Switzerland in the old world, and New York in the new. The centre of the stem, in the ebony, is always of the jetty black we have described, but in varieties of the species it assumes shades of yellow, green and red. It is a forest tree, with hard, dense wood, that gives some trouble to the woodcutter. The branches are rounded, and the leaves entire, mounted on short footstalks. The fruit is pulpy in its nature, and of a roundish shape; when fully ripe some of the species may be eaten, but in an immature state the juices are acrid and unwholesome. A great deal of ebony timber comes to us from Madagascar, the Mauritius, and other tropical places. But the valuable forests of Ceylon furnish it in the most abundance. They are on the eastern side of the island, and reach as far as the town of Trincomalee, which is situated on a bay of that name. On either hand are found trees of the utmost value; here is the delicate satinwood, and the tulipwood, and the ironwood, the name of the last denoting its duration and solidity; it is an ornamental tree, bearing violet-scented buds.

XYLOLITH.

EXTRAORDINARY claims are made in Germany for the substance called xylolith, or "wood stone," a structural material composed of magnesia cement, or calcined magnesite, mixed with sawdust and saturated with a solution of chloride of calcium. This pasty mass, before the cement sets, is spread into sheets of uniform thickness and subjected to a pressure of more than 1,000 pounds to the square inch. It is made in sheets from ¼ to 1½ inches thick, and of all sizes, the dimensions being almost unchangeable by dryness or moisture. A sheet measuring one meter square when perfectly dry will expand from one to two-tenths of one per cent. when soaked in water, and a moist sheet will contract in drying to about the same extent. Being so little subject to contraction and expansion, it is considered specially valuable for floors in railroad stations, hospitals and similar buildings, and for decks of vessels. It is readily planed, sawed, bored and fashioned with ordinary wood-working tools, and may be painted or decorated in the same manner as wood. It is nearly water-proof and may be made entirely so by painting the surface.

ROMANCE OF THE SAW.

THE saw is a tool of great antiquity, and its invention is attributed to the ancient Greeks in the twelfth century before Christ. It seems that Talus, a grandson of the reigning king and a prolific inventor, reflecting that the statuary of that day was nothing but shapeless blocks having only a faint resemblance to the human form, set to work to produce tools which would enable the artisan to work with greater freedom. He invented the saw, the lathe, the compass and the level. In the saw he noticed the mouth of the serpent, and reproduced the shape of the teeth in iron, and therefore formed the saw. For this invention alone he acquired great fame, so much as to incur the jealousy of the king, who was something of a mechanic himself, and Talus was disposed of in true classical style, pitched from the top of a high mountain and buried secretly. For this exhibition of jealousy the king, being found out, fled to the island of Crete, and while waiting for the little ripple in Grecian affairs to quiet down, made himself famous by building the Cretan Labyrinth. From the days of the Grecian king Dædalus and Talus the history of the saw is in a vague condition, but ancient pictures have frequent representations of it, and even in prints of the building of the ark this tool finds its corner.

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

AN event of the month in lumber circles here has been the sale by public auction on 24th inst. of some 1,300 miles of timber limits, the property of Perley & Pattee. Your jovial citizen, and clever knight of the hammer, Peter Ryan, was master in control. The sale, which took place at the Russell House, was made necessary, as your readers likely know, by the death of the late W. G. Perley. The sale brought together a large representation of lumbermen and capitalists from various parts of the Dominion, and some, though not a numerous contingent, of United States lumbermen. Taken altogether the sale was a success. Particulars are as follows :—

Parcel No. 1, 96 square miles on the Kippewa river, Quebec, was sold to Mr. J. C. Browne, of Ottawa, at $160 a mile.

Parcel 2, comprising 47 miles on the Kippewa, was sold to Mr. Browne for $450 a mile.

Parcel No. 7, 235 miles on River Coulonge, was sold to Messrs. Fraser & Bryson for $890 a mile.

Parcel 8, comprising 104 miles on Lake Temiscamingue, Ont., was bought by Messrs. Bronson, Weston & Co. for $500 a mile.

No. 3.—37 miles, Bonnechere, sold to W. C. Edwards, $500 per mile.

No. 4—100 miles, River Dumoine, sold to Mason & Son, $100 per mile.

No. 5—115 miles, Black river, sold to Hon. P. White, $30 per mile.

No. 6—200 miles, Black river, sold to W. C. Edwards, at $170 per mile.

No. 9—191 miles, Petewawa, sold Hawkesbury Lumber Co., at $45 per mile.

No. 10—212 miles, Petewawa, sold Hawkesbury Lumber Co., at $55 per mile.

Prominent among those who took part in the sale may be named: Messrs. W. C. Edwards, Rockland Ont. ; E. Whitney, Minneapolis; James D. Klock, Klock's Mills ; W. C. Chadwick, W. C. Cameron, and W. Ross, Rat Portage ; James Gillies, Carleton Place ; C. McLachlan, Arnprior ; John and George Bryson, Fort Coulonge ; Peter White, Speaker of the House of Commons ; A. Fraser, of Westmeath.

LARGE CONTRACTS FOR LUMBER.

Activity in the lumber trade during the month has been further shown by the closing of a number of large contracts for lumber to be cut by the mills in Ottawa and vicinity during 1894. These were completed by representatives of Quebec and English houses. Among the buyers are Messrs. Sharple & Co., of Quebec, represented by Mr. William Power ; Dobel, Beckett & Co., represented by Mr. Evans ; Mr. R. M. Cox, of Liverpool ; Brussell & Co., of Quebec, represented by Mr. Billingsley ; and Messrs. E. Harper Wade, of Quebec, and Alex. McArthur, of Toronto. The purchases include the output of deals from the mills of Messrs. J. R. Booth, Gilmour & Co., the Hawkesbury Lumber Company, and Messrs. Buell, Hurdman & Co. The cut of the mills owned by W. C. Edwards & Co. is not yet sold. The value of the sales will aggregate $2,500,000. It is reported that Messrs. Skillings, Whitneys, and Barnes have purchased the full cut of the McLachlin mills at Arnprior, aggregating about 60,000,000 feet of lumber, the value of which will reach $900,000. It is stated that at least four millions of dollars' worth of lumber has been sold in Ottawa for export during the past two weeks. Usually, the sales of a season's cut extend over several months, but this year they have all been made within a few days.

INDIFFERENT LENGTHS.

A large gang of millwrights are at work on the annual repairs in connection with Buell, Hurdman & Co's. two sawmills. The principal work to be done is around the old mill where the machinery has become more or less worn out with many years service.

A number of teams are at present engaged hauling logs which were carried over the Chaudiere Falls in the heavy floods of last spring back from where they have been piled at Water's ship yards to the gap above the E. B. Eddy company's paper mills. The logs are selling to Buell, Hurdman & Co. and will be sawn by that firm next spring.

A private letter received in Ottawa states that George O'Hara, of this city, who has been four years lumbering in British Columbia, was held up with two gentlemen from Toronto, and robbed of $2,000, a $175 gold watch and a diamond ring. O'Hara was on his way to Sydney from Victoria to pay a number of workmen he had in the lumber business.

Various estimates of the winter's cut are made from time to time. The general opinion is that the cut will about equal that of last season, although the operations of some of the concerns will not be as extensive, as they have a good stock of last winter's logs still on hand. The Rathbun Company will turn out about the same quantity of logs as last year ; W. C. Edwards & Co. will also cut about the same. The estate of Ross Bros , the McLaren estate, the Ottawa Lumber Company and J. R. Booth will take out about the same number of logs as last season. The operations of Gilmour & Hughson will be somewhat restricted. The David Moore Lumber Company will take out one raft of square timber and logs from its Kippewa limits. The Hawkesbury Lumber Company will reduce its cut about one-third.

OTTAWA, Can., Jan .26, 1893.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE Wilson tariff bill is being keenly discussed by lumbermen here. The lumbermen of Washington and Oregon territory, are, with a few exceptions, opposed to lumber being made free, but in contending against this proposition they unconsciously pay a high complement to the excellence of B. C. lumber. What is feared most, if the measure passes in the original form, is that B. C. lumbermen will invade California, and because of the superiority of our lumber they will be able to capture the trade.

COAST CHIPS.

Stokes, Shooks and McTaggart have taken over Purdy's mill at Mission City.

The Pacific Coast Lumber Co. have just completed a good and commodious Dry Kiln, replacing the one lately destroyed by fire.

R. H. Alexander, manager of the Hastings mill, Vancouver, has been appointed Consul for Peru at the port of Vancouver.

C. M. Beecher, of B. C., M. T. &. T. Co., and John Wilson, of Brunette Mills, have just returned from business trips to Eastern Canada.

About forty men are now employed in the construction of the Burrard Inlet Red Cedar Company's mill, at Port Moody. It is expected to be running this spring, and will be most modern in every point and detail, including the machinery.

A piece of oak cut on Pitt Meadows, was brought to the city a few days ago by James Fox, of Coquiltam. It will be news to many that oak flourishes on the lower Mainland. The tree from which the piece was taken was of recent growth.

The B. C. Iron Works Co. are now engaged in building a 7-foot Kendall band mill for the Red Cedar Lumber Mill at Port Moody. These mills are spoken of as being specially well adapted for cutting the heavy cedar and fir of the Pacific Coast.

The celebrated cigar shaped raft at Coos Bay, Oregon, is slowly breaking up and all efforts to tow the big mass out of the bay are futile. It is impossible to manage the raft while towing and it will probably be necessary to construct three or four rafts from it in order to save the timber.

It is reported in mill circles that the Royal City Planing Mills branch of the M. T. & T. Co., this city, have contracted to supply an Ontario dealer with 15,000,000 cedar shingles during the next six months. This is said to be the largest order of the kind ever seen in British Columbia, and no less than 100 cars will be required to carry the shingles to their destination. The outlook for the shingle trade in 1894 is brighter than for several years past.

NEW WESTMINSTER, B.C., Jan. 22, 1894.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE manufacture of elm hoops for sugar, pork and flour barrels has grown into a large industry in some parts of Michigan. There are five hoop mills on the Saginaw river, the cut of which in 1893 amouted to 75,000,000. H. Seeley operates a hoop mill at Beaverton, and the Michigan Lining & Hoop Company, of Coleman. A new stave and hoop mill is being built by Hecox & Co., at Coleman ; and Geo. Fiege, of Saginaw, operates a mill at Gaylord. There are also a few others in northern Michigan. Elm logs last winter brought $6 to $8 and are about $1 a thousand less this season. Large quantities of elm logs are also consumed in the manufacture of staves. The stock of hoops cut last season was pretty well sold up. There is a large quantity of elm timber in this section of the state. A few years ago it was considered of little value, but the development of the hoop and stave industry has put a good value on this timber. The Hecox Company, of Toledo, recently paid $10,000 for the elm timber on 2,500 acres of land near Coleman. The stave men just now are concerned over the Wilson-bill not feeling sure how it is going to strike them.

It is confidently believed, at least in Menominee, Mich., that the Kirby-Carpenter Company of that city, is the heaviest producer of white pine lumber in North America, if not in the world ; and there is but one lumber concern in the United States in any line that exceeds it in the actual number of feet, though by no means equal to it in the value of the product. The Kirby-Carpenter Company last year cut a total of 114,617,297 feet of lumber and 23,147,000 shingles. There was on hand at their docks January 1st, 1894, 51,617,297 feet of lumber, of which 21,342,827 was sold awaiting water shipment, mainly to the east, while about 4,000,000 is destined for Chicago. The shingles on hand at the same time amounted to 9,715,000, while the logs in the boom scaled the insignificant total of 1,472,000 feet.

BITS OF LUMBER.

Fisher & Turner, of Bay City, will harvest 20,000,000 feet of Georgian Bay logs this winter.

C. C. Barker, of Bay City, is cutting 20,000,000 feet of logs this winter, and will run his mill for all there is in it for 1894.

The Saginaw Lumber & Salt Company is harvesting as many logs in the Georgian Bay country this winter as it did last.

E. M. Fowler, of Chicago, and Arthur Hill, of this city, sailed from New York, January 27th, on an extended European tour.

Three carloads of the pine were recently started from Saginaw on a long journey to Buenos Ayres, via New York, and from Buenos Ayres it is destined for transportation 150 miles into the interior. The lumber was shipped hy the Saginaw Lumber & Salt Company.

At the annual meeting of the stock-holders of the A. W. Wright Lumber Company directors were elected as follows: A. W. Wright, E. P. Stone, C. H. Davis, W. T. Knowlton, A. D. Smith, Saginaw ; O. D. Witherell, Chicago. A. W. Wright was elected president, C. H. Davis, vice-president, W. T. Knowlton, secretary and treasurer.

E. Andrews says that he is feeling the effect of the business depression in his shingle trade, having sold 400,000 shingles the other day at 50c. a thousand less than he sold for in October. He says shingles are now selling at $2 and $3. His mill cut 11,000,000 last season ; he has 1,200,000 on hand, and is putting in a stock of logs for another season's run.

Loggers in this district are rather in despair because of the warm and moist weather, causing the woods and swamps to be redolent with mud and water. Cold weather is greatly needed and unless it comes the loggers will fail in their expectations. A good many logs in the aggregate are on the skids, but not many have been hauled. There is no demand of consequence for labor and there will not be until the weather freezes up. Loggers are paying from $8 to $18 a month, and have experienced no trouble in getting all the help they want.

Lumber sales are said to be slow at Bay City, and collections are reported slow, although credits are closely scrutinized. Logs are coming in by rail for several concerns, and a number of lumbermen are giving attention to logging matters here and in Canada. The streams tributary to Saginaw will furnish very few logs another season, probably not to exceed 100,000,000 feet in all, if that many. The last season only 14,000,000 feet came out of the Rifle river. No logs were left in the stream at the close of operations.

SAGINAW, Mich., Jan. 27, 1894.

TRADE NOTES.

The survival of the fittest applies more to the manufacturing and producing of satisfactory oils than to almost anything else we know of. A satisfactory oil is a thing to be prized. No one except an engineer, or one who has charge of lightning running machinery, can appreciate an oil that will do the work and keep the bearings cool, as against an oil that comes a little short, that can't quite do the work, costs a little less but takes double the quantity and keeps everybody nervous, fearing stoppages and delays caused by hot boxes, cut outs, etc. There is no further any uncertainty about oils. Long practice and experience have come to the aid of Samuel Rogers & Co., together with their ample means and facilities for manufacturing and selling oils of all grades, places them at the head of the list in this line. Their oils have undoubted merit. They are careful, painstaking, reliable people ; their great aim being to produce the best quality possible in every grade, from the cheapest black oil, to the finest engine and cylinder oil. They have made a special study of the various grades required for all the various uses, and especially sawmill uses, and have produced heavy, strong oils that are prizes for heavy work. We can say to our friends that they can depend on the goods they buy from this company, they are solid. See their advt. in this issue of the LUMBERMAN.

THE NEWS.

CANADA.

—James N. Howard intends erecting a sawmill near Exeter, Ont., at an early day.

—Lumber at the rate of ten to twelve loads a day is reaching Thistle station, Ont.

—The new shingle mill, of Jas. Thompson, Terrawoon, Ont., is about completed.

—Alex. McLaren has removed the machinery in his sawmill at Snow river to Cobden, Ont.

—Snow is abundant in New Brunswick, at least two or three feet, and other big storms coming.

—Jas. Macaulay, lumber merchant, South Indian, Ont., has assigned to A. Mutchmer, Ottawa.

The Gillies Bros. Company, limited, of Ottawa, has been incorporated with a capital of $200,000.

—David Campbell's sawmill, at Inverhuron, Ont., is now running with a considerable force of men.

—G. G. Scovil is cutting a large amount of lumber in Kings county to be brought to St. John by rail for shipment.

—McCrae & Son, of Everett, Ont., sawmill men, propose going extensively into the manufacture of lath this season.

—Clark Bros.' property on West side St. John's harbor, N.B., has been sold by auction, realizing $2,000. Wm. Barnhill is the purchaser.

—A. Growberger & Co., and Chas. Laundrie & Co., two new firms, are carrying on lumbering operations on the south branch of the Petewawa river.

—Wylie Bros., at Saginaw. Mich., will change their shingle mill into a band sawmill. They have closed a deal for a ten years' log supply from the Canada shore.

—C. W. Batreek & Son, of Midland, Ont., are going to build a large shingle and tie mill at Bying Inlet, Ont., and have it ready to commence cutting June 1st, 1894.

—Gilmour & Hughson will take out about 300,000 logs from their limits this winter, and calculate to saw next summer 2,000 a day in their Hull Point mill, and 3,000 in the Chelsea mills.

—Jos. Biette has rented the saw mills at Scone, Ont., and in the spring will erect a large cheese-box and heading factory and sawmill combined, on site of the one lately purchased by Krug Bros.

—The Brunette Sawmill Company, B.C., have, it is said, bought out the business of the Shoal Bay Lumber Syndicate and intend commencing logging operations there almost immediately.

—The explosion of a portable sawmill engine near St. Catharines, Ont., a few weeks ago, so shook the city, that the residents at once concluded, that an earthquake had visited them and so proclaimed it to the world.

—Ottawa lumber dealers say that the excellent prices obtained for timber limits at the sale of the Perley & Pattee property on Wednesday are due to the prospects of the abolition of the United States duty upon sawn lumber.

—An indication of how the shingle business has been overdone in New Brunswick is shown in the fact that W. A. Hickson, of Newcastle, who two years ago changed his lumber mill to a shingle mill is now changing back again.

—The Quebec Chronicle says that the ship "White Rose," 1,500 tons, and the barque "Prince Eugene," 1,300 tons, have been chartered to load timber at that port next spring. The rates are said to be 19s. 3d, for Liverpool, 18s. for Belfast and 17s. for Greenock.

—The spool mill erected by Clark, Skilling & Co., at Newcastle, N.B., is now in operation, employing a large crew. The spool mill at Oyster river, near Chatham, owned by McAiton, has been enlarged and is also in operation. A larger amount than usual of spool wood is being manufactured on the Miramichi, for the British market, chiefly to Scotland.

—Mr. J. Morrow, C. P. R. ticket agent for Eastern Ontario, is given as authority for the statement that the Hawkesbury Lumber Co., has just engaged over one hundred and fifty men from the vicinity of Little Metch, Rimouski county, Quebec, to work in their mills in Hawkesbury next summer. The men have hitherto been engaged in the fisheries along the coast of the gulf of St. Lawrence and work in lumber mills will be an altogether new industry to them.

—The News-Advertiser, Vancouver, B.C., says that shingle bolts cost $4 to $4.50 per cord, and that it cost $1.30 per thousand to produce shingles, the very lowest price at which they can be put on board the cars at Vancouver being $1.50 per thousand. At Tait's mill the wages paid are $1.50 and $1.65 per day; while at Spicer's mill they range from $1.50 to $2 per day. The latter firm employs sixteen white men and a number of Chinamen in the mill, but in the woods their hands are all white men.

—A Saginaw dispatch says: J. T. Hurst will have 70,000,000 feet of Canada logs, but he could not tell for the life of him if he will be able to find a market for them. One of his jobbers has 27,000,000 feet on skids, and is now hauling them to the water. Fisher & Turner are putting 20,000,000 feet into the Wahnapitae. J. W. Howry & Sons are putting 20,000,000 feet into Georgian bay waters, and the Holland-Emery Lumber Company, Saginaw Lumber & Salt Company, C. K. Eddy & Sons, Bliss and others operating with him, are putting in from 15,000,000 feet each and upward. Several Bay City firms not named are also putting in stock there.

GENERAL.

—Over 40,000,000 trees have been planted in Switzerland in seven years in the effort to "reforest" the country.

—The tallest tree on earth is perhaps a gum tree, Eucalyptus regnans, recently discovered in Australia. It is 415 feet high.

—The output of the Saginaw river lumber mills for the past season will approximate 630,000,000 feet, against 708,000,000 feet in 1892.

—The forest area of the civilized world is 1,286,824,000 acres divided as follows: Europe, 766,824,000; United States, 380,000,000; East India, 140,000,000 acres.

—The strongest timber known is the "Bilian" or Borneo ironwood, whose breaking strain is 1.52 times greater than that of English oak. By long exposure it becomes of ebony blackness and immensely hard.

—What looks like a case of murder, the victim being a lumberman in Newfoundland, is recorded in the press of that colony. "An altercation took place at Exploits between Appleton Cleaves, foreman of Mr. Phillips' lumbering teams, and a man named Cater, a book-keeper for the same gentleman. It was all about a boat, alleged to have been owned by Cleaves and taken by Cater unlawfully. After quarrelling for some time, Cleaves struck Cater, and he picked up a heavy auger, and in retaliation struck his opponent two blows on the head with it. Cleaves fell stunned and was taken to his quarters in a half-stupefied condition. Cleaves was an elderly man and had been engaged in the lumbering business in Newfoundland for nearly twenty years. He was a native of the State of Maine and was born near Portland. He was married, and his wife, who is very wealthy, resides at Passadumkeay, in that State. He proposed giving up the business and returning home this year."

FIRES AND CASUALTIES.

FIRES.

—Vaughan's sawmill, situated near the C.P.R. station, Chatham, Ont., was burned on 1st inst. Loss, $3,000. No insurance.

—S. S. Armstrong & Co.'s new steam sawmill and shingle mill, Cranbane, Que., was totally destroyed by fire a few weeks ago. No insurance.

—The sash and heading factory and planing mill with dry kiln, of Lawrence & Son, Watford, Ont., was destroyed by fire on the 1st inst. The loss is heavy with an insurance of only $1,600.

CASUALTIES.

—Geo. Wilson had his two legs badly jammed between logs, while working at a lumber camp back of Orillia

—Samuel Draper was killed by a falling log while at work at Mickle & Dyment's camp, near Draper township, Ont.

—A man named Patrick, living near Ratho, Ont., was killed on 1st inst. while hauling logs, becoming pinned under several large logs.

—Thos. McLaughlin, of Norval, Ont., was killed instantly while sawing a tree, which becoming lodged between two others, sprung back, striking him in the temple.

—While John Saunders, of Markdale, Ont., was tightening down the cap on the manhole of a boiler in a sawmill the cap blew off, striking Saunders in the breast and killing him instantly. The body was fearfully scalded with steam and hot water.

PERSONAL.

John McMurty, lumber merchant, Port Hope, Ont., died suddenly a fortnight ago of apoplexy.

J. B. Klock, of Klock & Co., lumbermen, is spoken of as the Conservative candidate for Nipissing at the next election.

The death took place on 12th Jan., of Mr. Wm. Merrill, a partner with Mr. H. Vari, in a large saw and planing mill, in Norwich, Ont.

The sudden death of Mr. Duncan McRae, of New Westminster, B. C., took place a fortnight ago. The deceased was a timber inspector for the Provincial Government. He had been a resident of the Province for twelve years, and been engaged in lumbering operations in one shape or another the larger part of his lifetime. He was highly esteemed by all who knew him.

QUEBRACHO WOOD.

QUEBRACHO wood is of a blood-red color, very bright when freshly cut. It is found in great abundance in large forests in North Argentina. The wood so far has only been appreciated in Europe by tanners, as it contains a large proportion (said to vary from fifteen to twenty per cent.) of its weight in tannin, to the presence of which has been ascribed its extraordinary durability. It is stated that when, for the purpose of extending railways in the province of Santa Fe, posts which had surrounded grazing inclosures were taken up, the wood, though having been for one hundred and fifty years, and sometimes longer, in ground alternately parched by great heat or sodden by tropical rains, appeared to be in as good condition as though recently cut. The wood is especially suitable for railway ties, on account of its stability, durability and weight, and by its freedom from attacks by insects. It weighs about seventy-eight pounds per cubic foot, does not decay, and is not compressible, so that holes must be bored clear through the wood, and equal to the diameter of the bolts.

PAVING BLOCKS OF BLAST FURNACE SLAG.

ABOUT twenty years ago it was discovered by a Mr. Woodward that blast furnace slag run into an iron mold and annealed would make an exceedingly tough block suitable for road paving, much cheaper than granite or any other stone. The manufacture of these blocks is now carried on in England, and has become a staple industry. The total product is a present about 100,000 blocks per week, of a value of about $3.25 per ton. The process of manufacture is as follows:—The slag, when of suitable quality, is run into a ladle; from this it is poured into cast iron moulds secured to the perhiphery of a horizontal wheel. Each mould has a hinged bottom. The wheel is slowly rotated, and the bottom of the molds are released in succession. The blocks, molten inside, but solid at the surface, drop upon a soft bed of granulated slag, and are quickly removed and stacked in an annealing stove. When full, the doors of the stove are closed, and the blocks are allowed to anneal themselves without extraneous heat. In about eight hours the doors are opened and the blocks withdrawn. They are then fit for use. Without annealing they would soon crumble to pieces from internal stresses. The blocks are in great demand for street paving, not only locally, but also foreign towns where they can be conveyed by water.

HEATING IRON IN COLD WATER.

IT would now seem as though the common, but time-honored blacksmith's forge, and all other kinds of fiery furnaces, will become extinct and live only in the memory of a rapidly-receding past. The forge and furnace of the future will consist of a lead-lined glass or porcelain vase or cupola filled with cold acidified water, to which is connected a strong positive conductor. A pair of tongs with insulated handles attached to a flexible negative conductor are also provided, making the new forge and outfit complete.

The smith seizes the piece of iron he wishes to manipulate with the insulated tongs and plunges it into the sour water, which begins to boil and bubble the instant it comes in contact with the iron, which, in a remarkable short space of time, turns to a red and then to a white heat, ready for the work of the smith.

So rapidly is the heating done, that the water and the portion of the iron not immersed in the water is but slightly warmed.

The principle involved in this process is the same as in incandescent electric light. Resistance produces the light and heat. It is said that enormous heat can be produced by the method, much greater than is necessary to extract the iron from the most refractory ores.

Like all, or nearly all, of the late practical applications of electricity, this discovery will no doubt lead to marvelous results in the perfect and rapid handling of heavy iron and steel plates and bars that have to be hammered and welded, and more valuable still for tempering purposes, as the required heat for the immersed portion can be quickly obtained, while the remaining portion is kept comparatively cool, which cannot be done by present methods. By electricity we live and move, and by electricity some of us die.—Mechanical News.

CANADA'S LUMBER TRADE IN 1893

Review of the Business of the year.

A RETROSPECT.

THE year 1893 was one of much anxiety to business men of all branches of trade, and in almost all parts of the world. It is very generally conceded, we believe, that in the United States and Great Britain, the financial depression was much more severely felt than here, and is apparently proving of longer duration. In other parts of the world, particularly, in Australia, commercial disaster in some of its severest forms has taken possession of the people, and it will yet be some time, we fear, before trade in that colony will have recovered itself.

It would be a strange phenomenon, if, with financial depression so wide spread, Canadian lumber, which finds a market in almost all parts of the world, was not measurably affected. Perhaps this stringency was the more felt by the timber trades of Canada from the fact that the year 1893 opened with many indications of a largely increased trade and at prices that would certainly have proved pleasurably remunerative. This view of the situation was reflected in interviews with prominent Canadian lumbermen in the early part of the year, some of the most cautious taking as hopeful view of the outlook at that period as was the case with others mentally built on a more sanguine plan. No one seemed to doubt that the trade would show a large increase over 1892, for the stocks of lumber on hand were very light, and values were steadily advancing. The mills of the Ottawa and the Georgian bay Territories opened with a large staff of hands in anticipation of a good trade.

Presently the clouds began to gather. The silver difficulties caused serious disturbance in monetary circles in the United States, and almost, as like a bolt out of a clear sky, we began to hear of this bank and another closing its doors, and for a few months, at least, a panic sharp and severe overtook business of every kind. Representatives of Canadian lumber firms, who had experienced no difficulty in finding customers for their lumber, were suddenly brought up with a short stop. Our lumber was wanted, but the one story was told in every ear. Money could not be had from the banks and consequently business could not be done. The piling grounds at all leading points in place of being bare, as had been the case the early part of the year, were now uncomfortably crowded with lumber. Lumbermen, generally, had, in fact, reached the point of not wishing to do business, considering it safer to hold on to their lumber than give it out where only paper was to be given in exchange, much of which was not negotiable, and nearly all of which was surrounded with doubt and uncertainty.

This was the condition of the lumber trade in Canada, as well as the United States, throughout the early summer of 1893, and which so continued, though in less aggravated form, along until the year had finally passed into the archives of the past. This remark, however, ought to be made, that whilst the depression in trade in the United States left its marks in Canada, at the same time the strain here was not as severe as there. As a matter of fact no serious failures occurred in the Canadian lumber trade in 1893, where not a few lumbermen of some importance and size across the border went to wreck within this period, unable to bear the continued strain put upon them.

Trade in lumber was likewise affected during the year by the slow moving features of business in the United Kingdom and other foreign points of export. It is doubtless true that very much was not expected of lumber in these places, from the fact that trade had been experiencing one continued series of set-backs for a long period of time. If it was not a London carpenters' strike, then things were all awry with dock men, and when the seat of trouble was not there it was somewhere else. Still the lumbermen of the United Kingdom had hoped that there was to be an end to these conditions, and we on this side of the Atlantic were not without expectations of improved trade as an outcome of this hope. In Australia, of course, the bottom fell completely out of trade, and little lumber business was done. Things were not so bad in South America, and later in the year there were encouraging signs of improvement, but taking the year throughout only a fair trade was done with these points.

And yet, whilst conditions throughout 1893 disappointed hopes and expectations that had taken strong possession of the breasts of Canadian lumbermen, when they entered into the activities of business in the early spring, still this disappointment can only be temporary. As a Canadian lumberman remarked to the writer a few days since lumber in Canada is gold. The lumber trade has reached a point where any man holding Canadian timber need not fear any depreciation in its value. Where the sacrifices will come in, if anywhere, is in an injudicious or ill-advised disposition of these resources, a penny turned to-day, only at the sacrifice of a pound a little later on. But much of this kind of business need not be feared at the hands of Canadian lumbermen. They know pretty well what they are doing.

ONTARIO.

What we have already said in this review of the situation, taking the lumber field generally, applies quite fittingly to the Province of Ontario. Here, more than in some other provinces, the boom of early spring was actively felt. There had been a large cut in the woods and the drives came along in good shape. Mills started up with a strong force of men cutting. Lumber was much needed, for the piling grounds were devoid of almost any stocks. As a matter of fact there was so strong a confidence in the lumber situation, that large orders for lumber had been placed before the saw had, in many cases, touched the logs. Prices were not only firm, but for white pine in particular, were steadily advancing. It may be that this condition of the situation was in a degree abnormal. Some think so. At any rate there was no difficulty in placing sales for Ontario lumber at profitable quotations, until the financial depression seized our neighbors to the south of us. Then trade began to shrink, stocks piled up, and sales were comparatively few. The figures of the cut of 1893 would have run into large numbers, but the unexpected always happens, and a season that opened out unusually propitious, closed with dulness and inactivity as a prominent feature.

Opinions vary as to the probable effect of the present depression upon work in the woods this winter. It had been supposed, at the commencement of the logging season, that the cut would fall considerably short of that of a year ago, but from reports that have come into our hands the indications point to a moderately large cut. How well the logs will be got forward, having once been cut, is yet problematical. We hear of an over abundant supply of snow in some quarters hindering operations, whilst at other points work is retarded because of too little snow, mud and water being the substitute. It is always a matter of concern how the drives will come along when spring once opens.

QUEBEC

Returns from the Supervisors of Cullers' office at the port of Quebec do not record a trade of encouraging size for 1893. Of white waney pine there was only 2,460,541 feet measured and culled as compared with 2,659,166 feet in 1892 ; 1,120, 697 feet of white pine, as compared with 2,310,081 feet in 1892 ; 393,391 feet of red pine, against 392,196, feet in the previous year ; 573,079 feet of elm, against 198,806 feet ; 158,285 feet of ash, against 198,806 feet, 140,909 feet of birch and maple, against 425,927 feet. In the item of oak alone there was an increase, the figures being 1,150,087 feet for the present year, as against 915,913 feet last year.

BRITISH COLUMBIA.

Commercial records show that the lumber trade of British Columbia ran into large figures for 1893. A leading Vancouver firm, in order to keep up with the demand, found it necessary for a considerable period to make double shifts by day and night. A great deal of shipping was also done there being gathered in the main harbor towards the close of the year the most numerous lumbering fleet on local record. But as Commerce, of Vancouver, has pointed out a large volume of trade does not always carry with it large profits. Says this journal : "Trouble in Southern America and depression in Australia caused much of a large output to be sold to little profit. Over competition did similar detriment to the shingle trade. Quite a number of the smaller loggers, moreover, assigned during the year, and lumberers of this class now loudly demand in what they declare to be absolutely necessary self protection, the appointment of a Government log scaler, who shall authoritatively estimate the cubical contents of the logs, for which purchasers at the mill must pay." Taking British Columbia interests, however, as a whole, during 1893, they compare most favorably with, and were maintained on a far sounder basis than was the case in the neighboring State of Washington, where, as a result of reckless over competition in falling markets—by men and companies having in many cases insufficient capital—slaughter sales were general, insolvency frequent and demoralization in the ascendant. The establishment of the new fast steamship service between Vancouver, Victoria and the Australian Continent, should, moreover, give an immense early impetus to our lumber industries, by affording them ready access to a great, albeit at present, a temporarily depressed market, which has hitherto been mainly held and controlled by the lumber exporters of the United States. A close estimate places the cut of logs in British Columbia for 1893 at 120 million feet, of which 3 million were sold and shipped to Washington mills.

MARITIME PROVINCES.

For the very full information given below, touching the lumber trade of the Maritime Provinces for 1893, we have to thank Mr. J. B. Snowball, the well-known lumberman, of Chatham, N. B.

The winter of 1892-3 proved the most favorable for log-getting of any we have had for many years, consequently we have had a much larger output for the force employed, than we anticipated. Spring freshets were poor, and driving expensive. About ten millions superficial feet of logs were left in the brooks.

Notwithstanding the favorable season the export from this port fell off twelve millions superficial feet from last year. And while the exports from St. John were ten millions more than in 1892, still the exports for the Province show a decrease of thirteen millions. The increased export from Nova Scotia is caused by the excessive quantity of birch deals shipped from that Province.

The present winter is the most severe experienced for twenty years. Snow is now deeper all over Eastern Canada than at any time last winter. Operations in this district were entered into on a limited scale, and with an anticipated production of 25 per cent. less than last year, but the severe weather is likely to reduce the production below the estimate, and next year's export from this port must be small.

The proposed United States tariff, if adopted for wood goods, will have an indirect beneficial effect on the trade of this section of New Brunswick. Freight rates from Eastern New Brunswick to the United States ports are so high in comparison with those from St. John and Bay of Fundy ports, that our trade in that direction is about nil, excepting in laths and shingles, but under the proposed tariff the export of a considerable portion of the southern and western portions of this Province is likely to be attracted to American ports, leaving more of the trans-Atlantic trade to be supplied from this section.

France, Spain and Mediterranean ports have taken a larger portion of our exports this year than formerly, and if the "favored nation" treaty is ratified, as it will probably be at once, between France and Canada, a larger portion of our export is likely to go to that country, to the great relief of the English market, and with a fair prospect of better prices for spruce.

The stock of merchantable deals wintering here is 7,600 St. Petersburg Standards, against 7,000 Standards last year and 11,000 Standards in 1891. Logs are 4,000 Standards against 3,000 last year.

SHIPMENTS FROM MIRAMICHI FOR 12 YEARS, FROM 1882 TO 1893, INCLUSIVE.

1882—117 millions	1886— 72 millions	1890—88 millions
1883—149 "	1887— 68 "	1891—72 "
1884—108 "	1888— 73 "	1892—95 "
1885— 87 "	1889—110 "	1893—83 "

THE SHIPPERS FROM THE PORT OF MIRAMICHI, IN THE SEASON OF 1893.

Shippers.	No. Vessels.	Tons.	Sup. ft. deals, scantling, ends and boards.	Palings. Pcs.
J. B. Snowball	36	25,169	22,081,347	2,421,206
D. & J. Ritchie & Co	20	10,964	10,660,238	83,800
F. E. Neale	11	12,847	13,519,604	
E. Hutchison	10	7,974	7,109,925	
Geo. Burchill & Sons	4	3,631	4,601,000	
W. M. McKay	21	18,621	18,084,380	32,000
Wm. Richards	8	7,509	6,607,000	29,972
Clark, Skilling & Co	2	1,069		
J. W. Bennett	1	739		
Total	113	88,523	82,663,494	2,566,978

DISTRIBUTION OF MIRAMICHI SHIPMENTS.

Country.	No. Vessels.	Tons.	Sup. ft. deals, scantling. ends and boards.	Palings. Pcs.
Great Britain	49	42,791	39,333,633	2,407,625
Ireland	44	32,356	30,850,877	159,353
France	7	5,066	4,964,239	
Africa	2	1,421	1,330,254	
Spain	11	6,889	6,184,491	
Totals	113	88,523	82,663,494	2,566,978

ST. JOHN SHIPMENTS, 1ST DEC., 1892, TO 1ST DEC., 1893.

Shippers.	No. Vessels.	Tons.	Sup. ft. deals, scantling, ends, and boards.	Tons Timber.
Alexander Gibson	55	72,351	67,505,580	850
W. Malcolm Mackay	77	77,878	65,282,983	4,444
George McKean	33	29,917	23,021,530	
J. & L. B. Knight	1	953	843,241	
Totals	166	181,099	156,653,334	5,294

DISTRIBUTION BY PORTS OF ST. JOHN SHIPMENTS, 1893.

Countries and Ports.	No. Vessels.	Tons.	Supt. ft. deals, scantling, ends and boards.	Tons Timber.
Bristol	3	3,728	3,472,852	
Barrow	1	1,843	2,422,400	
Continent	6	3,734	3,573,604	
Fleetwood	11	14,477	14,462,277	
Garston	6	6,953	7,004,811	
Ireland	54	40,490	38,968,156	70
Liverpool	33	47,055	42,788,326	5,224
London	12	16,269	2,845,616	
Penarth, f. o.	13	14,879	13,082,537	
Scotland	7	6,621	5,746,545	
Sharpness	6	9,066	8,426,545	
Wales	14	15,984	13,859,665	
Totals	166	181,099	156,653,334	5,294

SHIPMENTS FROM ST. JOHN TO TRANS-ATLANTIC PORTS FOR THE PAST 16 YEARS.

	Total sup. ft. deals, etc.	Timber (tons) Birch.	Pine.
1878	188,168,610	7,989	2,493
1879	153,279,357	11,548	3,237
1880	215,485,000	16,035	2,441
1881	210,281,730	5,134	1,734
1882	201,413,717	7,576	3,332
1883	181,517,932	11,778	3,883
1884	164,829,825	14,006	3,836
1885	152,543,026	13,769	3,686
1886	138,934,392	7,354	4,313
1887	118,450,590	5,197	1,587
1888	153,184,187	4,721	457
1889	180,167,488	7,221	487
1890	132,608,516	1,311	4,317
1891	122,242,682	5,004	
1892	146,529,309	10,200	
1893	156,653,334	5,294	

TOTAL TRANS-ATLANTIC SHIPMENTS OF NEW BRUNSWICK 1892, COMPARED WITH 1893.

Ports.	No. Vessels.	Tons.	Sup. ft. deals, etc.	Tons Timber
—1892—				
Miramichi	134	103,565	94,907,523	228
St. John	164	165,207	146,529,309	10,250
Bathurst	17	10,746	9,866,015	24
Dalhousie (including Campbellton)	48	25,615	22,568,604	805
Richibucto (including Buctouche)	29	13,887	13,002,512	
Shediac	23	11,278	10,156,333	
Sackville (including Baie Verte)	24	13,775	14,576,566	
Outports of Moncton (Hillsboro, Harvey, Cocagne)	16	13,712	13,542,949	
Totals	455	357,775	325,149,811	11,307
—1893—				
Miramichi	113	88,523	85,230,472	
St. John	166	181,099	156,653,334	5,294
Bathurst	18	11,810	10,176,000	102
Dalhousie (including Campbellton)	32	21,054	17,610,241	341
Richibucto (including Buctouche)	22	11,188	10,557,663	
Shediac	25	13,099	11,763,215	
Sackville (including Baie Verte)	21	14,395	13,382,475	
Outports of Moncton (Hillsboro, Harvey, Cocagne)	8	7,040	6,870,085	
Totals	405	348,208	312,243,485	5,737

The Trans-Atlantic Shipments from the Province of New Brunswick for the past ten years were :

1884—333 millions s. ft.		1889—369 millions s. ft.	
1885—292	"	1890—293	"
1886—276	"	1891—253	"
1887—250	"	1892—325	"
1888—277	"	1893—312	"

SHIPMENTS FROM NOVA SCOTIA, 1893.

Ports.	No. Vessels.	Tons.	Sup. ft. deals, etc.	Tons Birch Timber.
Outports of Amherst (Pugwash, Northport, Tidnish)	25	22,607	17,300,000	
Halifax	64	39,456	34,352,656	990
Jordan River	1	524	415,108	
Parrsboro	39	44,426	40,792,496	
Pictou	20	12,990	6,888,000	4,616
Saint Mary's River and Liscomb	7	4,823	4,315,680	
St. Margaret's Bay	5	2,935	2,593,698	
Sheer Harbor	2	1,403	1,316,092	
Ship Harbor	3	1,460	1,279,200	
Totals	166	130,625	109,252,930	5,606

The shipment of deals from Nova Scotia to Trans-Atlantic ports were :

1883	77,918,000	1889	92,605,488
1884	69,159,000	1890	99,512,924
1885	79,647,765	1891	78,603,742
1886	87,280,125	1892	87,861,398
1887	82,959,589	1893	109,252,930
1888	85,070,005		

INCREASING THE TEMPERATURE OF STEAM.

SOME short time ago, says the Scientific American, it was suggested by Lord Rayleigh that the efficiency of the steam engine might conceivably be increased by adding some salt to the water in the boiler, which should have the effect of raising the boiling point of the solution. The idea sought to be conveyed was that the initial temperature of the working fluid might be thereby increased, thus providing for a larger range and a greater fall of temperature between the boiler and the condenser.

Certain critics objected to this proposition that to raise the boiling point of an aqueous solution does not necessarily imply a corresponding elevation of the temperature of the evolved vapor, which is simply that of water, and must accordingly possess only the temperature corresponding to the pressure. A number of experiments to determine the temperature of the steam arising from a boiling salt solution have been made from time to time ; but the results have been of a conflicting character. The difficulty of arriving at trustworthy results in this class of experiments consists in the circumstance that, while the walls of the steam chamber must be at a temperature higher than that of boiling water, and yet below the temperature of the solution, a sufficient quantity of steam must be evolved to insure that these walls shall not exercise any appreciable cooling effect upon it. These desiderata are claimed to be all satisfied by an arrangement devised by Professor Sokurai, of the College of Sciences of the Imperial Japanese University, by the aid of which it has been determined that the temperature of steam escaping from boiling aqueous solutions of such salts as calcium chloride, sodium nitrate, potassium nitrate, is exactly the same as the solution itself. This is a corroboration of Lord Rayleigh, but whether of any material service to mechanical engineers remains to be seen.

THE WAY IT LOOKS.

A WRITER on the care of engines says it looks like pure laziness for a man to plant certain pieces of bright work on an engine because a little extra work is required to keep them bright. It does look that way Moreover, a man who will shirk work in that way will probably shirk in every other way he can get a chance.

A THREE CENT STAMP DOES IT.

ON receipt of a three cent stamp we will mail free to any address a copy of our little hand-book entitled "Rules and Regulations for the inspection of pine and hardwood lumber." as adopted by the lumber section and sanctioned by the Council of the Board of Trade, of Toronto, June 16, 1890. Address, CANADA LUMBERMAN, Toronto, Ont.

SOLID EMERY WHEELS.

THE distinctive feature of the various makes of solid emery wheels, says J. Wendell Cole, in Cassier's Magazine, is in the kind and quality of the cement used. They may be divided into, first wheels in which are used gums like rubber and shellac ; second, those cemented under hydraulic pressure and dried and seasoned, like the Northampton and Tanite wheels ; third, wheels made by pressure and moulding, and cured by heat like the Hart or Detroit wheels ; and fourth, the several vertified makes, in which a flux is melted into cement.

No one kind of wheel is the best for every kind of work. The rubber cement has to be softened and melted by friction heat before the emery will cut without glazing, and this takes much extra power. Other cements are not good conductors of heat, and cause the wheel, if used dry, to flake out or "spall" off. Virtified wheels have to be watched carefully as they are of a brittle, glassy nature, easily cracked by a blow. In fact, emery wheels are like steam boilers—very useful, but they must be in good condition to stand the strain, and should have intelligent care with frequent inspection. They should also be kept round, as, if out of round, they cut only on the high side and thus waste the time of the workman, and also are worn into cams and strike a dangerous blow, whereas, the round wheel gives a continuous cut the whole circle. A careless workman, bringing his castings against the wheel with a blow as he starts grinding, causes many wheels to get out of the round, while a careful grinder seldom gets a wheel much out of round.

The best cement is one that binds the emery together with sufficient strength to resist the centrifugal strain due to the high speed at which emery wheels cut best, about 5,000 feet surface speed per minute. It must not soften by frictional heat, nor glaze, nor burst, nor become brittle and break with cold. It must not hold the cutting grains until they are too dull to cut ; nor release them so readily as to waste away the wheel too fast. It must be capable of being mixed evenly with the grain emery, so that the wheel may not have hard or soft spots and be out of balance, and it must also be capable of being tempered to suit different kinds of metal or work. As great care and skill is required to select and use only pure and strong chemicals in these cements, and as careful, skilled workmen are necessary to manipulate and use them aright, one runs great risks in buying wheels to try from any but well-known, experienced and thoroughly responsible makers.

THE ELM.

THE elm (Ulnus Campestois) is an old and long familiar tree, the wood of which, however, according to Timber, of London, Eng., is of no great importance, and is used for a variety of purposes, while knobs or monstrosities found on the tree are cut into thin slices and polished, and employed by carpenters in the process of veneering. The wood is very durable and the keels of troughs and waterpipes in the neighborhood of salt springs are always constructed of elm timber. The elm tree lives to a great age, and some trees in Oxfordshire were famous even in the time of Queen Elizabeth. The "Long Walk" at Windsor was planted at the beginning of the last century, and is well known and greatly admired though some of the trees have passed their prime. There is a great elm tree in the south of England that measures sixty-one feet in circumference. Its trunk is hollow and has a door fitted into it and fastened by a lock and key. Another great elm, near London, has a winding staircase cut within it, and a turrent at the top where at least twenty persons can stand. But perhaps the largest and finest elm tree in the world was (for it unfortunately is not) in the county of Kildare, in Ireland. Two of the huge branches fell down of their own weight, and that on a still, calm day, when their was not a breath of wind. The timber of the branches was conveyed away and sold for guineas. The noble tree did not long survive the loss of the branches. It was already tottering to its fall, and a violent storm tore it up by the roots, a great mass of earth rocks being torn up with them. The elm is taller than most of our forest trees, and the masses of light shade, formed by its abundant yet rather loose foliage, impart much beauty to a woodland scene.

TRADE REVIEW.

Office of CANADA LUMBERMAN,
February 1, 1894.

THE GENERAL SURVEY.

FOR a month, usually dull, under the most favorable conditions, January has shown fair expectations of an encouraging lumber trade ahead. The results of the recent lumber sale at Ottawa, particulars of which are given in our correspondence from the Capital, furnish one reason, at least, for this hope. Good prices were realized, and the property well distributed in a number of hands, indicating a general confidence in the future. A larger number of contracts than the custom of previous years would lead one to expect, made at Ottawa during the month just closed, is likewise evidence of the present activity in lumber. The value of the sales closed at Ottawa during the first month of the year are placed at so large a figure as $2,500,000, and it is said that at least $4,000,000 of lumber for export has been sold in Ottawa during the past two weeks.

What is true of lumber in the Ottawa valley is true of the trade generally at other lumber centres. The worst of the depression of the past has left us, and the future contains many rays of hope.

When we commence to particularize there is not so much to be said of immediate business. That is, what is doing has a relation to the future rather than the present. Local trade in our own Province, and in the city, continues dull, which is all we have been able to say of it for some months. In Quebec and the Maritime Provinces there has been large activity during the month. British Columbia lumber matters are more active, especially the shingle interests, for which a good trade is expected during the year.

United States lumber reports are not yet any too hopeful. At the leading mill points, we are told, there are heavy stocks on hand, and not much demand during the month just closed. Contrawise, it is said, that there are signs of considerable building activity for the early spring, which will mean a distribution of stocks on hand and a demand for fresh stocks.

At foreign points it is believed that trade for '94 will show some improvement, though it must be admitted there has been a great deal of hoping against hope for a year past, and that there is abundance of room for bettered conditions. British trade, it is expected, will improve; South America, it is thought, is growing away from its financial difficulties, and time will improve the monetary situation in Australia.

Following our usual custom we give elsewhere in this issue of the LUMBERMAN a review of the lumber trade of the Dominion for 1893.

TORONTO, ONT.

TORONTO, February 1, 1894.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch	2 50	2 60
XX shingles 16 inch	1 50	1 60
Lath, No. 1		2 15
Lath, No. 2	1 80	1 85

YARD QUOTATIONS.

			F. M.		
Mill cull boards and scantling	$10 00		1 1-2 in. flooring, dres'd	26 00	30 00
Shipping cull boards, promiscuous widths	13 00		" " rough	18 00	22 00
" stocks	16 00		" " dres'd	25 00	28 00
Scantling and joist, up to 16 ft	14 00		1 1-4 in. flooring, undressed, B.M.	16 00	18 00
" " " 18 ft	15 00		1 1-4 in. flooring, dres'd	18 00	20 00
" " " 20 ft	16 00		" " undres'd	12 00	15 00
" " " 22 ft	17 00		Beaded sheeting, dressed	20 00	35 00
" " " 24 ft	19 00		Clapboarding, dres'd.		12 00
" " " 26 ft	20 00		XXX sawn shingles per M.	2 60	2 70
" " " 28 ft	22 00		Sawn lath		2 60
" " " 30 ft	24 00		Red Oak	30 00	40 00
" " " 32 ft	27 00		White	37 00	45 00
" " " 34 ft	29 50		Basswood, No. 1 and 2	28 00	30 00
	23 50		Cherry, No. 1 and 2	70 00	90 00
" " " 36 ft	31 00		White ash, 1 and 2	24 00	35 00
" " " 38 ft	33 00		Black ask, 1 and 2	20 00	30 00
" 40 to 44 ft	37 00				
Cutting up planks, 1 and thicker, dry	25 00	28 00			
" board	18 00	24 00			
Dressing blocks	16 00	20 00			
Picks Am. inspection		30 00			

HARDWOODS—PER M. FEET CAR LOTS.

Ash, white, 1 to 2 in.		$18 00	$20 00	Elm, soft	1	1½	$11 00 $12 00
" " 2½ to 4		20 00	24 00	" "	2	3	12 00 13 00
" black,	1	1½	16 00	18 00	" rock	1	1¼ 14 00 16 00
Birch, sq.,	1	4	17 00	20 00	" "	1½	3 15 00 18 00
" "	4x4	8x8	20 00	22 00	Hickory	1½	2 28 00 30 00
" red	x	½	20 00	22 00	Maple	1	1½ 16 00 17 00
" "	2	4	22 00	25 00	"	2	4 17 00 18 00
" yellow	1	4	14 00	15 00	Oak, red, p'n	1	1½ 28 00 30 00
Basswood	1	1¼	15 00	16 00	" "	2	4 30 00 32 00
"	1½	2	16 00	18 00	" white	1	1½ 28 00 30 00
Butternut	1	1½	23 00	25 00	" " "	2	4 30 00 35 00
"	2	3	25 00	28 00	" quart'd	1	2 48 00 52 00
Chestnut	1	2	25 00	30 00	Walnut	1	3 85 00 100 00
Cherry	1	1½	50 00	60 00	Whitewood	1	2 32 00 36 00
"	2	4	60 00	65 00			

OTTAWA, ONT.

OTTAWA, February 1, 1894.

Pine, good sidings, per M feet, b.m	$32 00 40 00
Pine, good strips, " " "	27 00 35 00
Pine, good shorts, " " "	20 00 27 00
Pine, 2nd quality sidings, per M feet, b.m	20 00 25 00
Pine, 2nd quality strips, " " "	18 00 22 00
Pine, 2nd quality shorts, " " "	15 00 18 00
Pine, shipping cull stock, " " "	14 00 16 00
Pine, box cull stock, " " "	11 00 13 00
Pine, s.c. strips and sidings " " "	11 00 14 00
Pine, mill cull	8 00 10 00
Lath, per M	1 60 1 90

QUEBEC, QUE.

QUEBEC, February 1, 1894.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	14 @	18
For fair average quality, according to average, etc., measured off	16	20
For good and good fair average, " " " " "	23	27
For superior " " " " "	28	30
In shipping order " " " " "	29	35
Waney board, 18 to 19 inch " " " " "	30	36
Waney board, 19 to 21 inch " " " " "	37	40

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	45	51

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	30	34

BIRCH.

16 inch average, according to average and quality	20	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $37 to $42 for 3rd quality.

Bright spruce, according to mill specification, $40 to $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality.

BOSTON, MASS.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$11 00	12 00	¾ inch	$ 9 50	10 00
Coarse No. 5	16 00	16 50	11-16 inch		9 00
Refuse	11 00	12 00	⅝ inch	8 50	9 00
Outs		9 00	Clapboards, sap ext.	52 50	55 00
Boxboards, 1 inch	11 00	11 75	Sap clear	47 00	50 00
⅞ inch	10 00	11 00	Sap, 2nd clear	38 00	40 00
			No. 1	20 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in	$52 00	54 00	Fine com., 3 and 4 in	42 00	46 00
1¼, 1½ and 2 in	52 00	55 00	No. 2, 1 in. Fine com.	28 00	30 00
3 and 4 in		60 00	1¼, 1½ and 2 in	29 00	31 00
Selects, 1 in	45 00	46 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in	48 00	50 00	No. 2	36 00	37 00
3 and 4 in		51 00	No. 3	28 00	30 00
Moulding boards, 7 to 11 in. clear	36 00	38 00	Cut ups, 1 to 2 in	24 00	32 00
60 per cent. clear	34 00	36 00	Coffin boards	21 00	23 00
Fine common, 1 in	40 00	41 00	Common all widths	22 00	26 00
1¼, 1½ and 2 in	41 00	43 00	Shipping culls, 1 in	15 00	15 50
			do 1¼ in.	15 50	16 50

SPRUCE—BY CARGO.

Scantling and plank, random cargoes	14 00	@15 00	Coarse, rough	12 00	@14 00
Yard orders, ordinary sizes	15 00	16 00	Hemlock bds., rough	12 00	13 00
Yard orders, extra sizes	16 00	18 00	" " dressed	12 00	14 00
Clear floor boards	19 00	20 00	Clapbds., extra, 4 ft.	29 00	30 00
No. 2	16 00	17 00	Clear, 4 ft.	30 00	31 00
			Second clear	23 00	24 00
			No. 1	12 00	16 00

LATH.

Spruce by cargo	2 50	@2 75

SHINGLES.

Eastern sawed cedar, extra	$3 00	$3 25	Eastern shaved sawed cedar, 1st quality	5 00	
clear	2 30	2 75	2nd quality	4 75	
2nd's	2 00	2 35	3rd "	3 85	4 00
extra No. 1	1 50	1 75	4th "	3 00	3 25
			Spruce No. 1	1 50	

OSWEGO, N.Y.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$47 00@49 00
Pickings, " "	39 00 40 00
No. 1, cutting up, " "	34 00 35 00
No. 2, cutting up, " "	24 00 25 00
In strips, 4 to 8 wide, selected for moulding strips, 14 to 16 ft.	32 00 34 00

SIDING.

1 in siding, cutting up picks and uppers	32 00@39 00	1¼ in selected	35 00@42 00
1 in dressing	19 00 21 00	1¼ in dressing	19 00 21 00
1 in No. 1 culls	14 00 15 00	1¼ in No. 1 culls	14 00 16 00
1 in No. 2 culls	12 00 13 00	1¼ in No. 2 culls	12 00 13 00
		1 in. No 3 culls	10 00 11 00

1X12 INCH.

12 and 16 feet, mill run	21 00 24 00
12 and 16 feet, No. 1 and 2, barn boards	19 00 20 00
12 and 16 feet, dressing and better	27 00 31 00
12 and 16 feet, No. 2 culls	15 00 16 00

1X10 INCH.

12 and 13 feet, mill run, mill culls out	21 00 23 00
12 and 13 feet, dressing and better	26 00 28 00
1x10, 14 to 16 barn boards	18 00 19 00
12 and 13 feet, No. 1 culls	16 00 17 00
12 and 13 feet, No. 2 culls	15 00 16 00
14 to 16 feet, mill run mill culls out	21 00 23 00
14 to 16 feet, dressing and better	26 00 28 00
14 to 16 feet, No. 1 culls	17 00 18 00
14 to 16 feet, No. 2 culls	15 00 18 00
10 to 13 feet, No. 3 culls	11 00 12 00

1¼X10 INCHES.

Mill run, mill culls out	$22 00@25 00	No. 1 culls	17 00 18 00
Dressing and better	27 00 35 00	No. 2 culls	15 00 16 00

1X4 INCHES.

Mill run, mill culls out	17 00 21 00	No. 1 culls	14 00 15 00
Dressing and better	24 00 30 00	No. 2 culls	13 00 14 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20 00 25 00	6, 7 or 8, No. 1 culls	16 00 17 00
6, 7 or 8, drsg and better	25 00 30 00	6, 7 or 8, No. 2 culls	14 00 15 00

SHINGLES.

XXX, 18 in pine	3 70 3 90	XXX, 18 in. cedar	3 50 3 71
Clear butts, pine, 18 in.	2 70 2 90	Clear butt, 18 in. cedar	2 50 2 71
XXX, 16 in. pine	3 10 3 30	XX, 18 in. cedar	1 90 2 00
Stock cedars, 5 or 6 in.	4 50 5 00		

LATH.

No. 1, 1¼	2 30	No. 2, 1¼	2 25
No. 1, 1 in.	1 80		

BUFFALO AND TONAWANDA, N.Y.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in	$47 00	50 00	Shelving, No. 1, 13 in and up, 1 in	31 00@33 00	
2½ and 3 in	55 00	57 00	Dressing, 1¼ in	26 00	28 00
4 in	58 00	60 00	1¼x10 and 12		28 00
Selects, 1 in.	38 00	40 00	1½ in	24 00	25 00
1¼ to 2 in	40 00	42 00	2 in	26 50	28 00
2½ and 3 in	50 00	52 00	Mold st'ps, 1 to 2 in	33 00	35 00
4 in		54 00	Barn, No. 1, 10 and 12 in	23 00	24 00
Fine common, 1 in	35 00	38 00	6 and 8 in	22 00	23 00
1¼ and 1½ in	37 00	38 00	No. 2, 10 and 12 in.	18 00	19 00
2 in	39 00	40 00	6 and 8 in	18 00	19 00
3 in		45 00	No. 3, 10 and 12 in.	14 00	16 00
4 in		45 00	6 and 8 in	14 50	15 50
Cut'g up, No. 1, 1 in.	28 00	30 00	Common, 1 in	16 00	18 00
1¼ to 2 in	35 00	36 00	1¼ and 1½ in	18 00	20 00
No. 2, 1 in	18 00	20 00	2 in	20 00	22 00
No. 2, 1¼ to 2 in	24 00	26 00			
No. 3, 1¼ to 2 in	18 00	19 00			

BOX.

1x10 and 12 in. (No 3 out)		14 00	Narrow	13 00@14 00	
1x6 and 8 in (No. 3 out)		13 50	1¼ in	15 00	18 00
1x13 and wider	15 00	17 00	1½ in	15 00	18 00
			2 in	15 00	18 00

SHINGLES.

18 in. XXX, clear	3 75	4 00	16 in., *A extra	2 60	2 70
18 in. XX, 6 in. clear.		2 85	16 in. clear butts		2 10

LATH.

No. 1, 4 ft.	2 50	2 60	No. 1, 3 ft.		1 10
No. 2, 4 ft.		1 95			

ALBANY, N.Y.

PINE.

2½ in. and up, good	$56	$60	10-in. common	$15	$16
Fourths		58	12-in. dressing and better	28	34
Selects		50	Common	15	17
Pickings		45	1¼-in. siding, selected, 13 ft.	40	45
1¼ to 2-in. good	52	55	Common	15	17
Fourths	47	50	1-in. siding, selected	38	42
Selects	42	45	Common	15	17
Pickings	37	40	Norway, clear	22	25
1-in. good	52	55	Dressing	16	18
Fourths	47	50	Common	11	15
Selects	42	45	10-in. plank, 13 ft., dressing	c.	c.
Pickings	37	40	and better, each	42	55
Cutting-up	22	27	10-in. plank, 13-ft. culls, each	23	25
Bracket plank	30	35	10-in. boards, 13 ft., dressing		
Shelving boards, 12-in. up	30	32	and better, each	28	32
Dressing boards, narrow	19	21	10-in. boards, 13-ft. culls	17	21

LATH.

Pine	$2 40	Spruce	$2 30 $2 40

SHINGLES.

Sawed Pine, ex. XXXX	$4 40	$4 54	Bound butts, 6x18	$5 90	$6 00
Clear butts	3 15	3 25	Hemlock	2 15	2 30
Smooth, 6x18	5 50	5 60	Spruce	2 20	2 30

SAGINAW, MICH.

FINISHING LUMBER—ROUGH.

Uppers, 1, 1¼ and 1½	45 00	Fine common, 1 in	35 00
2 in	46 00	1¼ and 1½ in	36 00
Selects, 1 in	40 00	2 in	36 00
1¼ and 1½	41 00	C, 7, 8 and 9 in	30 00
2 in	41 00		

SIDING.

Clear, ½ in	24 00	C, ½ in	19 00
⅞ in	48 00	⅞ in	34 00
Select, ½ in	21 00	No. 1, ½ in	13 00
⅞ in	40 00	⅞ in	23 00

TIMBER, JOIST AND SCANTLING.

2x4 to 10x10, 12, 14 and 16 ft.	$11 00	20 ft	13 00
18 ft	13 00	22 and 24 ft	15 00

For each additional 2 ft. add $1; 12 in. plank and timber $1 extra; extra for sizes above 12 in.

SHINGLES.

XXX 18 in. Climax	3 65	18 in. X (cull)	1 00
XXX Saginaw	3 40	XXX shorts	2 25
XX Climax	2 25	XX	1 50
18 in. 4 in. c. b	1 25		

LATH.

Lath, No 1, white pine	2 25	Lath, No. 2, W. pine, Norway	1 65

NEW YORK CITY.

WHITE PINE—WESTERN GRADES.

Uppers, 1 in	$44	@45 00	Coffin boards	20 00	22 00
1¼, 1½ and 2 in	46 00	47 00	Box, in	$17	@17 50
3 and 4 in	55 00	58 00	Thicker	17 50	18 50
Selects, 1 in	40 00	41 00	Ccil'g, base, fig. No. 1	40 00	42 00
1 in., all wide	41 00	43 00	No. 2	35 00	37 00
1¼, 1½ and 2 in	43 00	44 00	No. 3	24 00	26 00
3 and 4 in	52 00	53 00	Shelving, No. 1	30 00	32 00
Fine common, 1 in	36 00	37 00	No. 2	25 00	27 00
1¼, 1½ and 2 in	38 00	40 00	Molding, No. 1	36 00	37 00
3 and 4 in	46 00	48 00	No. 2	34 00	36 00
Cutting up, 1 in. No. 1	28 00	30 00	Bevel sid'g, clear	22 50	23 00
No. 2	21 00	23 00	No. 1	22 00	22 50
Thick, No. 1	29 00	32 00	No. 2	20 00	20 50
No. 2	24 00	26 00	No. 3	16 00	17 00
Common, No. 1, 10 and 12 in	22 00	23 00	Norway, c'l, and No. 1	23 00	25 00
No. 2	20 00	21 00	No. 2	20 00	22 00
No. 3	17 00	18 00	Common	18 00	19 00

COST OF SAWING LUMBER.

THE following calculation of the cost of sawing lumber, made in the office of the Timberman, Chicago, is based, of course, on data from United States mills, but relatively will find an application to Canadian mills, and as material for comparison, ought to have a value to Canadian lumbermen.

Estimates as to the proper charge for the saw bill vary, says our cotemporary, according to locality, conditions and the ideas of lumbermen, from $1.50 to $2.50, while some contend that in an economically arranged mill there should be a profit at $1. Some instances were given illustrative of these differences.

In one mill in Mississippi 35,000 to 40,000 feet of inch stock is cut and put out of the mill with thirteen men all told, including foreman, fireman and filer. In another—in Alabama—thirty men take logs from the landing in the woods, haul them by rail five miles, put them through the mill dry kiln and deliver at the planing mill. Product 75,000 feet a day. At another, but larger, Alabama plant to do the same work it takes 150 men for every 100,000 feet of output.

In a well-equipped Northern white pine mill cutting from 80,000 to 100,000 a day, about fifty men are required to take the logs from the pond and put the lumber in pile. This means a labor cost of production of about 80 cents to $1.25 per thousand, according to wages. Still in a Muskegon mill of about 200,000 feet per day capacity the cost of this work averaged for months 60 cents.

A man thoroughly posted in the mill business makes the following schedule of crew and wages for a double decked mill, cutting nearly or quite 100,000 feet a day, based on western Wisconsin conditions.

Position.	No. of men.	Av. Wages per man.	Total.
In pond	3	$1 75	$5 25
On deck	3	1 50	1 50
On carriage	4	2 25	9 00
Sawyers	2	3 00	6 00
Off Bearers	2	1 50	3 00
Edgerman	1	2 75	2 75
" off bearers	2	1 50	3 00
Trimmer men	2	1 50	3 00
Slasher	2	1 50	3 00
Buggy loaders	6	1 50	9 00
" wheelers	6	1 50	9 00
Pilers in yard	8	2 00	16 00
Filers (head $5 others $2)	3	3 00	9 00
Engineer and fireman	2	2 50	5 00
Grader	1	4 00	4 00
Roustabouts	3	1 50	4 50
Foreman	1	5 00	5 00
Total hands	51	Total wages	$101 00

The above table stands the test of criticism fairly well for the section indicated. While various mill men might raise some salaries and lower others, and make slight changes in the apportionment, no material change is suggested except in the number of pilers. Five or six men, instead of eight should be enough to do the work. Horses for drawing lumber carts would reduce the number of wheelers, but probably not the expense.

In a certain Wisconsin Valley mill the log-scaler, who also handles the chain and kicker, gets $2 a day; deck hands, $1.50: setters, $3; other carriage men, $1.72 to $2; sawyers on the rotary $5, band $4.50; two edger men get $2.75 each; trimmer men, $2 each; slasher men, $1.66 each; four lumber-cart drivers, who also care for the horses, $1.75 each; six pilers, $1.75 to $2.25 each; circular saw filer $6, band filer $7, the two getting $13 a day, against $9 for three given in the table. Wages in other positions are the same. It will be seen that the result in this mill does not differ materially from that shown by the table, what is lost in some things being gained in others.

Where material changes would be made in the above table is in other sections of the country. In the South $1 a day is the price paid for common labor. But in many southern mills more men are required to handle the lumber from the trimmer chains to the piles. The results shown by the table, therefor, are not greatly modified even there.

It may be assumed, therefore, that in the average modern double decked mill the labor cost is about $100 per day; making a saw bill of $1 a thousand, if the product is 100,000 feet a day, and $1.33 if the output is 75,000 feet, though with that capacity the number of hands would be slightly reduced. Still we come back to the fact that some mills show better results than these. In the table the daily product per man is about 2,000 feet, whereas in some mills it is from 2,500 to 3,000. Looking at the other extreme, there are mills—and many of them—where the output is not much over 1,000 feet for each hand employed.

With these considerations in view it seems safe to say that modern machinery has done but little to increase the per capita product. In the days of the sash saw two or three men would get out from 3,000 to 6,000 a day. It may be admitted, however, that within the last ten years there has been a distinct advance in the way of labor saving appliances. For many years increase in capacity meant a corresponding increase of men, but of late there seems to have been a distinct gain in economy.

We do not wish to be understood to overlook the fact that many more items must be added to those in the table in order to determine the cost of manufacture. The table gives labor items only, and to those must be added insurance, repairs, interest, office expenses, etc.

MARKING TOOLS.

FIRST cover the article to be marked with a thin coating of beeswax, and with a sharp instrument write the name in the wax; fill the letters with nitric acid; let it remain for five minutes, then dip in clean water and rub off, and the name will be etched into the steel or iron.

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LIMITED
TORONTO - ONT.

EAST INDIAN WALNUT.

EDGAR THURSTON, official reporter on economic products to the goverment of India, has written the following report: The siris tree (albizzia lebbek), whose timber is called East Indian walnut in the English market, is a large, deciduous, spreading tree, belonging to the natural order leguminosæ atalie, found wild and cultivated in most parts of India; growing in the evergreen forests in the sub-Himalayan tract from the Indus eastward, in Bengal, central and southern India, Burma, and the Andaman islands, and ascending to 5,000 feet in altitude.

The following account of the wood is given by Gamble in his "Manual of Indian Timbers:"—"Sapwood large, white; heartwood dark brown, hard, shining, mottled with deeper colored, longitudinal streaks. The annual rings in trees grown in the Punjab are marked by a distinct line. Pores large, not numerous, often subdivided and enclosed in patches of softer whitish tissue, which are frequently arranged in short bands. Pores prominent on a longitudinal section. Medullary rays fine, very numerous."

The growth of the tree, which is said to attain a height of 40 to 60 feet with a girth of 6 to 9 feet, and at times 10 to 12 feet, is exceedingly rapid during the first few years, and Brandis says, in his "Forest Flora of Northwest and Central India," that trees in the Punjab have 2¾ feet girth in 12 years, 4½ feet in 30 years, and that trees at Sakhar, in Sind, 17 years old have reached 5 to 6 feet in girth. This, is pointed out by Gamble, would give from 1 to 3 rings per inch of radius, which is very fast.

The weight of the wood is said to be 40 to 60 pounds per cubic foot. It seasons, works, and polishes well, and is fairly durable. Its value may be inferred from the fact that the Burmese government fixed a higher tax upon the felling of kuk-o (albizzia lebbek) than for teak or any other tree.

The wood is used in India for picture frames, sugar-cane crushers, oil mills, furniture, well curbs, canoes (Burma), and wheelwork; in the Andaman islands, where trees of large size are procurable, it is utilized for building, and especially for house posts. In the Deccan the wood is considered as being of excellent quality. In northern India it is considered unlucky to employ it in house-building.

The deputy conservator of forests, Andaman islands, in reply to a circular recently issued by Mr. Ribbentrop, inspector general of forests, stated that "small quantities of koko timber have occasionally been sent to London with padouk, and have commanded a ready sale. It makes pretty furniture, having a beautifully patterned grain, and works well up when carved."

Burls of albizzia lebbek, like those of any other furniture wood, increase in value with the intricacy and rarity of the design and the size of the burl. The price of such burls, which are invariably sliced up into veneer, is frequently ten to twenty times that of the plain wood, and as much as a hundred times the value of the ordinary wood has been paid for extremely curious and unique burls.—Timber Trades Journal.

MIX THE MOVEMENTS.

DOUBTLESS many of our readers, who are not experienced engineers, may have noticed that frequently the oscillations of the main belt in a mill come in unison with the beat of the engine, and a perceptible slapping about of the belt is noticeable. The beat of an engine will often come in sympathy with the sway of the building, and so increase it as to be very perceptible. If this were continually going on in exact time it would become so great in time as to be dangerous, but one or the other gets ahead and mixes the movement, so that it gradually ceases until they are again unison. If the speed of the engine is changed in either case the swaying will be kept mixed all the time instead of occasionally. On long lines of shafting this will appear also, the pull on the belt at the commencement of the stroke being in unison with the spring of the shaft, thus causing a marked oscillation. The same remedy is applied here—to mix the two movements purposely—and the trouble is partly, if not entirely, removed.—Machinery.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 27th of each month to insure insertion in the following issue.

WE WANT ALL KINDS OF HARDWOODS. Will pay cash. ROBERT THOMSON & CO., 103 Bay Street, Toronto.

FOR HEMLOCK, DIMENSION LUMBER, hardwood flooring, cedar shingles, piles, sawdust, etc., write J. E. MURPHY, lumberman, Hepworth station, Ont.

WANTED

BASSWOOD LUMBER, BY CAR OR CARGO. Offers invited. Address "Baswood," care of CANADA LUMBERMAN.

LUMBER AND SHINGLE MILL FOR sale in the Village of Dundalk; this is good new 50-horse power mill; will run lumber and shingles at same time; plenty of stock can be bought in the locality for four or five years at a reasonable rate. Apply to JOHN IRWIN, Brampton, Ont.

WANTED SITUATION

AS BAND SAW FILER, NINE YEARS' EXperience; also thoroughly practical on Rotarys. Steady and temperate; good references. Best offer in December for next season and earliest to work, gets me.—H, HOWE, South Boardman, Mich.

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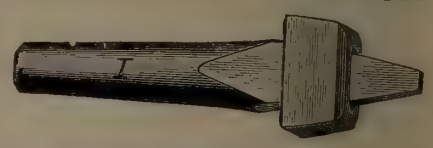

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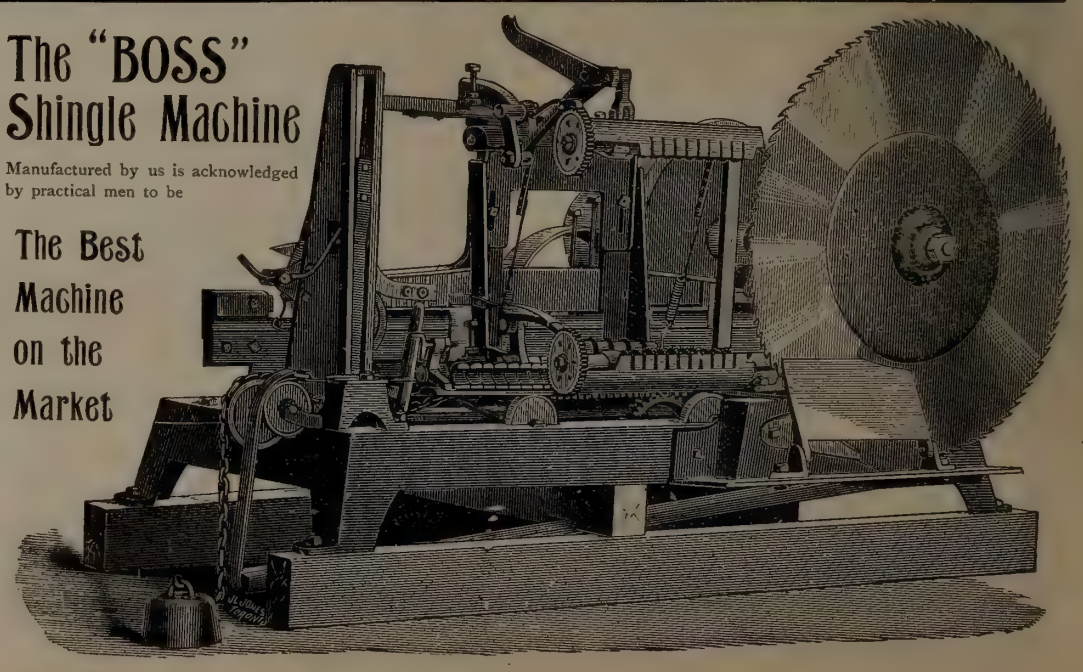

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TOWN	Railway, Express, or nearest Shipping Point	NAME	BUSINESS	Power, Style and Daily Capacity
Ottawa, Ont.	Ottawa	**Booth, J. R.**	Lumber, Wholesale and Retail	Steam, Circular and Band Mill
Ottawa, Ont.	Ottawa	**Bronson & Weston Lumber Co.**	2 Sawmills, White and Red Pine, Wholesale	Water, Gang and Band, 450m
Ottawa, Ont.	Ottawa	**OTTAWA LUMBER CO.**	Lumber, Pine, Spruce, Hemlock, Wholesale	
Parry Sound, Ont.	Utterson	**Conger Lumber Co.**	Lumber, Wholesale and Retail	
Parry Sound, Ont.	Parry Sound	**Parry Sound Lumber Co.**	Saw, Shingle and Lath Mills, Pine, Wholesale	Water, Gang, Circular, Saw 90m, Shingles 70m, Lath 30m
Muskoka Mills, Ont.	Midland	**Muskoka Mill and Lumber Co.,** Head Office, Arcade, 24 King st. w., Toronto	W. Pine Lumber, Lath and Bill Stuff, all lengths.	2 Mills, Water, 1 Band, 2 Gangs and 3 Circulars.
Alexandria, Ont.	Alexandria	**McPherson, Schell & Co.**	Cheese Box Factory, Pine, Spruce, Cedar	
Almonte, Ont.	Almonte	**Caldwell, A. & Son**	Sawmill, Pine, Lumber, Hemlock, Hardwoods	Circular, 3m
Barrie, Ont.	Barrie	**Dymont & Mickle**	Sawmill, Pine, Spruce, Cedar, Hardwoods	Steam, Circular, 40m
Barrow Bay, Ont.	Wiarton	**Barrow Bay Lumber Co., Limited**	Saw, Shingle and Heading Mill, Pine, Cedar Oak, Oak Railway Ties, Paving Blocks	Steam, Circular, 16m
Blind River, Ont.	Blind River	**Blind River Lumber Co.**	2 Saw, Sh. and Lath Mls., Pine, Hem., Bl. Birch	Stm., Band, Cir., S. 75m, Sh. 60m
Bobcaygeon, Ont.	Fenelon Falls	**Boyd, Mossom & Co.**	Lumber, Wholesale and Retail	
Barrie, Ont.	Barrie	**Burton Bros.**	Lumber, Wholesale and Retail	
Waubaushene, Ont.	Waubaushene	**Georgian Bay Consolid. Lumber Co.** Hd. office arcade 24 King st. w., Toronto	Pine only.	Waubaushene mill, stm., 200m; Pt. Severn mill, water, 120m
Calabogie, Ont.	Calabogie	**Carswell, Thistle & McKay**	Lumber, Wholesale and Retail	
Callander, Ont.	Callander, G.T.R.	**John B. Smith & Sons** Head Office, Strachan Ave., Toronto	White and Red Pine Lumber, Bill Stuff, Lath and Shingles	Steam, 2 Circular, 80m
Collins Inlet, Ont.	Collins Inlet	**Collins Inlet Lumber Co.**	Lumber, Pine, Oak, Ash, Birch, Whol. and Ret.	
Glammis, Ont.	Pinkerton	**McIntyre, N. & A.**	Saw, Shingle and Lath Mill, Timber Lands, Hemlock, Pine, Lumber, Hardwoods	Steam, Cir., Saw 14m, Sh. 20m
Hamilton, Ont.	Hamilton	**BRADLEY, MORRIS & REID CO.**	Lum., Tim., Pine, Hem., Hwds., Whol. and Ret.	
Huntsville, Ont.	Huntsville	**Heath, Tait and Turnbull**	Sawmill, Pine, Spruce, Hemlock, Hardwoods	Steam, Circular, 25m
Hamilton, Ont.	Huntsville and Katrine	**Thomson, Robert & Co.**	Sawmill, Pine, Spruce, Hardwoods	Steam, Circular, 4m
Keewatin, Ont.	Keewatin	**Dick, Banning & Co.**	Sawmill, Pine, Hardwoods, Wholesale	Steam, Circular
Keewatin, Ont.	Keewatin	**Keewatin Lumber & Mfg. Co.**	Saw, Lath, Sh. and Pl. Mill, Moving Posts, Pine	Water, Band and Circular, 100m
Lakefield, Ont.	Lakefield	**Lakefield Lumber Mfg. Co.**	Lumber, Wholesale and Retail	
Little Current, Ont.	Sudbury	**Howry, J. W. & Sons.**	Lumber, Wholesale and Retail	
London, Ont.	London	**Gordon, James**	Exp. and dlr. in Am. Hwds, made to specification	
Longford Mills, Ont.	Longford	**Longford Lumber Co.**	Saw and Plan. Mill, Tim. Lands and Logs, Pine	Steam, Band and Circular, 100m
Norman, Ont.	Norman	**Minnesota & Ontario Lumber Co.**	Lumber, Wholesale and Retail	
Louise, Ont.	Elmwood, G.T.R.	**S. B. Wilson & Son**	Hardwoods, Shingles, Lath, Handles	Steam, Circular, 20m.
Toronto, Ont.	Warren, C.P.R	**The Imperial Lumber Co., Limited**	Pine	80 M. per day, Stm., 2 Cir. Saws
Toronto, Ont.	Cache Bay, Ont.	**Davidson, Hay & Co.**	W. Pine, Lath, Shingles, Dim. Timber, Car Sills	Stm, 2 Band, Cir. & Gang, 140m
Toronto, Ont., Mill: Stony Lake	Lakefield	**S. J. Wilson & Co.**	Pine and Hardwood, Wholesale	Steam, Circular, 15m.
Toronto, Ont.	Toronto	**F. N. Tennant**	Lumber, Wholesale	
Toronto, Ont.	Toronto	**Donogh & Oliver**	Lumber, Wholesale	Com.
Toronto, Ont.	Toronto	**Victoria Harbor Lumber Co.**	3 Saw, Shingle and Lath Mills, White Pine, Whol.	Stm., Cir., Gang and Band, 140m
Toronto, Ont.	Toronto	**W. N. McEachren & Co**	Lumber, Wholesale	Com.
Toronto, Ont.	Toronto	**James Tennant & Co.**	Lumber, Lath, Shingles, etc., Wholesale	Com.
Toronto	Toronto	**DeLaplante & Bowden**	Pine and Hardwood Lumber, Whol. and Retail.	
Toronto, Ont.	Toronto	**James McBain Reid.**	Ry. and Ship Timber, any required dimensions	
Wiarton, Ont.	Wiarton	**Miller, B. B.**	3 Sawmills, Lumber, Barrel Heads	Stm., Wr., Cir., Port. & Sta., 10m
Montreal, Que.	Montreal	**Dufresse, O. Jr. & Frere**	Sawmill, Pine, Spruce, Hemlock, Hdwds., Whol.	Steam, Circular and Band, 50m
Montreal, Que.	Montreal	**SHEARER & BROWN**	4 Sawmills, Oak, Ash, Elm, Pine, Hem., Dim.	2 Stm., 2 Wat., Band, Cir., 40m
Moodyville, B.C.	New Westminster	**MOODYVILLE SAWMILL CO.**	Sawmills, P. Fin, Spruce, Cedar, Hardwoods	Steam, Circular, 20m
New Westminster, B.C.	New Westminster	**Brunette Sawmill Co.**	Saw and Planing Mills, Sash, Doors and Blinds. Fir, Cedar, Spruce, Hardwoods	Steam, Gang and Circular
Canterbury, N.B.	Canterbury Stn.	**James Morrison & Son**	Sawmill. Pine, Hardwoods	Steam, Circular, 38m
Bridgewater, N.S.	Bridgewater	**DAVIDSON, E. D. & SONS**	5 Saw, Shgle. and Lath Mills, Pine, Spr., Hwds.	Water, Circular and Gang, 200m
South River, Ont.	South River, G.T.R.	**South River Lumber Co., Ltd.**	Pine, Spruce, Birch, Hemlock, Shingles	Stm., Cir., 40m, Shingles, 35m, Lath, 15m

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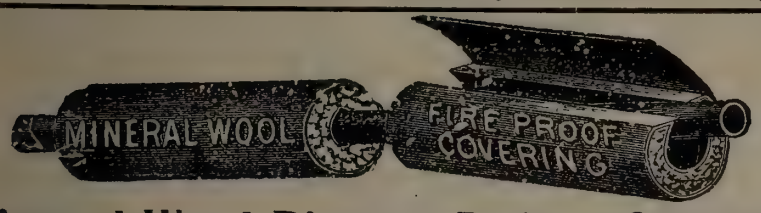

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For partitions, costs no more than brick; weight, one-third that of brick.

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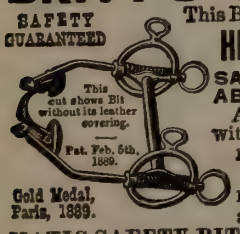

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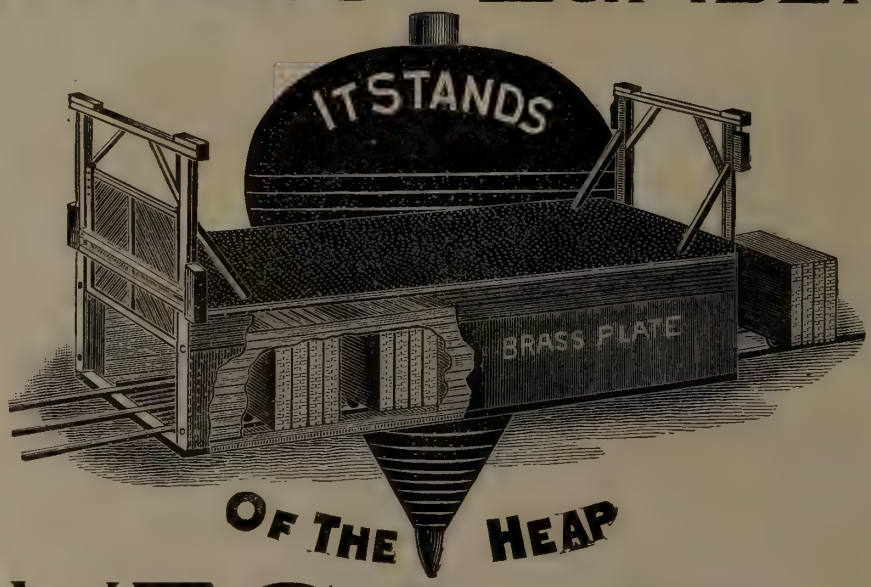

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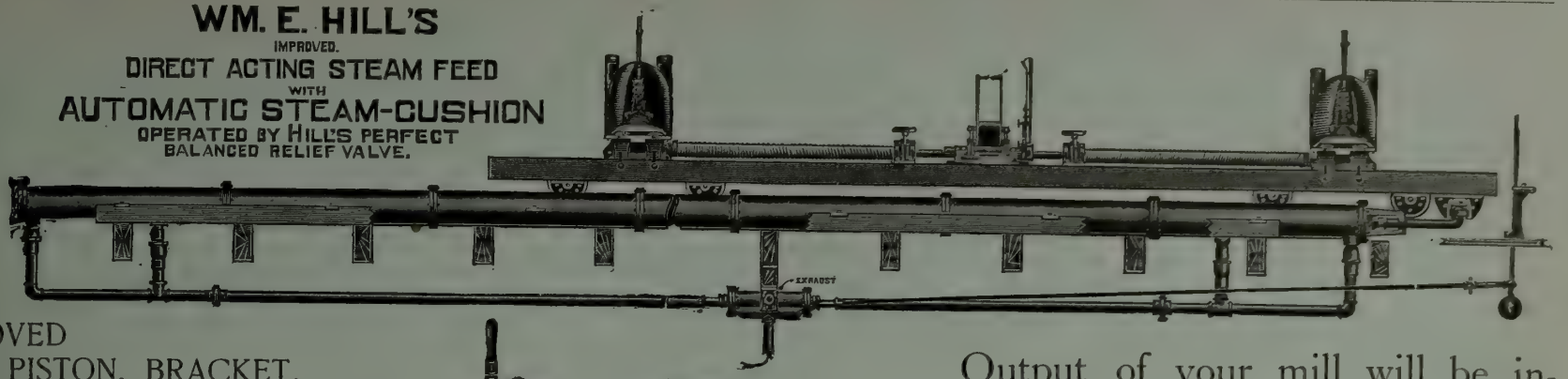

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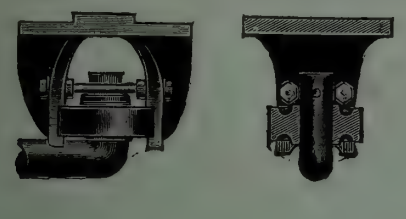

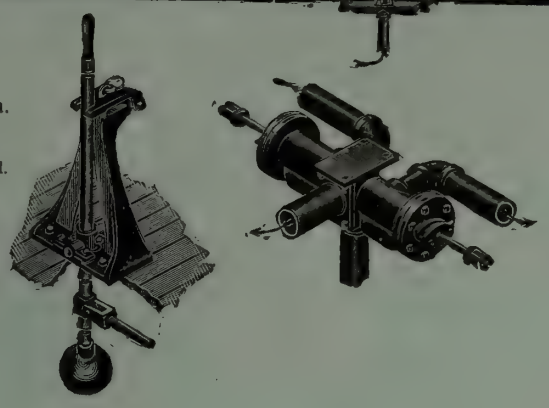

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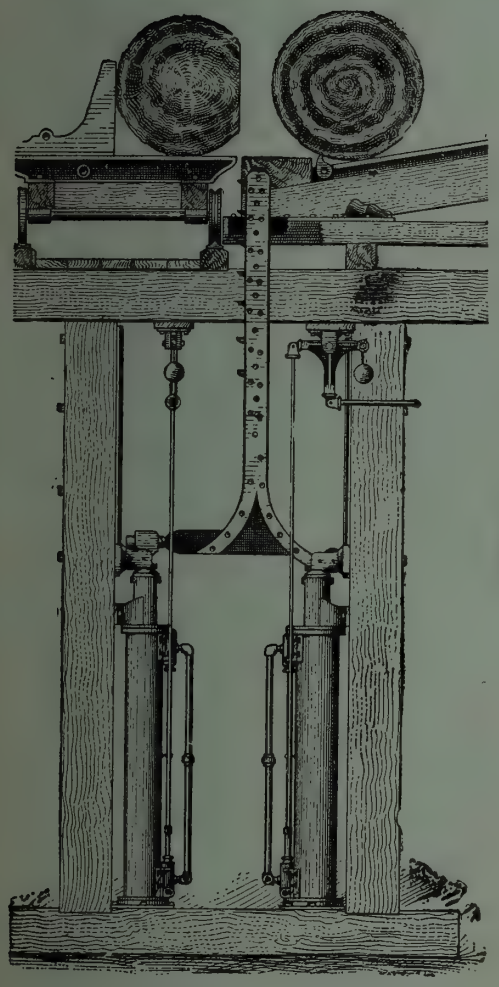

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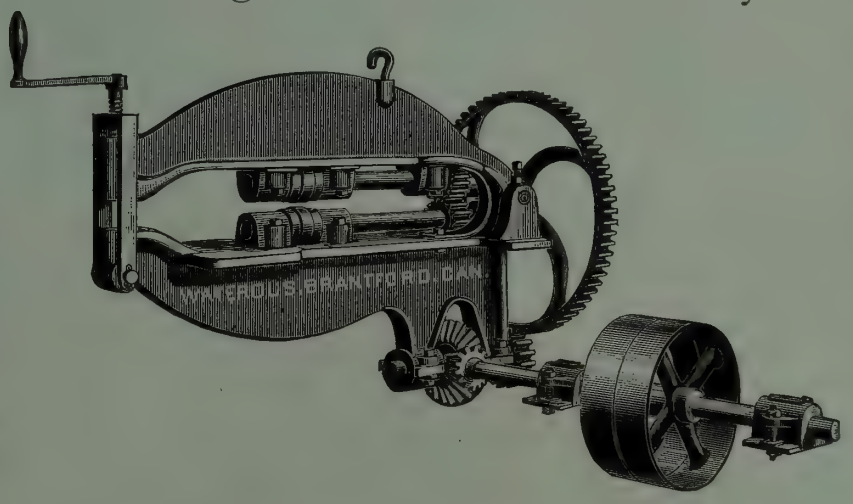

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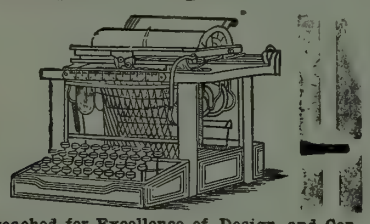

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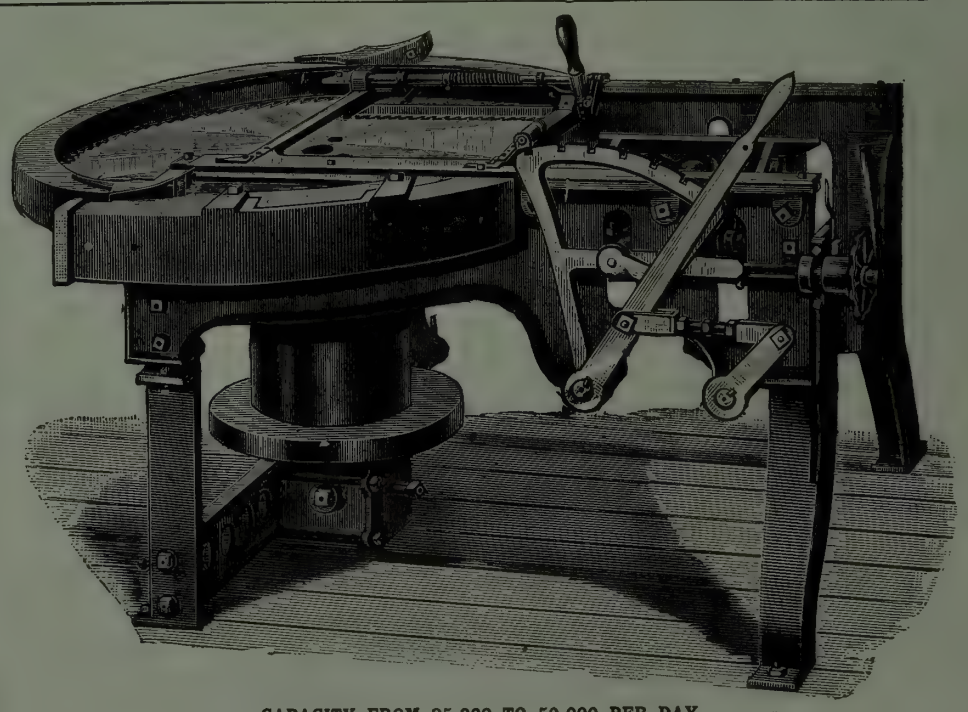

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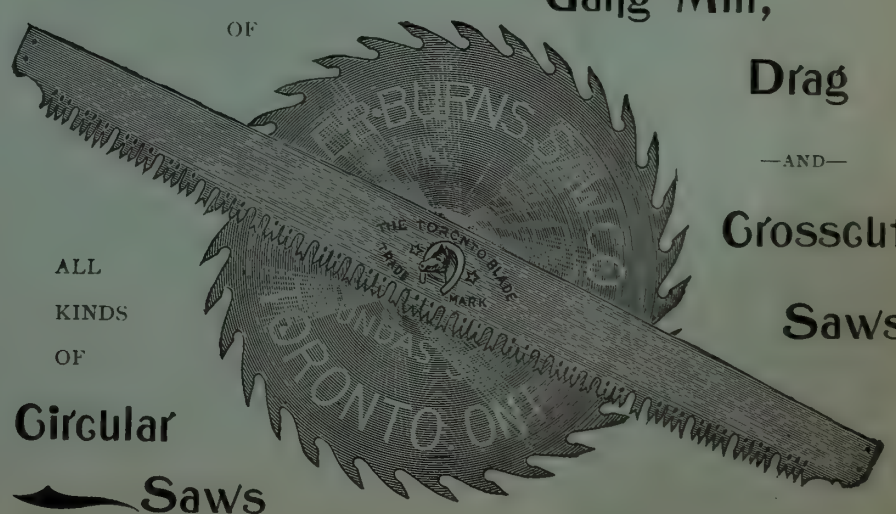

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5,726	"	2 "
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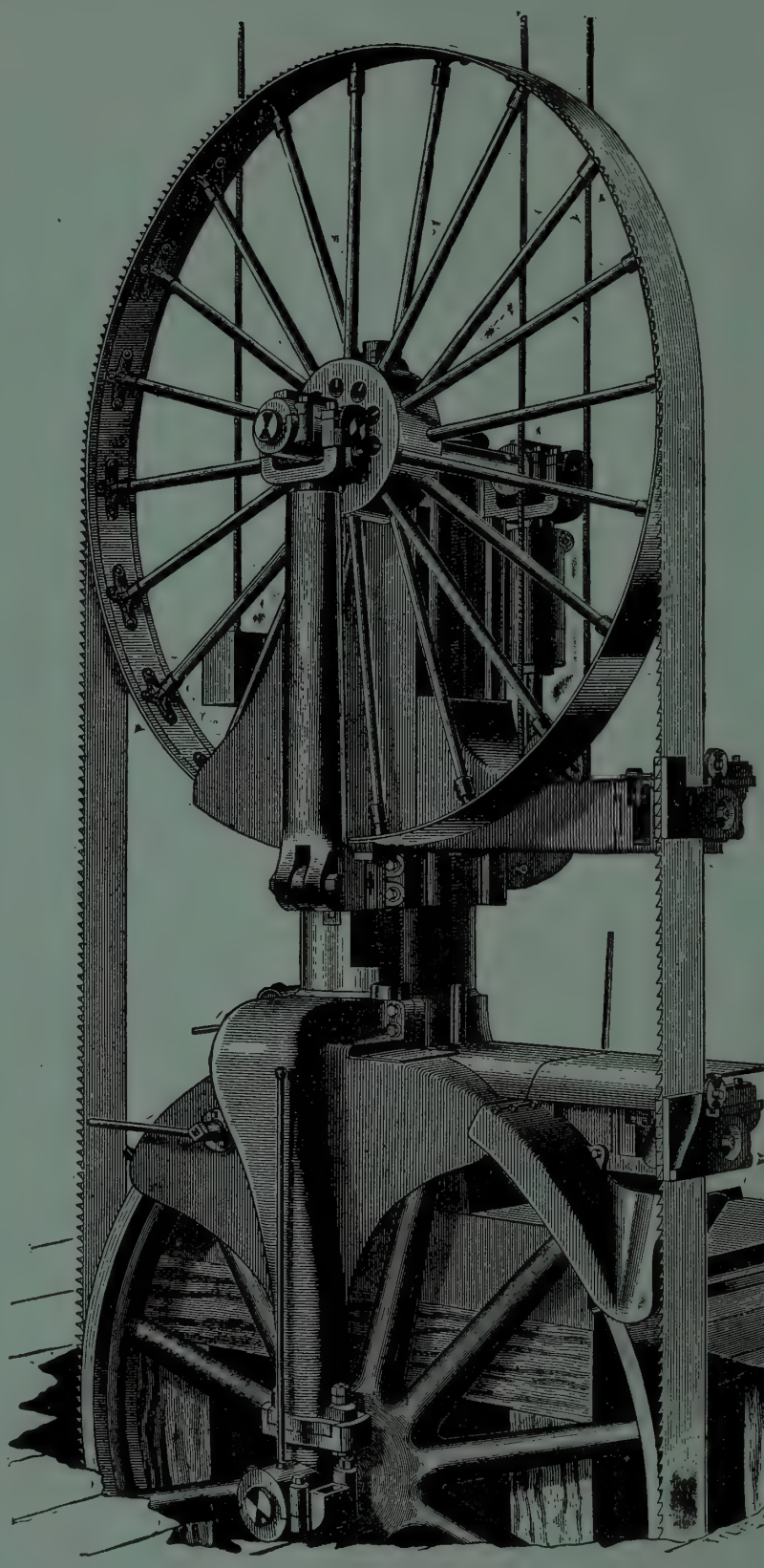
Yours truly,
PERLEY & PATTEE.



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THE CANADA LUMBERMAN

VOLUME XV.
NUMBER 3.

TORONTO, ONT., MARCH, 1894

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WORKING UP WASTE.

UNDER the most favorable and economical conditions, says a lumber cotemporary, the waste in the manufacture of lumber is bound to be a big item. One looks at a tree in the forest, towering, it may be above its fellows and showing the straight, long body that delights a timber hunter's eye, and it seems to him that every inch of it ought to be available and of value. But looking at it with the eye of experience, he knows better. A rapid mental calculation tells him that a very large proportion of it will find its way, not into the timber pile, but into the refuse burner or the sawdust pit. The magnificent top he knows is worthless anyway, the heart must come out, the sap runs into the low grades, and the butt possibly is worthless. Lopping off here a little and there a good deal as waste, and then of the really sound, clear timber turning a considerable quantity into sawdust, there is left at last a surprising small part of the whole as a product available for market. Some timbers work up better than others, of course, but in the best of them a large part of the cost of the marketable material produced is represented in that which is thrown away.

The desirability of reducing this waste as much as possible was early recognized, and the history of lumber manufacture shows a steady, though slow progress in the direction of saving something out of the last material. Not so much goes into sawdust as formerly, and less into the slab pile or furnace; but there is still more room for economy and a further profit to be made in a closer utilization of the contents of a tree. Comparatively little has yet been done in the saw mill business in working wood into small shapes. Lath and pickets have been made for years where the timber was suitable, but beyond these there are few saw mills that undertake to do more than get as much boards, strips, plank and timber out of their logs as they will cut, letting everything that will not work up into this shape go into refuse. Unquestionably millions of feet of good lumber have been thrown away in this fashion, and the waste is still going on. When trees were plentiful and cheap it would have been useless and even unprofitable to attempt any sawing of this waste, but now it is important to work up as much as possible of it, the margin in lumber production having become so narrow that every means to produce it is necessary to success.

It is true that some experiments in this direction have been failures. Several large mills, the proprietors of which sought to carry to its extreme limit the idea of working up everything that came from the tree big enough to make a match splint, have gone into oblivion along with other schemes founded upon purely theoretical knowledge of the business. But the cause of failure was not the principle of avoiding waste, but its disproportionate development. With such people the idea is to use up everything that comes into the mill, almost regardless of the cost and relative profit. They do not sufficiently take into account the fact that there is no saving nor any money in working up a thing that is not worth in the end the cost of making it. They spend more in saving waste than what the save will bring, which is even more foolish than throwing away something that at small cost might be turned into a source of considerable revenue. Economy can be so elaborate and carried to such extremes that it becomes extravagance and waste itself, which is the case with practically every operation which, boasting of the results it proposed to accomplish by means of its close utilization of every particle of timber, has yet split and gone to pieces because it could not somehow make its income exceed its outgo.

The same principles should and must govern this part of wood conversion that controls the main work of sawing trees into timber. Costs and results may be fully considered in every case, and methods selected that are not only applicable to the particular wood handled, but that are adapted to the conditions of the business in respect to the cost of labor and the market available for the products, whatever they may be determined to be.

Due regard being had to the peculiar circumstances of each case, there are few locations where it is not possible to work up to advantage a very considerable part of the stuff that is now wasted. Not all mills can do it, of course, for not all of them are able to invest capital in such an extension of their business, but it is plain that all who can do it should give the matter attention. Hardwood producers especially should make a careful study of the subject. The waste is proportionately greater in the manufacture of the hardwoods than of the coniferous varieties, and hence a greater necessity of more careful economy in getting out of the logs all the marketable stuff there is in them. But on the other hand many of the hardwoods have this advantage, that they are available for use in a large variety of small shapes, for which fair prices are obtainable and for which here is a steady demand. The time will no doubt come when most of the cut-up stock used in every factory where wood is worked up will be cut to the desired size and shape, or nearly so, at the saw mill, saving a good deal in material and the cost of handling to the user and producer. Even now orders are occasionally placed for small dimensions of hardwood, though, for the most part, these are still cut by the user as he wants them from lumber of the regular merchantable sizes. Saw mill men should encourage buyers to place their orders, not for so much lumber, to be cut up when it gets to the factory, but for so many pieces of a certain size, which the mill men can often furnish at considerably less than they would cost cut in the old way, while netting himself a good profit by saving the larger part of the stock out of refuse that would otherwise be of no value. There is room here for a development in the business that would be decidedly advantageous for mill men and it is to be hoped that it may go on steadily.

LUMBERING INTERESTS IN MAINE.

A DOCUMENT recently prepared by prominent Maine lumber manufacturers, intended to serve as a protest against the free lumber clause of the Wilson bill, contains some interesting statistics as to the size and character of the lumbering interests of this important lumber state. LUMBERMAN readers will be interested in the figures on the general principle of wanting to know all they can of the business in which they are engaged, and also because of the intimate relationship that exists between lumber methods in Maine, and our own Maritime provinces.

In the first place it is shown that the total cut of logs in the state during 1893 amounted to 849,581,398 feet. Of this amount 573,811,627 feet was spruce, 107,330,822 pine, 100,357,101 hemlock, 60,904,701 cedar and 7,177,147 hardwoods. The cost of getting logs from the stumps to the various saw mills, including cutting, hauling, driving, boomage, shorage, tolls and other expenses is estimated at from $8 to $8.50 a thousand. The average cost of stumpage is $2, which makes the cost to the manufacturer of spruce logs delivered at the mill from $10 to $10.50 a thousand. In other words from 75 to 80 per cent. of the cost of a cargo of sawed lumber is expended for labor, which is a larger percentage than on almost any other manufactured article.

American citizens doing business at St. John, N. B., under the act of congress of March 16th, 1866, (which provided for the free importation of the product of logs cut in the United States, but taken to a Canadian point for sawing) have from 15,000,000 to 20,000.000 feet of sawed lumber on hand, and from 90,000,000 to 100,000,000 feet of logs cut in 1892 and 1893, which have been carried over and will be marketed in 1894. Of this amount 90 per cent is spruce. About the usual amount of logs is being put in this winter under the provision of the above act, on the St. John river and its tributaries which will add largely to the stock to be marketed by the American citizens at St. John in 1894.

American spruce logs lying in booms at St. John, side by side with provincial logs of the same quality, sell in the open market for $1.50 to $2 a thousand more than provincial logs, which just about represents the increased cost of labor in getting them out.

There is now on hand 300,000,000 feet of logs and manufactured lumber cut in 1892-93 on the Penobscot, Kennebec, St. Croix, Union, Machias, Androscoggin and other rivers of Maine. The cut of logs in Maine during the present winter will be about two-thirds as large as last year. This will give 879,000 000 feet to be marketed in 1894.

An interesting point touching the question of forestry is brought out in this report, it being estimated by experts that the timber in a single Maine township renews its growth equal in amount to what six or eight horses, kept constantly at work, can haul to landings. In the great forest fire of 1825, extending from the Penobscot waters, in Maine, to the Miramichi, in New Brunswick, 600,000 acres of timber land were burned over, but so rapid was the new growth that large lumbering operations have been conducted on this same territory for years, and it is now equal in value to the same number of acres in any other section of the Maine forests. Townships which have been cut upon constantly are reckoned as the most valuable, for a judicious cutting of the large trees makes possibly the more rapid growth of the smaller trees. A few years ago it was supposed by many that the spruce forests of Maine would be destroyed by beetles, but it is now admitted by those familiar with the subject that the worms, or beetles, only attack the old trees, which have begun to decay.

The assessor's books show that in the state of Maine there are 13,214,027 acres of timber land, valued for the purpose of state and county taxes at $34,204,634.

WOOD THAT WILL NOT BURN.

ACCORDING to Nicholas T. Wilson, an inventor, of Chicago, Ill., there is no necessity in future for the destruction by fire of frame dwellings, or any other kind of buildings constructed of wood. He has invented a plan by which with certain solutions of chemicals wood is rendered non-inflammable. Saturated in the solution, it is impossible, he maintains, for a piece of lumber to burn, even if it should be soaked in coal oil. The wood or inflammable material of which houses are constructed is first immersed in the solution of chemicals for a period of twenty-four hours. Then the lumber is fire-proof and will burn no more than a piece of iron or stone. By means of the chemicals the wood becomes so dense that heat will decompose it by charring only, but will not cause any flame. The substance produces an inert gas, which prevents combustion. By this scientific process of making wood non-inflammable, Mr. Wilson believes that thousands of fires may be prevented. He also thinks that, after the invention is thoroughly known, many railroad cotches will be built of wood so prepared. This would prevent railroad horrors resulting from fires after a wreck. Several car builders have seen the test and are satisfied that it is impossible to burn the wood after it is once immersed in the substance.

ELEPHANTS AS SAWMILL HANDS.

THE displays of trained animals, broken for show purposes, cannot offer the slightest comparison in interest to the trained elephant exhibition one sees in the city of Moulmein, British Burmah. The most absorbingly entertaining feature of the novel sight is the paradoxically industrious character which the work of those huge Indian pachyderms assumes. It hardly seems possible that the work of a sawmill, usually done by human hands, could be accomplished through the medium of the elephant's trunk and the elephant's sagacity; nevertheless it is a fact that the Irawadi steamship company uses some forty to fifty elephants in the operation of its sawmills at Moulmein, and the teakwood so largely entering into the construction of ships is here made ready for the artisan.

A gentleman lately returned from a tour of the east gives an interesting account of the manner in which the mills are operated. The logs are chopped in the interior and floated several hundred miles down the Salwin river to the mill, which is situated on the banks of the stream at Moulmein. Here the logs are formed into a boom, and henceforth the work of transporting is done by the elephants.

The boom is very similar to those we see in Canadian lumbering districts, but instead of the sight of men, brightly garbed in red and blue, running from log to log and moving them with long steel-pointed poles, we see great, ponderous elephants wading and swimming among the teak logs and pushing them toward the shore. The logs are not sawed directly from the water, but are first seasoned, and the elephants not only bring the logs from the water to the land, but also stack them in huge piles, convey them to the mill, saw them, and afterward pile the lumber. Of course, each elephant performs only such certain parts of the work for which he has been trained, and the entire herd is divided into companies of from two to eight. One division of the pachyderms does the work in the water, another company carries the logs to the drying or seasoning stacks, others pile them, another class convey the dry logs to the mill, where some of the elephants do the work of sawing, still others pile the saw lumber, and another herd carries hay and prepares the food for this great industrial combination of brute strength and intelligence.

But the most wonderful, interesting, novel and almost incredible feature of the entire combination is the sight of two monstrously large male elephants that actually act in the capacity of bosses or overseers of the work. These move from place to place among the working elephants, spurring them on, pushing, driving, and frequently chastising a lazy or recalcitrant member of force.

Very few men are needed to direct the elephants in their work. From six to eight of the animals usually work in the water. These wade or swim, according to the depth of the water, to the log boom, and loosening several logs at a time, tow them to the shore at a certain point. Each of the company of elephants that convey the logs from this point to the drying place has a chain attached to his neck and reaching to the ground. At the bottom of the chain is a loop through which the log is run. A man directs the movements of the elephants in placing the log within the coil of the chain. The elephant picks up another log by his trunk and in this manner drags two at a time to the seasoning stacks. About eight elephants are employed in this capacity. The work of piling the logs to dry is done by two female elephants. Each winds her trunk about the log near the end, and together they raise it in a horizontal position and place it on the stack.

After the logs have dried sufficiently they are ready for the mill. Two female elephants take the dry logs from the piles and deliver them to a herd similar in training to those that work between the water and the seasoning stacks. These convey the logs to a track over which a small car runs to the mill. Only one log at a time is placed on this car. As soon as a log is in position on the car an elephant trained for this particular part of the work pushes the car to the mill. Arrived at the mill the log is pushed from the car to a carrier that passes beneath the buzz saw. As soon as the log is thus transferred to the carrier the elephant operating the car returns for another log, while another huge beast, trained to do the sawing, operates the carrier and pushes the log against the saw. But the interesting part of the work does not end here, for as the log is being sawed into the desired boards and timbers, another elephant receives the completed material, piling the slabs on one side and the more valuable product on the other. But two men are required to oversee and direct the elephants in sawing the logs.

Another detachment of the herd is used in carrying the lumber from the mill to the yards and sheds. For this purpose very long trucks with the low front and back wheels close to each other are used. There are elephants trained for loading trucks to the sheds. In the lumber yards are the "pilers" or elephants that take the lumber from the trucks and place it in piles for further seasoning.

As stated before, there is one detachment of this strange army of laborers which does the "kitchen work" for the hotel de elephant, or whatever the feeding place of these big fellows may be called. Some may be seen carrying for the stables, but by far the most interesting sight is the preparation of the food. This is composed of grass, bran and molasses, and is mixed in a large vat. While some are carrying these different components of this highly delectable elephantine boarding house hash, others are engaged in mixing it with pestles which they dexterously manipulate with their trunks. The narrator observed one of the elephants suddenly stop in his work with the pestle and refuse to wield his mixing stick any further. One of the two big boss elephants was called to the scene, and, picking up the recalcitrant's pestle beat him with it over the back and hips until he returned to his work.

Only about ten men are employed in directing the work of the entire herd of elephants. Those who have seen this novel mill at Moulmein in operation all agree in giving it the credit of being the greatest exhibition of trained animals in the world, and say that Hagenbeck's, and, in fact, all other trained animal shows, are simply nowhere near "in line" with it. The mill hands, or more properly speaking, the mill trunks of this institution, have never yet gone out on a strike.

CHEAP POWER FOR MANUFACTURERS.

IN a suggestive article on "The Economics of Electric Power," which appears in Cassier's Magazine for March, Mr. H. L. Lufkin, a prominent electrical engineer, draws a very striking picture of what has more recently been accomplished in the way of applying electric motors to the driving of machinery of all kinds. So much has been said and written in a general way of the convenience and economy of applying electricity to the driving of shop tools that specific facts and figures, derived from actual experience, are most welcome additions to the literature of the subject, and every power user must, therefore, needs appreciate the valuable reference data given in the article. One of the advantages of using electric motors is found in the fact that they may be connected to the machinery to be operated almost directly, without the intervention of long lines of shafting, whose friction losses alone often represent an appreciable item of expense. Referring to this feature, Mr. Lufkin says:

The apparent losses in shafting had always been vaguely estimated until the advent of the electric motor, by which, with the aid of an ampere indicator, these losses are readily and accurately determined. As a result of a test in some thirty shops of varied descriptions, made in 1890, it was discovered that 68 per cent. of the average power applied in these shops was consumed in the shafting. Some data recently very kindly furnished to the writer by one of the large electric companies, which, by the way, is furnishing current for operating about four or five thousand horse-power in electric motors, cover seventy-one shops. The totals of these shops showed that 121,524 watts represented the average total energy supplied, and that 84,700 watts were consumed in the shafting, etc., being 69 2-3 per cent, of the average power, thus approximately checking the tests of 1890. These friction losses in shafting in the mills and factories before referred to have been partially eliminated by means of grouping tools in sets and otherwise, driven by electric motors, so that entire sets might be completely shut down when not actually in use without interfering with the remainder of the shops, and long lines of transmitting shafting and belting between floors or from building to building have thus been dispensed with.

An interesting example of the economy derived from this grouping of tools is found in a factory now being equipped with an electrical transmission system. A preliminary experiment in this factory showed that the saving in fuel alone will certainly exceed 50 per cent. and possibly 60 per cent. In one recent instance a card, indicating fifty-nine horse-power, was taken from an engine driving a large machine shop, a blacksmith shop with pneumatic hammer, blowers, etc., a pattern shop, and numerous special tools on three floors of a building about seventy-five feet square. This card was taken with all tools idle, thus showing friction only. The same tools were rearranged and grouped into several sets, driven by electric motors, and under the conditions the average indicator card from the engine driving the dynamos which furnish the power for these same tools is about twenty-five horse-power, covering friction, power for the tools and all.

The convenience and flexibility of an electrical power transmission system are frequently commented on by present users, from the fact that single tools or small groups of tools may be efficiently operated in isolated locations, or locations at considerable distances from the main power plant. The great saving derived in an electrical system owing to the intermittent use of tools, was long since taken advantage of by the builders of traveling cranes, and to-day probably ninety-nine out of every hundred traveling cranes installed are operated entirely by electric power, an independent motor being used for each of the several functions of the crane. Many foundries now work their jib cranes with directly geared motors, taking current, in many instances, from the same dynamo which lights the shops.

THE SHADDOCK TREE.

AMONG the interesting trees of the South is the "shaddock," or "grape fruit" tree. Its name "shaddock' is due to the fact that it was introduced from its native clime, the Malayan and Polynesian islands, to the western tropics by Captain Shaddock, many years ago. From this fact the larger, coarser varieties, which are never imported, take their name. They are also called by the native islanders "forbidden fruit" or pomelos. The trees grow a height of thirty or forty feet and are very beautiful. The leaves resemble the leaves of an orange tree are glossy, dark green and very downy upon the under sides and upon the young shoots. The shaddock is considered the "black sheep of the melon family." It grows singly and often attains a weight of fifteen pounds, while the grape fruit known in this country grows in clusters. The outside of all varieties is pale yellow, according to the kind. The rind and the divisions are extremely bitter. Of late years it has been widely cultivated in Florida, for as its medicinal properties become known the demand for the fruit increases.

AMMONIA AN ENEMY TO WOOD.

THE injurious effect of ammonia upon paint and varnish have been so frequently referred to that few are unaware of the loss that is sure to occur if painted surfaces are exposed to its fumes, but it is not so well known that this enemy to paint is also an enemy to wood, particularly when in a green state. Its worse effects are shown upon oak and hickory, but it operates against other hard woods. If any of our hard timbers are piled up to season near a stable or other place where they are brought in contact with the fumes of ammonia, it will ruin the timber by rendering the fiber brittle and destroying its elasticity. The discoloring of oak is often due to the presence of ammonia. To protect the timber from this enemy it must be well covered, and so piled while seasoning that a good current of air can circulate freely among the piles and between the respective pieces.

LUMBER RANKS BROKEN.

DEATH OF FOUR PROMINENT LUMBERMEN.

ISAAC MOORE.

An early lumberman of the Ottawa district, Mr. Isaac Moore, died suddenly a week ago. Deceased was born in Hull, January 15th, 1823, and was brough up there, but the last 37 years of his life was spent in Ottawa. He was a first cousin of the late David Moore. He leaves six children, three sons and three daughters to mourn his loss.

EDWARD D. DAVISON.

One of the leading lumbermen of the Maritime provinces, in the person of Edward D. Davison, of the firm of E. D. Davison & Sons, died at his home, at Bridgewater, N.S., on the 21st February. Mr. Davison was born at Mill Village, Queen's County, N.S. His ancestors hailed from Connecticut. His first sawmill was started in his own village in 1840. In less than ten years he enlarged his milling capacity, and added steam to his water power. In 1865, in partnership with his sons, he commenced business on the Lahare river in Lunenburg County, and it was not many years before he was able to lead all competitors. In 1890 and 1891 the firm secured and remodled the lumber business on the Midway and Nictaux rivers, comprising 100,000 acres of land and three lumber mills. Last year the firm cut 20,000,000 feet of logs, and 16,000,000 feet of lumber. In 1854 deceased was elected to the local legislature and served a term of four years. He was generous to a fault and had gathered around him during his life-time a large circle of friends. He leaves behind him a widow, three sons and four daughters.

GEO. CORMACK.

Few lumbermen were better known throughout the province of Ontario than Mr. Geo. Cormack, of Whitby, Ont., whose death occurred on Tuesday, 20th February, in his 64th year. Particularly throughout the lumber territories of the north, deceased was well known, he having been a frequent visitor to these points for many years, where he had a large business connection. Geo Cormack was born at Aberdeen, Scotland, in 1829. He was selected by the Queen's architects to carve a model of Balmoral castle for her inspection before that fine Highland palace was built. He came direct to Whitby from Scotland about 40 years ago, and shortly afterwards started a retail lumber business. From these small beginnings he branched out into milling and lumbering, developing an extensive wholesale lumber trade. Personally he was a man who was greatly esteemed for his high character, integrity and kindly disposition. He occupied for a short time a position as councillor of his own town, but he had no particular relish for public life, preferring to live the life of the quite and respected citizen. He was a member of the Presbyterian church and a Liberal in politics. A widow, one son, and three daughters survive him. The business will be carried on as usual by the son, George, who, for the past three years, since illness had confined the father at home, has been the active head of the concern.

JOHN B. SMITH.

On 7th inst., John B. Smith, founder and senior member of the firm of John B. Smith & Sons, lumber merchants of this city, passed away at the age of 75 years. Deceased was one of Toronto's best known and most highly respected citizens. While engaged in overseeing the erection of a mill at Angus two years ago he overtaxed his strength, and the result was the illness that finally caused his death. Mr. Smith was born in Greenock, Scotland, in 1819, and when a young man he followed his business as a ship carpenter at St. John, N. B., Charleston, S. C., and New Orleans. He subsequently went into business as a contractor, and as such he constructed a number of bridges on the Scottish Central, now the Caledonian Railway, one of them being the bridge at Stirling, over the Forth, and another over the Bannock at Bannockburn. He became a resident of Toronto on October 17th, 1850, having previously been a short time in Brantford. He engaged in trade here as a grocer and provision dealer, on a large scale, and associated with him was Mr. Robert Jaffray. The business was continued until 1859, and in conjunction with it Mr. Smith carried on the business of a contractor and lumber dealer. Subsequent to 1859 he devoted himself exclusively to the lumber business, in which he succeeded, despite reverses which would have discouraged a less resolute man. Thrice were his factory and lumber yards destroyed by fire, and thrice his sawmills at Angus; but under his directing hand they rose up out of their ashes larger and better than ever. As a business man Mr. Smith was the personification of probity and uprightness. He would scorn to take an unfair advantage for gain, or to do any act that would involve a sacrifice of his honor. Though in later years a wealthy man, he led a life of unostentatious simplicity, and never lost sight of the smallest details of his business, every feature of which he knew thoroughly. If there was one thing that gratified him more than another it was to see work properly done, and the mechanic who acquitted himself well was always sure of his commendation. Mr. Smith was married three times. His first wife died in the old country, leaving one son. His second wife was a sister of Mr. Robert Jaffray, while the widow who survives him is a daughter of the late John Armour, of York Mills. The deceased leaves behind him twelve children—six sons and six daughters. Three of the sons have been partners in the business, and will continue to carry it on. Mr. Smith was a Presbyterian, and a member of St. James' Square Presbyterian Church. Politically he was a staunch and consistent Liberal.

ONTARIO'S TIMBER POLICY.

THE timber policy of the Province was defended in a vigorous, and in many respects, exhaustive speech, from the Commissioner of Crown Lands during the debate on the Budget a few days ago. Mr. Hardy replying to a criticism as to the lumber output of the province for some years back gave the following figures: The output in 1869 was 524 millions of feet board measure; 1872, 678 millions, and in 1893, 765 millions, or not quite one hundred millions more in 1893 than in 1872. In 1886 the output was 625 millions; in 1887, 628 millions; in 1888, 781 millions, and in 1889, 818 millions. Four years ago the output was more than it was last year. In 1892 it was 694 millions, and in 1893, 765 millions, or about fifty millions less than in 1889. These figures represent the quantity of timber actually cut and upon which dues were paid.

When we come to consider revenue from Crown lands the case, said the Commissioner, is somewhat different, for the reason that the bonusing system is comparatively modern. In 1873 we received as revenue $832,119; in 1882, $539.610; in 1886, $731,845; in 1887, $1,004,304; in 1888, $1,652,659; in 1889, $1,027,531; in 1892, $2,135,849; in 1893, $1,858,896. On this point the following question was interjected by Mr. Clancey: Will the hon. gentleman permit me to ask if the ground rent, bonus and timber dues are not essentially a part of the same thing, growing out of the timber sales? Mr. Hardy replied: "Ground rents are not bonuses in the slighest degree. When the land is a virgin forest the ground rent of $3 per mile is still payable upon it. Until the limits are put under license no revenue whatever is derived from them. The dues are paid on the timber when cut. It does not follow that the licensees will cut the timber when they pay their ground rent. They may wait 5, 10 or 20 years, and, in the meantime, the Government is receiving ground rent. The timber taken out from 1873 to 1882, inclusive, was 4,433 million feet; from 1883 to 1892, 6,184 million feet, or an increase of 39 per cent., instead of 83 per cent. The bonuses were, from 1873 to 1882, $422,890, and from 1883 to 1892 $3,189,000, or an increase of 654 per cent."

The hon. Commissioner then turned to a record of the timber sales before and since Confederation. Before Confederation there was sold, he pointed out, at the rate of fifty cents per mile, no fewer than 9,904 miles of timber, while there was also sold before Confederation 2,561 miles upon which was paid a bonus of $116,771, averaging $45.50 per mile. Thus the total disposed of before Confederation was 12,465 miles. Since Confederation the record of timber sales was as follows:—

The Sandfield Macdonald Government, in four years, 635 miles for $165,362, an average of $260 per mile.

The Blake Government, in one year, 5,031 miles for $592,601, an average of $117.79 per mile.

Mowat Government, in 22 years, 4,284 miles, for $5,101,627.75, an average of $1,205.15 per mile. Thus the total sales since Confederation amounted to 9,900 miles, which, added to the 12,465 miles sold before Confederation, made a total of 22,365 miles sold down to the present time.

The Sandfield Macdonald and the Blake sales were made subject to a ground rent of $2 per mile, and to dues of 75 cents per thousand feet. Of the 4,234 miles sold by the Mowat Government the terms were as follows:—2,766 miles were sold subject to $2 per mile ground rent and 75 cents per thousand feet dues; 835 miles were subject to $3 per mile ground rent and $1 per thousand feet dues; and 633 miles were subject to $3 per mile ground rent and $1.25 per thousand feet dues.

The Sanfield Macdonald Government made four sales in four years, or an average of one every year, and the present Government had made six sales in twenty-two years—one in about four years. Put another way, the Sandfield Macdonald Government sales had averaged 159 miles per year, and the sales under the Mowat Government had averaged 192 miles per year. Continuing, the Commissioner showed that as between the present Government and preceding Governments the figures quoted show that there were sold during a period of 31 years prior to the time of this Government—1873—18,227 square miles, and during the 22 years of this Government 4,324 miles. He took the period of 31 years before the present Government took office because that was the time, about 1841, when the Government of Canada first began to make sales of timber. Of the amount sold before Confederation 9,904 miles were so sold at 50 cents per mile and 2,561 miles at an average of $45.50 per mile. During the five years from 1867 to 1873, 5,666 miles were sold for $759,963, or an average of $133.77 per mile. From 1873 to 1894 under the Mowat Government, 22 years, 4,234 miles were sold for $5,101,627, or an average of $1,205.15 per mile.

Referring to the charge of members of the opposition that large areas of timber limits have been sold, which had they been reserved to the present time, would have brought greatly increased prices and would now have been filling the Provincial coffers, the Commissioner said: "It is true that there have been recent sales of limits between private individuals at very large prices, limits that were sold by the Crown 30 or 40 years ago, before the time of Confederation, when the fixed charge was 50 cents per square mile, or a little later, when the average was $45 a square mile. For example, the Lumsden, formerly McLaren, limits sold recently for $400,000, which were originally bought for 50 cents per mile. The Perley & Pattee limits on the Bonnechere, bought for 50 cents per mile, sold for $750,000. The Dickson estate limits, bought at the same price, sold for $400,000. The Georgian Bay Lumber Company sold a portion of their limits, bought from the Goverment for $50 per square mile, for $1,000,000, including some lumber, deducting which, the price for the limits themselves has been estimated at $750,000. These limits were disposed of by the Crown before Confederation, and, of course, prior to the existence of the present Government."

The objection has been urged that it is wrong to use receipts from timber taken from the forests and apply it from year to year as revenue. The Commissioner replied by saying that there is not a single representative country in existence on this continent or elsewhere where the receipts from timber taken from the forests is not applied from year to year as revenue.

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Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

LATE R. W. PHIPPS.

AN important side of the lumber interests loses a staunch friend in the death of Mr. R. W. Phipps, chief clerk of Forestry, for the Ontario government, who died at his late residence in this city on Sunday 18th inst. Deceased was well-known not alone for his interest in and close study of the subject of forestry, but for the wide and intelligent sympathy he showed for public affairs generally.

Mr. Phipps was a Canadian by birth, having been born in Toronto, December 7th, 1834, and was therefore in his 60th year at the time of his death. He spent twelve years of his life on the Globe, first as compositor, and afterwards as proof-reader. Sometime after this he removed to a farm in the township of St. Vincent, in the county of Grey, and remained there until 1872. It was while engaged in farming he obtained a practical knowledge of forestry, which he afterwards turned to good account on behalf of his native province.

Deceased was possessed of a strong literary instinct. He became quite a prolific writer on public and literary tropics, through the newspaper press and by the medium of the pamphlet. He was one of the early and most enthusiastic advocates of the National Policy, and a pamphlet, he wrote at the time the struggle for the N. P. was at its height, is believed to have played a prominent part in influencing public opinion on these lines. In al his writing Mr. Phipps gave much attention to the garb, in which his thoughts were clothed. He was a man of culture and wide reading, and in everything that came from his pen this bent of mind was plainly to be seen.

In 1883 the Department of Forestry was created by the Provincial government, and Mr. Phipps became chief clerk. Since that time his best thoughts have been given to this subject. He studied the question closely and lost no opportunity by voice or pen to bring his views before the attention of lumbermen and others. In 1892 when the Algonquin Park commission was appointed he became a member of it, Mr. Phipps was never married,

EDITORIAL NOTES.

THE mills on the Ottawa are not expected to begin sawing before the first week in May, and there is not likely to be any night sawing.

BRITISH COLUMBIA lumbermen are pushing their lumber wherever opportunity presents itself. Its claims are now being pressed upon the Dominion Government, the statement being made that the pine of the coast is better than the oak and cheaper. Certain tests made at McGill University, prove, it is alleged, that British Columbia wood has greater strength either for pillars or beams.

ONE of the most hopeful signs of future trade, noted in our trade review this month, is the growing spirit of confidence in lumber circles in Great Britain. To quote an English authority on the question: "The belief in a gradual improvement in trade gains ground, and there is now no inclination to sacrifice stocks, which fact has helped to stiffen prices for most descriptions of timber."

THE Puget Sound Lumberman summarises the output of lumber and shingles in those territories for 1893, as follows, and contrasts the figures with those of 1892 thus:

	Lumber, Feet		Shingles	
	1893	1892	1893	1892
Washington	764,234,912	1,164,425,880	1,829,528,500	1,883,868,750
Oregon	449,036,250	608,600,200	86,486,000	162,340,000
B'h Columbia	96,954,000	164,877,000	84,975,000	126,273,000
Montana	65,063,953	no comp'n	10,500,000	no comp'n
North'n Idaho	22,120,000	"	13,950,000	"
Total	1,398,407,115	1,937,903,080	2,035,439,500	2,172,481,750

THERE is something daringly dazzling in the plans of the average Frenchman. At a time when the hardwood dealer treasures with care his stock of mahogany, knowing that every splinter counts, we read that the Paris Municipal Council is now making roadways of this precious wood. A portion of the Rue Lafayette has been pulled up and workmen are laying down blocks of real Brazilian mahogany of a fine texture and color. The cost of the business seems to be fully recognized by the Parisians, but it is thought that the extra outlay will be more than covered by the extra durability of the mahogany.

AT the Forestry Congress held in Albany, N. Y., on the 1st of the present month, among those who took part in the proceedings was Mr. Wm. Little, of Montreal. Discussing the outlook for forestry in New York State, Mr. Little expressed the view that it would pay the State to expend millions and millions for the protection of the Adirondacks, not at $2 or $3 per acre, but even at $20 per acre. Colonel W. F. Fox, of the Forest Commission, of the State, communicated the information that there were forty-six varieties of trees in the Adirondacks, and that the main problem of the commission was how to make the State Department self-sustaining, and at the same time establish a system of preserving the forests. At a later session of the Congress Mr. Little read a paper on "Timber Tariff."

AT a meeting of the Paper Makers' Association of Canada held during the month at the Queen's Hotel, a discussion of the wood pulp industry was a leading feature of the conference. Before the passage of the McKinley act the wood pulp mills in Canada numbered 28 in operation, and a very considerable share of the product was exported to the States. The heavy duties imposed under that act has practically closed the market, and as a result 16 of the wood pulp mills have been shut down. The new Wilson bill makes no change in the wood pulp tariff, and the paper makers think it is time to play a return game. This can be done by putting an export duty on the Canadian spruce used in American pulp mills, and thus increasing the price of their raw material. A great many American paper makers have pulp mills entirely dependent, it was said, on Canadian spruce. Under normal conditions if the McKinley duty is taken off much of the pulp would be manufactured in Canada for export. The condition of the trade will be made known to the committee of the Cabinet engaged on the tariff inquiry with a view to securing a modification of the law.

THE log problem gives rise to various suggestions. Mr. R. A. Johnson, of Bay City, Mich., says: "The great problem now is where to obtain the 250,000,000 feet of logs needed to keep the mills stocked. The Georgian Bay and East Algoma district of Canada is the region to which the mills must look for supply. The present arrangement is a very comfortable one for the American lumbermen and manufacturer, and if the Canadian government does not disturb it, there is no reason why the American lumbermen should want it changed." The Toronto Star, makes this contention, in urging the imposition of an export duty on logs: "The way in which Ontario's lumber business has been moved across the lakes is shown by the immense concern opening out at East Tawas, Mich., where a company has purchased 100 acres on the shore of a bay, giving it nearly a mile of water front. The plant is to be the most extensive in the state and comprises two large saw mills with a capacity of 300,000 feet a day, a mill that can turn out 150,000 shingles a day, two salt blocks and wells, a dry kiln, and a general store that will do a business of $75,000 a year. There will be six enormous docks, three booms capable of holding 7,000,000 feet of logs and room for 100,000,000 in sight if needed. The company is logging 70,000,000 feet of logs in Georgian bay. Its pay roll will be $15,000 a month—on the Michigan side, of course—and 350 men will be employed."

WORD comes from Minneapolis of the consummation of the biggest deal in Minnesota pine lands of recent years. The negotiations, which have been pending for the transfer of vast stumpage in the northern part of the state held by C. A. Pillsbury & Co., and T. B. Walker, to a syndicate of Minneapolis lumbermen, and which include practically all the lumber manufacturing firms of the city, have been brought to a successful close. This is said to be the largest body of standing pine in the world. Most of it is near Leech lake. The practical effect of the deal is to unite the Minneapolis lumber interests in one organization, so far as the purchase of logs is concerned. The tract covers thirty townships and is estimated to contain 225,000 acres of pine. The amount of pine is estimated at 1,500,000 feet and a deal involves a matter of $10,000,000. None of the parties will disclose the price per thousand, but it plain that it is a low figure and that the effect of the deal will be to unify Minneapolis prices. The firm composing the syndicate are Nelson, Tenny & Co., E. W. Backus & Co., Shevely, Carpenter & Co., Carpenter, Bros. & Co., Leavitt, Horr & Co., and J. W. Day & Co., of Minneapolis, and Wells Bros., of Clinton, Ia. The sale includes the Brainerd and Minnesota logging road and saw mills, and the planing mill and entire plant of the Northern Mill Co. at Drayton.

LUMBERMEN from the Ottawa say that the shortage of the annual cut of logs on the timber limits this winter will not affect the cut of lumber in the mills at the Chaudiere this year, but may possibly affect it more or less seriously in 1895. From twenty to twenty-five per cent. of the cut of logs of last winter in the woods will not come out this season, owing to the unusual depth of snow in the bush, which practically paralysed the drawing. As the lumbermen at the Chaudiere get out between them some 950,000 standards of logs, and each standard furnishes some 235 feet of sawn lumber, it can be readily seen that the reduction of 25 per cent. of the forest winter cut will mean a curtailment in the output of sawn lumber in the mills in 1895, although not this year. Not only has the log cut suffered by the deep snow, but the square timber cut is claimed to be worse, as it is asserted it will be fully forty per cent. less than last year. This is greatly owing to the more unwieldy length of this class of lumber, which is much harder to be hauled in deep snow than the comparatively short log. The shortage of square timber is not looked upon as very serious, however, as the prices last year were small, and a shortage in the supply this year may help to lift up the price for the market of 1896. At the Chaudiere this coming summer, Mr. J. R. Booth will, it is expected, cut one hundred million feet of lumber; Benson & Weston, five million feet; and Buell & Hurdman, forty-five million feet.

A PROMINENT Ottawa lumberman was asked a few days ago when he thought the log drive would commence. "Ask me something easy," he replied. "I know a little something about lumbering operations, but when you come to ask me when the drive will commence, I must plead ignorance, for the commencement of the drive is one of the unknown things, for everything depends on the weather If we had an extraordinary early break up it might begin the 1st of April, and if it was strangely late it might not begin before the 1st of May. Everything depends on the weather. Ordinary seasons, the drives in the up river sections are started about the 15th of April. "But come to think of it, it may be a little earlier this year than usual because the ice is very poor and I think will disappear rapidly once the spring thaw sets in." "How about the price of lumber this summer?" "Oh, I don't think there will be any change from last season's figures as conditions are about the same. Things are brightening up in the United States, and I think we should have a fairly good season. As to whether the tariff comes off or keeps on it will make but a very fractional difference. From all I can see I think we should have a reasonably busy season."

* * * *

Government Statistician Johnson has prepared a comprehensive report to the minister of finance regarding the growth and extent of the lumber trade in Canada. Referring to the demand for an export duty on logs as necessary to the preservation of our lumber resources, Hon. Mr. Foster said: "During the coming session the government will not consider itself debarred from taking the course that is shown to be imperatively necessary because any persons have last year or this year, on the existing state of things, bought limits or invested in timber lands in our country."

* * * *

Mr. E. C. Grant, of Ottawa, manager of the Ottawa Lumber Company, says, "The prospects of the lumber trade were excellent. A marked improvement had taken place this year, the American market was flat, but the English market, which had been dead for the last few seasons, had shown great signs of revival, and, in his opinion, the trade with England will be excellent during this year. One marked incident this season is that the great American contracts for lumber to be cut during the summer, which are usually made in February, have not been entered into owing to the Wilson tariff bill. These contracts will be made later on. As regards the season's output Mr. Grant thinks the cut will be larger than ever, and his own company will make a heavy increase over last season."

* * * *

Frank McDonald, who recently returned from a business trip to the camps of the Ontario Lumber Co., says the snow was seven feet deep on the level. He says: "There was only the one track. When we met a loaded team we had to unhitch our horses and get them off the the road and upset our sleigh off the track to let the loaded team past. When two teams with loads met they divided up the beaten track, the horses being hitched up in tandem fashion until the sleighs pass each other. No one unless by actual experience can understand the difficulty in getting off a beaten track where snow is seven feet deep. In our journey we saw great numbers of deer. In some places they were thick as cattle in a barnyard. I saw Indians shooting many of them but had no time for sport myself."

* * * *

W. J. McFaul, son of H. A. McFaul, Hillier, was cutting saw logs on his place in Ameliasburgh a few days ago when his axe struck a file about a foot long, which was embedded in the timber. How it got there in that shape is a mystery. Not far from that place in the same woods Mr. McFaul found a sum of money. The money had been placed in quite a large tree. The top of the tree being dead it was decided best to cut it into fuel. When splitting the first length a package was exposed to view. A hole had been bored in the tree about six inches deep with an inch and a half auger, and the money placed therein. The hole had been completely covered by a growth of wood and bark. The contents of the package was as follows: One $10 bill, one $1 bill, one 50c. piece, two 25c. pieces, one 10c. piece and two 5c. pieces. The money had been well preserved and was all good.

* * * *

There is now in the river, says a Chaudiere lumberman, large quantities of logs which fill almost every boom for a long distance up the Ottawa. On the upper Ottawa there are five large rafts of square timber owned by Messrs. Barnet and Mackay, A. Fraser and Klock. These will, in all probability, be conveyed down to the Quebec market quite early in the season. There will not be many rafts of square timber on the Ottawa this year as the winter season was most detrimental to the taking out of large timber whether for dimension cutting or logs. It is safe to say that the amount of logs which will come down from the upper shanties this year will be less than that of 1893. Just what the difference may amount to is impossible to know just now. It is said on good authority that the cut of lumber in the saw mills of this city and Hull will not this year be so materially altered by the small cut of logs in the lumber camps along the Ottawa valley.

* * * *

A California reader of the LUMBERMAN sends a bit of history of Mr. Robert Dollar, who has recently purchased a large interest in the Usal Lumber Company, and becomes general manager at a salary that would knock the salary-economists of the city hall dizzy. I am inclined to think that even some of the fat-fee-fed-officers of the Ontario government, to quote from the speeches of her Majesty's loyal opposition, would simply be no where along side of Mr. Dollar. But "Dollars" count, and especially when they are Canadian "Dollars," and the circulating locality is the United States. The Republic to the south of us owes much of its prosperity to brain and energy that has come from this side of the line. The name Dollar was for years a familiar one in Canada in lumbering circles. Readers of these lines will remember the late Mr. John Dollar, who was for years identified with the lumber interests of Midland, where he built his first mill, and later united with Mr. H. H. Cook, and others, operating as the Ontario Lumber Company. In 1889, John Dollar removed to San Rafael, Cal., and engaged in the lumber business there, meeting his death in his Pacific Coast home in August, 1892. Jas. Dollar was a brother, who until about a year ago resided in Bracebridge, where he carried on a lumbering business. He was like the other members of the family highly respected, and at the time he left for San Rafael, Cal., to take up his residence there, he was serving his second term as Mayor of that flourishing town. We have now before us a third member of the Dollar family—Robert Dollar. His chief operations before going to the Pacific Coast were in Michigan, though he had been a large shipper of Canadian woods, as well as those of Michigan, to foreign ports. Mr. Dollar has been a large shipper of sugar pine from the Pacific Coast, and the story is told of him that knowing that should he ship sugar pine direct from the Pacific Coast the dealers abroad wouldn't know what the blawsted stuff was, and maybe would not touch it with a pole. So he cut the sugar pine logs into deals, shipped them to Quebec, thence to a foreign market branded as Michigan deals, and asked for a special report on them. The reply was that they were a very fair sample of wide Michigan deals: that the quality was first-class, and that the softness and fine texture of the wood was a surprise. Thus it was that Mr. Dollar showed how far he had developed Yankee cuteness, and at the same time did a good stroke of business. Having made the right impression for his sugar pine, Mr. Dollar now sends his sugar pine to the foreign markets on its merits; his three-inch deals going direct to London and Liverpool.

AN OBJECT LESSON.

PEOPLE who do not believe that forest growths have any particular effect on streams are pointed to the present condition of the Muskegon river, in Michigan. Years ago, when lumbermen first began cutting the pine along its course, it was an ideal logging stream, deep and of even flow. To-day with the forests practically cut away from it, it is a comparatively shallow stream. When the primitive forests lined its banks it was little subjected to floods; now it rises and falls quickly, like any other stream that has no heavy forest growths to conserve the waterfall along its course.

CANADIAN LOGS FOR MICHIGAN.

F. W. FLETCHER, of Alpena, Mich., states that Alpena will receive about 40,000,000 feet of logs from Canada the ensuing summer. There is in Thunder Bay waters about 75,000,000 feet of old logs and nearly as many new ones have been put in this winter, which will give the Alpena mills a full stock. He says that Alpena manufacturers are carrying over about 50,000,000 feet of lumber and trade has been on its back with them during the winter, but there is some inquiry now, and they are disposed to the idea that the stuff will be wanted later on. He says the cedar business has been carried on more extensively this winter than ever before on the Huron Shore, and this has given employment to labor, so that there have been very few idle men. A large quantity of cedar railway ties has been gotten out, besides poles and posts.

TRADE NOTES.

The F. E. Dixon Belting Co., of this city, have issued a hand-book of useful information about leather belting, that ought to be, it seems to us, in possession of every man who finds a leather belt a necessary part of the equipment of his mill. And what mill can get along without leather belting? Their little book contains a variety of mechanical tables that are practically invaluable to all interested in mechanics.

The Canadian agency for the famous "Camel" brand belting manufacturers, is now in the hands of Mr. Fleming, of Montreal, who succeeds Mr. Fenwick, the former representative. A contract from the city of Montreal for a round lot of fire hose has just been awarded to Mr. Fleming.

NEWS AND NOTES.

Dickenson's mill at Staples, Ont., started running on 2nd inst.

Shaw, of Windfall, Ont., has sold his saw mill to C. Mills, of Wheatley, Ont.

Over 2,000 feet of shingle bolts were burned recently at Allen's saw mill, Crossland, Ont.

D. E. Sprague, Winnipeg, has returned from his lumber camp on the Rosseau river. He states that the winter has been a a splendid one to get out logs, and his cut has been the largest he has ever made.

Mr. Geo. Webber, cooper, who recently bought a large quantity of oak timber from Mr. Lakins, Freelton, Ont., found among the lot one tree which measured 42 feet to the first limb, 5 feet in diameter at the butt, and only 11 inches less where it was cut at the top. The tree, according to the rings, was 349 years old.

The largest contract for cutting timber ever made in the Duluth district has just been entered into by the Siskiwit Lumber Co., and the Cranberry Lumber Co. The Siskiwit has given the Cranberry Co. the contract for cutting 100,000,000 feet of logs in the vicinity of Cranberry river, the money consideration being half a million dollars.

The saw mills at Young Point, Ont., are getting into active work. Mr. C. Young's mill is cutting plank for the Peterborough Waterwork's dam and also custom logs for farmers and others. Austin Dunn's shingle mill has commenced work for the season. W. J. Young has taken out a large quantity of saw logs this winter, and about three hundred cords of beech and maple on the lots he purchased last winter from the Lakefield Lumber Co., in the township of Harvey. I. A. Gordon, and J. M. Godfrey are also taking out quite a quantity of stuff from same locality.

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE Hon. Mr. Flynn, Commissioner of Crown lands for Quebec, has returned from a trip through the lumbering region, and encountered some of the hardships in travelling owing to the thaw, that the lumbermen sometimes meet with. In many places he and his travelling companion, Mr. W. C. Edwards, M.P., had to make long circuits to avoid floods in creeks and coulees receiving several upsets and breakdowns by the way. On the commissioner's return here he called a meeting, which was held in the office of the Upper Ottawa Improvement Co., of the lumbermen to confer with as to the best mode of preventing forest fires and preserving the young and other growing timber. He gave a very interesting description of his trip and as to what he saw, being convinced that a terrible waste has taken place in the valuable forests by fire, of which no reports to the department or by the lumbermen even had fully expressed, and felt it was high time that the best means in the power of the government with the aid of the lumbermen and co-operation of settlers were employed to prevent the terrible loss sustained by the province each year by fire. He suggested that the lumbermen should nominate a certain number of reliable men—men of prudence and judgment, such men, if found qualified by the departments, and as it was as much in the interest of the lumbermen as of the governments that they should be good men, that they should be appointed by the government for the season, during which fires were prevalent. He said one half the wages would be borne by the government and the other half by the lumbermen, or in other words that the bush fire protecture system of the Ontario government, which has proved so successful in combatting forest fires for four or five years past in Ontario, be adopted. Those present were Messrs. J. R. Booth, W. C. Edward., M. P., Hiram Robinson, of the Hawkesbury Lumber Co., Levi Crannell, of the Bronson, Weston & Co., Messrs. Reed & Avery, Mr. Gillies, Geo. H. Perley, Messrs. Gilmour & Hughson, Robert Hurdman, Allan Gilmour and Alex. Lumsden. The lumbermen expressed their great willingness to co-operate with the Hon. Mr. Flynn and to aid in the very laudable purpose taken by the commissioner ; and now prompt action is to be taken to preserve the forests from the ravages made by fire. The Hon. Mr. Flynn received a very hearty vote of thanks for the deep interest taken in this matter. He being the first Commissioner of Crown lands who ever visited personally the lumbering regions. His trip will no doubt result in great good to the province.

LOGGING DIFFICULTIES.

The recent very severe thaws have brought work in the lumbering camps in the Ottawa district to almost a stand still. Horse teams in nearly all the shanties are more or less off work, and many are leaving or are being kept in stables pending colder weather, and ice. If very cold weather does not soon come to speedily dry up the streams and gullies filled with water by the thaw, a very considerable quantity of skidded logs must remain in the bush. Persons coming from the Coulonge, Black river, Dumoine, Kippewa and Temiscamingue, and other lumbering districts report that in addition to the check given to hauling logs, that supplies are scattered by the scores of loads along the lakes and along winter bush roads which are for the most part cut out of the forests along creeks and ravines now overflowing with water. This sudden break up added to the heavy work with deep snows is now certain to greatly curtail the crop of logs and enhance the cost of the logs which reach water. Cold weather and snow are very much needed, but at this advanced season are scarcely hoped for. The water in the Ottawa has risen nearly five feet and ice is fast giving way.

READY FOR THE LOGS.

The Upper Ottawa Improvement Company, who tow the logs in the upper reaches of the Ottawa, have been very busy during the winter in making repairs at their several works. At Des Joachim, Fort William, Allumette, Quyon, Deschene, and Thompson's bay, piers and booms have been put in a thorough state of repair in preparation for handling the season's cut of logs. It is estimated that these repairs cost the company fully $12,000. The company's steamers too are being looked carefully after and are getting a general overhauling. The steamers number 11 and are in use during the summer in towing logs and rafts from Des Joachim's to Ottawa.

INDIFFERENT LENGTHS.

At the annual meeting of the Bronson & Weston Lumber Co., Ottawa, Hon. E. H. Bronson was elected president, A. Weston vice-president, and Levi Crannell secretary-treasurer.

By the death of "Jock" Arkinson, Ottawa and the Valley f the Ottawa lose an old man who grew up with the history of this section of the province, and who for years was an authority on timber, lumber, hunting, shooting and fishing as well as being a taxidermist in his way. He had been foreman of gangs on the Madawaska, Du Lievre, Ottawa, Gatineau and other rivers where he is pleasantly remembered.

OTTAWA, Can., March 5, 1894.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

A TERRIBLE calamity overtook the fine tug-boat Estelle in the vicinity of Cape Mudge. The only thing that appears certain is that the boat is a total wreck and that the whole crew of eight persons lost their lives with her. It is said that the vessel was blown to pieces by the explosion of her boilers, but this has yet to be confirmed. The Estelle was one of the best boats of her class in the Canadian Pacific waters, and her machinery was of the best. She was built about three years ago at a cost of $20,000.

COAST CHIPS.

Mr. H. H. Spicer has returned from Ontario.

Bolton has started a sash factory at Salmon Arm.

The B. C. M. T. & T. Co. started their Surrey logging camp this month.

The Pacific Coast Lumber Co. are putting in a larger fan in their new dry kiln.

It is expected that the B. C. M. T. & T. Co. will begin running again almost immediately.

The Brunette S. M. Co. are expecting a ship to load lumber. This will be the first of the lumber fleet for 1894.

The B. S. M. Co. are doing a number of improvements to their mill, the most important the putting in of an Allis band mill.

It is reported that the Brunette Saw Mill Co. have bought out the Shoal Bay Lumber Syndicate and will shortly begin operations.

It is rumored that the Moodyville mill, which has been idle for so long, will resume operations shortly, though nothing definite to that effect has yet been announced.

Messrs. E. C. Cargill & Co., have bought Chas. Brewer's sawmill property at Armstrong for $5000, including logs and lumber on hand. The mill will be put in order and begin the season's work shortly.

The American vessel Pioneer is loading for Santa Rosalia. The barkentine Wrestler, 447 tons, Capt. Bergman, which came from Honolulu via San Francisco, and will load at the Sayword mill, Victoria, for Australia on private terms, being under charter to Messrs. Robert Ward & Co., Ltd.

The smaller loggers of this province welcome the news that the Local Government intends to appoint an official log scaler. They are urging the nomination of such an official, in order, as they assert, to secure for them the due returns for their labor, by accurate measurement of the results of their work, ere it passes into the lumberman's hands.

NEW WESTMINSTER, B.C., March 2, 1894.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

WE are hardly more than on the threshold of spring, but already there are evidences of an improvement in trade. Nothing very bright, I must confess, and not a few dealers say so far as they are concerned, they fail to sight the coming boom, but there is a measure of inspiration in the air, and the belief is times will be better.

BITS OF LUMBER.

6,000 cord of pulp wood a year is consumed at Fletcher & Sons' factory at Alpena.

The Cadillas Stave & Heading Company has been incorporated with a capital of $20,000.

A sale of 1,000,000 feet of lumber was recently made by Bay City concerns, to L. C. Slade, of Saginaw.

Albert Peck, of Alpena, is harvesting 4,000,000 feet of logs in Presque, Isle County, which will be cut by his Alpena mill.

Pitts & Co., of Bay City, are harvesting a large lot of logs in Ogeman County, which are being railed to their Bay City mill.

The Muskegon Booming Company has been re-organized under the name of the Muskegon River Boom Company with a capital stock of $100,000, where the present capital is $50,000.

The rumor is generally current that the Arthur Hill Company has purchased $300,000 worth of Canadian pine timber.

Sibley & Bearinger have purchased 60,000,000 feet of standing timber in Duluth district adjacent to a body of timber owned by them.

A. T. Linton, of Saginaw, has closed a contract with New York firms for boxes that will require about 5,000,000 feet of lumber to make them.

The entire plant and stock of the Lansing Lumber Company at Dodge was burned on 11 inst. Loss, $175,000, believed to be covered by insurance.

Reports of logging in the vicinity of Menominee tell of successful work being done, it being estimated that over one-half the present winter's intended log cut is now at the landing.

S. O. Fisher, of Bay City, is showing his faith in the future of the lumber business by engaging extensively in logging and in purchasing large quantities of lumber as opportunities offer.

It is reported that an agent of D. Whitney, jr., of Detroit, recently purchased 8,000,000 feet of lumber, to be cut at a Lake Superior mill, at $18 a thousand, that would readily have brought $21 last season.

W. C. McClure states that his concern in Duluth has suspended logging operations. They had intended to put in 50,000,000 ft. and run the mill day and night, but they have only cut 25,000,000 and will run the mill but 10 hours a day.

Whitney & Batchelor are putting an Allis band mill outfit into their saw mill at Melbourne, taking out one circular. This will give them a band, gang, and one circular. They are cutting and bringing down from Clare County 8,000,000 feet of logs and have purchased 20,000,000 feet of Canada logs, which will give them a full stock for the coming summer's work. The firm has 10,000,000 feet of unsold lumber on the mill dock.

The Emery-Holland concern, at East Tawas, of which Temple Emery, of Bay City, is the moving spirit, will, when in full motion, be the largest lumbering establishment in Michigan. There will be two sawmills with a daily capacity of about 300,000 feet. The territory occupied will be nearly one hundred acres with a mile of water frontage ; six docks, with tramways and boomage for 7,000,000 feet of logs ; a big shingle mill of 150,000 daily capacity, two salt blocks, a dry kiln and all the other requisite machinery in a first-class mill. The company in all its ramifications of business will employ over three hundred men.

SAGINAW, Mich., March 8, 1894.

TIMBER IN FRENCH TONQUIN.

THE forests of Tonquin are numerous and their utilization is only waiting for capital and skilled labor. This is generally the fault in all French colonies. At present these forests are worked by the most primitive methods. The saw mills are for the most part in the hands of the Chinese, who will be found everywhere devoting themselves to all kinds of trade, giving the preference to those that yield the largest profit.

These forests are found in all the provinces, even in the neighborhood of the sea, but especially in the interior, where many are still in a virgin state. The species of wood are greatly diversified, timber for building and hardwood for finishing, both abounding. To find the extensively wooded tracts, one has to go towards the mountain in the direction of Lass and towards the Yunnan. To reach this remote region will, perhaps, not be without its inconveniences nor without danger, the neighbors being no more accommodating than they can help. But this is a question of time, and probably in a few years, when the peace making will be more complete, these regions will offer more chances of success and the work will be able to commence.

To produce a quantity and on conditions cheap enough to contend with the Chinese competition and make the latter impossible, it is necessary that the French who apply themselves to the working of the forests and the preparation of the woods, do it by the most perfect means. The hand or water saw mill does not produce enough results ; and as the Chinese are a very clever and practical people in all manual work, they would not be slow in imitating the improvements which they would see in regard to tools. One must absolutely use steam. This information is furnished us by a gentleman lately returned from Tonquin, and who has visited the colony and inspected everything carefully.

THE NEWS.

CANADA.

—Burton's mill at Rugby, Ont., is doing a good business this season.

—The sawmill of D. P. McDougall & Co., Maxville, Ont., Ont., has been started up.

—W. H. Atkinson, lumber, Deloraine, Man., admitted Alfred Atkinson; style, W. H. Atkinson & Co.

—Wm. Harris & Sons, Day Mills, Ont., are getting out a large quantity of square timber for the "Soo" canal.

—Campbell's new saw mill at Inverhuron, Ont., is now running and turning out about 8,000 feet of lumber a day.

—Frank Atkinson, sawmill, Ailsa Craig, Ont., who compromised at 50c. on the dollar in December last, has now assigned.

—Mr. Mitchell, of Millwood, it is said, has decided to build a saw mill at Selkirk, Man. He will tow his logs from Lake Winnipeg.

—Chas. Ashley, Havelock, Ont., whose new mill has a capacity of 15,000 feet per day, informs the LUMBERMAN that business is lively.

—E. C. Cargill & Co. have purchased from Charles Brewer his sawmill property at Armstrong, B.C., the sum paid being $5,000, including logs and lumber on hand.

—George Trask, whose sawmill at Orillia, Ont., was burned a few years ago, and on whom the work of rebuilding it has proven too heavy a strain, has assigned.

—Lumbering operations are still impeded in New Brunswick, owing to the heavy snows. There has been 12 weeks of uninterrupted sleighing in the province this winter.

—The Rathbun Company is carrying on extensive lumbering operations near its own section. Timothy Murphy's shanty of 60 men will get out in Hungerford 2,500 cords of hardwood, which will be shipped to Deseronto by train.

—Stewart Bros., of Rapid City, Man., have finished their season's log cut. About 12,000 pieces have been secured. Axemen and skidders have returned from the bush, but it will take the teams about six weeks to finish hauling.

—The shipments of W. M. McKay, of Ottawa, to British ports last year numbered 171 cargoes. Mr. McKay has shipped during the month 690,000 feet of deals to Liverpool, and Scammell Bros. 402,406 feet of scantling and 304,971 feet of boards to Buenos Ayres.

—E. Todd, Brantford, Ont., writes: "I have moved my sawmill from Clavering to Brantford. Have got out a fine stock of pine, oak and basswood; have 700,000 feet on skids and in yards. Though it has been a bad winter for logging in this section, yet I have logs within seven miles of the city."

—A dispatch from Collingwood says: "The sawmill and the large water front belonging to the Georgian Bay Lumber Company have been sold to Toner & Gregory, of this town, who intend to put the works in operation at once. The mill usually employs from 75 to 100 men during the cutting season. The capacity of the mill is from 80,000 to 100,000 feet per day.

Mitchell Bros.' sawmills at Berkeley, Holland Centre and Lucknow, are running in fine shape. $12,000 has been paid out for logs so far this season at the Berkeley mill. The mill is running day and night, the large part of the work during the winter season being in the manufacture of window rollers for the English market, and shipped direct by the Mitchells. The volume of business at the other two mills is about the same as at Berkeley, the whole aggregating a large business.

—At Dorchester, N.B., says the Sackville Post, besides the large quantity of logs that is got out and sawed by Messrs. James Anderson & Son, there are as follows: By Messrs. James & Robert Buck, 1,500 logs; Samuel & John McAllister, 1,200; Gideon Buck, 1,000; Robert Cook, 1,000; Leonard Buck, 800; Rennis Hicks, 200, and a brow at Dorchester Cape of 4,000 logs. F. C. Palmer & Co. will have about 800 cords of pulp wood and 500 cords of kiln wood to ship as soon as navigation opens; also a quantity of piling.

—D. E. Sprague, the Winnipeg lumberman, who is in the woods on Rosseau river, with a gang of 100 men and 40 teams, says that the winter's work is progressing favorably. He adds that there is plenty of snow for the long hauls. The white and red pine in that section of the province is of a superior quality. Mr. Sprague's cut this winter will exceed two million feet. The logs will be floated down the Rosseau river to the Red river, and thence to the mill at Winnipeg. Mr. Sprague expects also to get a quantity of logs from Minnesota, to be brought down the Red river for his mill.

—The vast amount of logs that passed over the Horseshoe falls, and which are now on the Canadian side of the river on the ice bridge, are only a portion of the number which came down from Tonawanda, and their loss will be a most serious blow to Mr. W. L. Land, who owns the property. Mr. Land is from Au Sable, Mich., and an extensive lumber dealer. The extent of his loss is estimated at 1,500,000 feet of Norway pine lumber, valued at $21,000. Some of this lumber has undoubtedly passed through under the ice bridge, and will hardly be recovered again. The lumber was in rafts when swept away by the ice.

GENERAL.

—Sales of lumber at Duluth, already contracted for, aggregate 20,000,000 feet, or forty cargoes.

—Puget Sound lumbermen are discussing the advisability of introducing the Australian idea of cutting timber by exploding a ring of compressed gun cotton. It is claimed that the explosion will cut the tree perfectly clear of the stump.

—Messrs. Merrill, Ring & Co., of Toledo, Ohio, recently sold 800,000 feet of white pine lumber to the Jeannette Planing Mill Company, of Jeannette, Pa. This firm claims that they manufacture from 500,000 to 600,000 feet of glass boxes into lumber every month.

FIRES AND CASUALTIES.

FIRES.

—Pilkey's sawmill at Edenvale, Ont., has been destroyed by fire.

CASUALTIES.

—Frank Benninger, while running an edge-saw in Thompson's mill, Hepworth, Ont., had his hand cut clean off.

—Wallace Beeler, an employee of Rope Bros., Bridgetown, N.S., met an almost instantaneous death by a log rolling over him.

—James Shannon, employed in McCorgowdale's sawmill at Boissevain, Man., had his right arm badly injured by an accident in the mill.

—John Richardson, of Windermere, Ont., was instantly killed a few days ago, by a log which rolled off a high pile, striking him on the head.

—Samuel Thompson while employed in a camp of Messrs. Dyment & Mickle's, near Bracebridge, Ont., was struck by a falling tree and instantly killed.

—A man named Kelly, while drawing logs for Rathbun & Co., at McLean, Ont., had his sleigh upset, receiving a broken leg as a result, and one of his ears was completely severed.

—A terrible accident happened at Vale's sawmill in Sombra township, Ont. The operators were just preparing to shut down when the boiler exploded, killing Mr. Cornell, the engineer, and three of his children, who were in the engine room at the time. The boiler was thrown over the house adjoining the mill. Mrs. Cornell has one child left.

PERSONAL.

Capt. Graham, formerly of Winnipeg, and well known in the lumber trade, is dead. He has lately been residing at Townsend, Wash.

W. D. Mearns has resigned his position as foreman of the Hastings mill, New Westminster, B. C., after a service of a number of years.

Mr. Duncan McLaren, a well-known lumber merchant of Lanark county, died recently in Florida, whither he had gone for his health. His remains were brought to Carleton Place for burial.

At St. Martin's church, Montreal, Que., on Feb. 27th, Albert MacLaren, of Buckingham, Que., lumberman, was married to Lillian Edith, daughter of William Henry Moody, of Terrebone, Que. The officiating clergyman was Rev. G. Osborne Troop.

LUMBERMEN OF MANITOBA.

The third annual meeting of the Western Retail Lumbermen's Association was held at Winnipeg on the 12th February. The meeting was well attended and much interest evinced in the association work.

The president in his opening remarks made pleasing allusion to the honorary members in acknowledging the good support received from them in faithfully observing the by-laws and firmly declining to sell to suspended members and generally co-operating with the association throughout. He reported the association to be in a prosperous state and that the board of directors had only a few congested cases to deal with in the early part of the season for infraction of the by-laws, and was glad to state that the board had successfully disciplined the offenders and all of whom in the end are working harmoniously with each other.

The secretary-treasurer followed with the financial statement showing a balance on hand of $1,140.80. He also reported the association in a prosperous condition; that it is generally recognised in the lumber trade of this country and that its members comprises all the retail yards in this province, and the eastern part of Assiniboine, with its usefulness for good being more and more demonstrated. The secretary desired to strongly emphasize the remarks of the president as to the honorary members in the very reliable support received from them in dealing with suspended members, in refusing to sell to such; and that the retail members should in their dealings keep in mind the old adage "that one good turn deserves another," in making their purchases, to patronise honorary members always.

The by-laws having been read and with a slight amendment adopted, the election of officers was proceeded with and on motion the president and directors were re-elected by acclamation. The question of freight rates was discussed and a committee appointed, with power to co-operate with other corporate bodies in urging the railway companies, to make a reduction in the freight tariff. An amendment to the lien law was submitted and upon full discussion was given into the charge of a committee to obtain legislation upon it.

An important question was brought up at the close of the meeting as to the advisability of establishing a mutual fire insurance company in connection with the association. After much live discussion the matter was given into the hands of the board of directors to deal further with it.

A very successful meeting was brought to a close after two sessions and extending to two days.

LUMBERING IN GREY COUNTY.

THE lumbermen of Grey look for a profitable season's work, and already many of the mills are quite busy. In this county is located a considerable lumber interest. The following particulars touching some of the leading operators will prove interesting.

John Harrison is getting the most of his stock from the Manitoulin Island and will raft it to his mill at Owen Sound. He has large orders for lumber to fill for the C. P. R. and for the G. T. R. extension. C. H. Whittune & Co. have their new mill near Shallow Lake running. J. E. Murphy, the Hepworth lumber king, has erected another mill on con. 10, Keppel, on the G. T. R. extension, which will be running almost right away. H. Pedwell has removed his mill from the Glen to the Centre road, Keppel, and has made large improvements in the size and increased the speed of his manufactory. He has out a large stock of logs and is running a full gang of men on full time. Mr. Pedwell has also a second mill at Brookeholm, for which he is getting out large stocks of logs on the shores of Georgian bay, and which he will raft to this place as soon as navigation opens and start cutting. He has also a good stock of logs at his mill at Thornbury. James Nelson at Bayview, Sarawak, is getting out a nice little stock for his water mill. Kilbourn & Dunbar, near Presque Isle, are getting out a good stock of hardwood logs and will start to cut in March. Pickett & Ryan, who have purchased the mill near the Polsons, are purchasing logs on the Georgian bay to be rafted to their mill at Owen Sound, to be sawed during the coming season. Maitland & Rixon have a large gang of men and 30 teams getting out logs on their limits on the Peninsula, to be rafted to their big mill at Owen Sound and converted into lumber during the summer. Brunell Bros. mill on the Derry line is running day and night manufacturing mangles for the English market. They are getting out a large stock, and so are Barber & Gowan at their mill, also laying in a fair stock of logs. Campion's mill at Rocklyn is busy, with a small stock in the yard. Wardell's mill at Kilsyth is busy on custom work, and has a stock of logs in yard. R. A. Stark has already a large stock of logs on hand and will double his last year's supply if the sleighing holds out. Jones Bros. are not stocking very heavy this season. They are waiting, it is said, for free trade in lumber and will then take advantage of the market. Young, Leslie & Bro. have in a large stock and are paying good prices for logs to fill their orders for lumber in the American market. Charles Engle at Balaclava is running full time, and has his yards full of logs. N. D. Seaman, whose steam mill is near Woodford, is well supplied with hardwood and hemlock logs, and is running full time to fill orders in hand for lumber. J. S. Findley's mill at St. Vincent Crossing has in a large stock of logs, mostly maple, that he is manufacturing into mangles for the London market.

The details here given are confined principally to those whose operations are within easy distance of Owen Sound, and does not take in Hepworth, Chatsworth, Holland Centre, Allanford, Tara, Meaford, Wiarton, or the many other mills in this county, or the neighboring county of Bruce. The saw mills mentioned will have a combined stock of at least 17,000,000 feet.

TRADE REVIEW.

Office of CANADA LUMBERMAN,
March, 10, 1894.

THE GENERAL SURVEY.

THE considerable measure of brightness and sunshine that has prevailed for the past few weeks has inspired lumbermen with thoughts of a possible improvement in trade. An increase in trade at this time of the year we have all a right to expect, but it is rather difficult to say how far lumber business will be affected by the opening season. It does not appear that the general lumber trade of the province will be on any unusual scale this spring or summer. Building operations both in the city and out of it will be carried on with care and conservatism, and we do not learn of prospective contracts of any magnitude being under way.

Export trade with the United States will depend largely on the result of tariff legislation. It is generally anticipated that the Wilson bill will secure free trade in lumber. At the same time there are not a few contingencies likely to arise to modify the character of the bill. For one thing it is among the possibilties that the bill may be so slaughtered before it is actually formulated into legislation, that when it comes out its best friends will not know it. In any case it is yet a question among lumbermen how broadly the term free lumber can be interpreted to cover the various classes of manufactured lumber that may be exported from this country. This uncertainty is likely to have an effect in retarding trade in the meantime between Canada and the United States. Much different was the condition on the opening of trade last year. It seemed hardly possible then for a while to nearly meet the large call from the United States for our lumber, while prices no matter how stiff they were held, were made an objection by no one. But the trade depression that struck our neighbors, like one of their western cyclones, a little later in the year, changed all this, and business has remained depressed ever since. Lumbermen, however, do not themselves believe that these conditions can continue much longer, and if lumber duties are removed there will be a speedy revival in trade.

The outlook in South America and in the United Kingdom is better than for some time, and Ottawa lumbermen are anticipating a large export to South America this year, the Export Lumber Co., of that city, having chartered seven cargoes for the river Platii out of Montreal. It is also known that Ottawa lumbermen have already sold a large part of their cut in England this season.

In the Maritime Provinces trade is not any too active. British Columbia is maintaining a good share of activity, and would seem to be steadily developing new fields for its products. This is especially the case in shingles, our own Province now being large purchasers of red cedar shingles.

UNITED STATES.

It cannot be said, taking the lumber interests generally of the United States, that indications are abroad of a heavy season's business. Tariff affairs still drag slowly along, and it may be some months before a complete copy of the Wilson bill is presented to the public. This uncertainty is having an injurious effect on general trade and activity in lumber interests is being also impeded from the same cause. Then there is a difference of opinion among lumbermen, especially handlers of white pine, as to what shape prices may take. Large stocks have been carried over the winter by lumbermen, and they have now a strong desire to unload, and obtain some relief from a winter's inertness. With some the temptation is strong enough in this direction to lead them to give way in prices. We are told that this is especially the case with common grades. Another element, however, comes into calculation here. It looks as though the log crop might be short. The weather has on the whole been unfavorable. Spring has come upon us with a rush and large numbers of logs are in the woods still on skids, and no immediate appearance of getting them forward. Thus it is that a period of hesitancy in operations prevail, producing at least a present dull market.

FOREIGN.

A decidedly better feeling prevails in British lumber markets. It is felt that the depression of the past year has well nigh exhausted itself, and that with the opening of spring a fair trade may be looked for. Nor are stocks excessive at any point, so that if building operations are carried on to any extent new purchases must be made. Favorable reports also come from South America, and there is good reason to suppose that a season of revival has already commenced in this port. Farnworth & Jardine, of Liverpool, Eng., have this to say of Canadian woods in the United Kingdom: Both waney and square have moved off slowly, as usual at this time of the year; there is no change in value to report, and the stock, although moderate, is sufficient. Red pine is in dull demand, and values rule low. Oak has been dull of sale throughout the month, although there has been more enquiry for first-class wood for next season's delivery; the present stock is much too heavy. Ash: The import has consisted of one small parcel from the United States; the deliveries during the month have been fair, but the stock is still too heavy, and there is no change in value. Elm has been in fair request and prices steady, and the stock moderate. Pine deals have moved off more freely than during the two years at corresponding time. Prices are firmer in sympathy with the higher values being asked by shippers for the coming season's delivery; the stock is sufficient."

TORONTO, ONT.

TORONTO, March 10, 1894.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch	2 50	2 60
XX shingles 16 inch	1 50	1 60
Lath, No. 1		2 15
Lath, No. 2	1 80	1 85

YARD QUOTATIONS.

		F. M.		
Mill cull boards and scantling	$10 00	1 1-2 in. flooring, dres'd	26 00	30 00
Shipping cull boards, promiscuous widths	13 00	" " rough	18 00	22 00
" stocks	16 00	" " dres'd	25 00	28 00
Scantling and joist, up to 16 ft	14 00	1 1-4 in. flooring, undressed, B.M.	16 00	18 00
" " 18 ft	15 00	1 1-4 in. flooring, dres'd	18 00	20 00
" " 20 ft	16 00	" " undres'd	12 00	15 00
" " 22 ft	17 00	Beaded sheeting, dressed	20 00	35 00
" " 24 ft	19 00	Clapboarding, dres'd.		12 00
" " 26 ft	20 00	XXX sawn shingles per M.	2 60	2 70
" " 28 ft	22 00	Sawn lath		2 60
" " 30 ft	24 00	Red Oak	30 00	40 00
" " 32 ft	27 00	White "	37 00	45 00
" " 34 ft	29 50	Basswood, No. 1 and 2	28 00	30 00
	23 50	Cherry, No. 1 and 2	70 00	90 00
" " 36 ft	31 00	White ash, 1 and 2	24 00	35 00
" " 38 ft	33 00	Black ask, 1 and 2	20 00	30 00
" " 40 to 44 ft	37 00			
Cutting up planks, 1 and thicker, dry	25 00 28 00			
" board	18 00 24 00			
Dressing blocks	16 00 20 00			
Picks Am. inspection.	30 00			

HARDWOODS—PER M. FEET CAR LOTS.

Ash, white,	1	to 2 in.	$18 00	$20 00	Elm, soft	1	" 1½	$11 00	$12 00
" "	2½	to 4	20 00	24 00	" "	2	" 3	12 00	13 00
" black,	1	" 1½	16 00	18 00	" rock	1	" 1¼	14 00	16 00
Birch, sq.,	1	" 4	17 00	20 00	" "	1½	" 3	15 00	18 00
" "	4x4	" 8x8	20 00	22 00	Hickory	1½	" 2	28 00	30 00
" red	x	" ½	20 00	22 00	Maple	1	" 1½	16 00	17 00
" "	2	" 4	22 00	25 00	"	2	" 4	17 00	18 00
" yellow	1	" 4	14 00	15 00	Oak, red, p'n	1	" 1½	28 00	30 00
Basswood	1	" 1¼	15 00	16 00	" "	2	" 4	30 00	32 00
"	1½	" 2	16 00	18 00	" white	1	" 1½	28 00	30 00
Butternut	1	" 1½	23 00	25 00	" "	2	" 4	30 00	35 00
"	2	" 3	25 00	28 00	" quart'd	1	" 2	48 00	52 00
Chestnut	1	" 2	25 00	30 00	Walnut	1	" 3	85 00	100.00
Cherry	1	" 1½	50 00	60 00	Whitewood	1	" 2	32 00	36 00
"	2	" 4	60 00	65 00					

OTTAWA, ONT.

OTTAWA, March 10, 1894.

Pine, good sidings, per M feet, b.m.	$32 00	40 00
Pine, good strips, " " "	27 00	35 00
Pine, good shorts, " " "	20 00	27 00
Pine, 2nd quality sidings, per M feet, b.m.	20 00	25 00
Pine, 2nd quality strips, " " "	18 00	22 00
Pine, 2nd quality shorts, " " "	15 00	18 00
Pine, shipping cull stock, " " "	14 00	16 00
Pine, box cull stock, " " "	11 00	13 00
Pine, s.c. strips and sidings " " "	11 00	14 00
Pine, mill cull	8 00	10 00
Lath, per M	1 60	1 90

QUEBEC, QUE.

QUEBEC, March 10, 1894.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	14 @	18
For fair average quality, according to average, etc., measured off.	16	20
For good and good fair average, " " " " "	23	27
For superior " " " " "	28	30
In shipping order " " " " "	29	35
Waney board, 18 to 19 inch " " " " "	30	36
Waney board, 19 to 21 inch " " " " "	37	40

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	45	51

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	30	34

BIRCH.

16 inch average, according to average and quality	20	23

TAMARAC.

Square, according to size and quality	17	19
Flatted. " " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $37 to $42 for 3rd quality.
Bright spruce, according to mill specification, $40 to $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality.

BOSTON MASS.

BOSTON, Mass, Mar. 10.—One cannot report much of lumber trade at the Hub. It is quiet, with no very bright omens as yet of future trade.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$11 00	12 00	¾ inch	$ 9 50	10 00
Coarse No. 5	16 00	16 50	11-16 inch		9 00
Refuse	11 00	12 00	⅝ inch	8 50	9 00
Outs		9 00	Clapboards, sap ext.	52 50	55 00
Boxboards, 1 inch	11 00	11 75	Sap clear	47 00	50 00
⅞ inch	10 00	11 00	Sap, 2nd clear	38 00	40 00
			No. 1	20 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in	$52 00@54 00		Fine com., 3 and 4 in	42 00	46 00
1¼, 1½ and 2 in	52 00	55 00	No. 2, 1 in. Fine com.	28 00	30 00
3 and 4 in		60 00	1¼, 1½ and 2 in	29 00	31 00
Selects, 1 in	45 00	46 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in	48 00	50 00	No. 2	36 00	37 00
3 and 4 in		51 00	No. 3	28 00	30 00
Moulding boards, 7 to 11 in. clear	36 00	38 00	Cut ups, 1 to 2 in	24 00	32 00
60 per cent. clear	34 00	36 00	Coffin boards	21 00	23 00
Fine common, 1 in	40 00	41 00	Common all widths	22 00	26 00
1¼, 1½ and 2 in	41 00	43 00	Shipping culls, 1 in	15 00	15 50
			do 1¼ in.	15 50	16 50

SPRUCE—BY CARGO.

Scantling and plank, random cargoes	14 00@15 00		Coarse, rough	12 00@14 00	
Yard orders, ordinary sizes	15 00	16 00	Hemlock bds., rough	12 00	13 00
Yard orders, extra sizes	16 00	18 00	" " dressed	12 00	14 00
Clear floor boards	19 00	20 00	Clapbds., extra, 4 ft	29 00	30 00
No. 2	16 00	17 00	Clear, 4 ft	30 00	31 00
			Second clear	23 00	24 00
			No. 1	12 00	16 00

LATH.

Spruce by cargo	2 50@2 75

SHINGLES.

Eastern sawed cedar, extra	$3 00	$3 25	Eastern shaved sawed cedar, 1st quality	5 00	
clear	2 30	2 75	2nd quality	4 75	
2nd's	2 00	2 35	3rd "	3 85	4 00
extra No. 1	1 50	1 75	4th "	3 00	3 25
			Spruce No. 1	1 50	

OSWEGO, N.Y.

OSWEGO, N. Y., Mar. 10.—Business has not yet taken on its spring activity. So soon as navigation opens there will doubtless be a change.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$47 00@49 00				
Pickings, "	39 00	40 00			
No. 1, cutting up, " "	34 00	35 00			
No. 2, cutting up, " "	24 00	25 00			
In strips, 4 to 8 wide, selected for moulding strips, 14 to 16 ft.	32 00	34 00			

SIDING.

1 in siding, cutting up picks and uppers	32 00@39 00		1¼ in selected	38 00@43 00	
1 in dressing	19 00	21 00	1¼ in dressing	20 00	22 00
1 in No. 1 culls	14 00	15 00	1¼ in No. 1 culls	15 00	17 00
1 in No. 2 culls	13 00	14 00	1¼ in No. 2 culls	14 00	15 00
			1 in. No 3 culls	11 00	12 00

1X12 INCH.

12 and 16 feet, mill run	21 00	24 00
12 and 16 feet, No. 1 and 2, barn boards	19 00	20 00
12 and 16 feet, dressing and better	27 00	31 00
12 and 16 feet, No. 2 culls	15 00	16 00

1X10 INCH.

12 and 13 feet, mill run, mill culls out	21 00	23 00
12 and 13 feet, dressing and better	26 00	28 00
1x10, 14 to 16 barn boards	18 00	19 00
12 and 13 feet, No. 1 culls	16 00	17 00
12 and 13 feet, No. 2 culls	15 00	16 00
14 to 16 feet, mill run mill culls out	21 00	23 00
14 to 16 feet, dressing and better	26 00	28 00
14 to 16 feet, No. 1 culls	17 00	18 00
14 to 16 feet, No. 2 culls	15 00	16 00
10 to 13 feet, No. 3 culls	11 00	12 00

1¼X10 INCHES.

Mill run, mill culls out.	$22 00@25 00		No. 1 culls	17 00	18 00
Dressing and better	27 00	35 00	No. 2 culls	15 00	16 00

1X4 INCHES.

Mill run, mill culls out	17 00	21 00	No. 1 culls	14 00	15 00
Dressing and better	24 00	30 00	No. 2 culls	13 00	14 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20 00	25 00	6, 7 or 8, No. 1 culls	16 00	17 00
6, 7 or 8, drsg and better	25 00	30 00	6, 7 or 8, No. 2 culls	14 00	15 00

SHINGLES.

XXX, 18 in pine	3 70	3 90	XXX, 18 in. cedar	3 50	3 70
Clear butts, pine, 18 in.	2 70	2 90	Clear butt, 18 in. cedar	2 50	2 70
XXX, 16 in. pine	3 00	3 20	XX, 18 in. cedar	1 90	2 00
Stock cedars, 5 or 6 in.	4 50	5 00			

LATH.

No. 1, 1¼	2 30		No. 2, 1¼	2 25	
No. 1, 1 in.	1 80				

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N. Y., Mar. 10.—Signs are not wanting that we are soon to enter upon spring trade. Mills are stocking up, taking it for granted that there will be business to do. We are hearing favorable reports of

export trade in South America and the West Indies. Possible tariff changes are still influencing buyers. It is generally anticipated that free lumber is coming, but until the Wilson bill has passed through all its vicissitudes, no one is perfectly sure what the outcome may be.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in	$47 00	50 00	Shelving, No. 1, 13 in and up, 1 in	31 00@33	00
2½ and 3 in	55 00	57 00	Dressing, 1¼ in	26 00	28 00
4 in	58 00	60 00	1¼x10 and 12		28 00
Selects, 1 in.	38 00	40 00	1½ in	24 00	25 00
1¼ to 2 in	40 00	42 00	2 in	26 50	28 00
2½ and 3 in	50 00	52 00	Mold st'ps, 1 to 2 in	33 00	35 00
4 in		54 00	Barn, No. 1, 10 and 12 in	23 00	24 00
Fine common, 1 in	35 00	38 00	6 and 8 in	22 00	23 00
1¼ and 1½ in	37 00	38 00	No. 2, 10 and 12 in.	18 00	19 00
2 in	39 00	40 00	6 and 8 in	18 00	19 00
3 in.		45 00	No. 3, 10 and 12 in.	14 00	16 00
4 in		45 00	6 and 8 in	14 50	15 50
Cut'g up, No. 1, 1 in.	28 00	30 00	Common, 1 in	16 00	18 00
1¼ to 2 in	35 00	36 00	1¼ and 1½ in	18 00	20 00
No. 2, 1 in	18 00	20 00	2 in	20 00	22 00
No. 2, 1¼ to 2 in	24 00	26 00			
No. 3, 1¼ to 2 in	18 00	19 00			

BOX.

1x10 and 12 in. (No 3 out)		14 00	Narrow	13 00@14	00
1x6 and 8 in (No. 3 out)		13 50	1¼ in	15 00	18 00
1x13 and wider	15 00	17 00	1½ in	15 00	18 00
			2 in	15 00	18 00

SHINGLES.

18 in. XXX, clear	3 75	4 00	16 in., *A extra	2 60	2 70
18 in. XX, 6 in. clear.		2 85	16 in. clear butts		2 10

LATH.

No. 1, 4 ft.	2 50	2 60	No. 1, 3 ft.		1 10
No. 2, 4 ft.		1 95			

ALBANY, N.Y.

ALBANY, N.Y., Mar. 10.—Just at present it is a case of anticipating a fairly good lumber season, but real work has not yet actually begun.

PINE.

2½ in. and up, good	$56	$60	10-in. common	$15	$16
Fourths		58	12-in. dressing and better	28	34
Selects		50	Common	15	17
Pickings		45	1¼-in. siding, selected, 13 ft.	40	45
1¼ to 2-in. good	52	55	Common	15	17
Fourths	47	50	1-in. siding, selected	38	42
Selects	42	45	Common	15	17
Pickings	37	40	Norway, clear	22	25
1-in. good	52	55	Dressing	16	18
Fourths	47	50	Common	11	15
Selects	42	45	10-in. plank, 13 ft., dressing	c.	c.
Pickings	37	40	and better, each	42	55
Cutting-up	22	27	10-in. plank, 13-ft. culls, each	23	25
Bracket plank	30	35	10-in. boards, 13 ft., dressing		
Shelving boards, 12-in. up	30	32	and better, each	28	32
Dressing boards, narrow	19	21	10-in. boards, 13-ft. culls	17	21

LATH.

Pine	$2 40		Spruce	$2 30	$2 40

SHINGLES.

Sawed Pine, ex. XXXX	$4 40	$4 50	Bound butts, 6 x 18	$5 90	$6 00
Clear butts	3 15	3 25	Hemlock	2 15	2 30
Smooth, 6 x 18	5 50	5 60	Spruce	2 20	2 30

SAGINAW, MICH.

SAGINAW, Mich., March 10.—When dealers contrast conditions at this port with those of a year ago, they are inclined to become blue. Then it was easy to sell lumber, and get one's own price for it. Buyers to-day are going it slow, and they are not so sure that lumber may be worth all that is being asked. Business in a word is slow, and it is hard to say just how trade will develop this spring.

FINISHING LUMBER—ROUGH.

Uppers, 1, 1¼ and 1½	45 00		Fine common, 1 in	35 00	
2 in	46 00		1¼ and 1½ in	36 00	
Selects, 1 in	40 00		2 in	36 00	
1¼ and 1½	41 00		C, 7, 8 and 9 in	30 00	
2 in	41 00				

SIDING.

Clear, ½ in	24 00		C, ½ in	19 00	
⅞ in	48 00		⅞ in	34 00	
Select, ½ in	21 00		No. 1, ½ in	13 00	
⅞ in	40 00		⅞ in	23 00	

TIMBER, JOIST AND SCANTLING.

2x4 to 10x10, 12, 14 and 16 ft.	$11 00		20 ft	13 00	
18 ft	13 00		22 and 24 ft	15 00	

For each additional 2 ft. add $1; 12 in. plank and timber $1 extra; extra for sizes above 12 in.

SHINGLES.

XXX 18 in. Climax	3 65		18 in. X (cull)	1 00	
XXX Saginaw	3 40		XXX shorts	2 25	
XX Climax	2 25		XX	1 50	
18 in. 4 in. c. b.	1 25				

LATH.

Lath, No 1, white pine	2 25		Lath, No. 2, W. pine, Norway	1 65	

NEW YORK CITY.

NEW YORK, March 10.—Business is not looking up to any encouraging extent in the Metropolitan market. A considerable amount of building is anticipated in the early spring, but the effects of present plans is not being felt in lumber quarters. Prices, however, keep quite firm; certainly a hopeful sign of the confidence in the ultimate condition of lumber.

WHITE PINE—WESTERN GRADES.

Uppers, 1 in	$44 00@45	00	Coffin boards	20 00	22 00
1¼, 1½ and 2 in	46 00	47 00	Box, in	$17 00@17	50
3 and 4 in	55 00	58 00	Thicker	17 50	18 50
Selects, 1 in	40 00	41 00	Ceil'g, base, fig. No. 1	40 00	42 00
1 in., all wide	41 00	43 00	No. 2	35 00	37 00
1¼, 1½ and 2 in	43 00	44 00	No. 3	24 00	26 00
3 and 4 in	52 00	53 00	Shelving, No. 1	30 00	32 00
Fine common, 1 in	36 00	37 00	No. 2	25 00	27 00
1¼, 1½ and 2 in	38 00	40 00	Molding, No. 1	36 00	37 00
3 and 4 in	46 00	48 00	No. 2	34 00	36 00
Cutting up, 1 in. No. 1	28 00	30 00	Bevel sid'g, clear	22 50	23 00
No. 2	21 00	23 00	No. 1	22 00	22 50
Thick, No, 1	29 00	32 00	No. 2	20 00	20 50
No. 2	24 00	26 00	No. 3	16 00	17 00
Common, No. 1, 10 and 12 in	22 00	23 00	Norway, c'l, and No. 1	23 00	25 00
No. 2	20 00	21 00	No. 2	20 00	22 00
No. 3	17 00	18 00	Common	18 00	19 00

BELTS IN SAW MILLS.

IT is frequently stated, says the Tradesman, that there is no place where a leather belt is subjected to harder use than the saw mill, and that the belts that drive the saw under the most favorable conditions are short lived. While this is true to a certain extent, still there is no good reason why this should be the case. It is also true that the belt which drives a circular saw is subjected to more variations in tension, from the fact that the resistance offered to it is more variable than in any other class of machinery; still, that is no good reason why a good leather belt should not last a reasonable time under favorable conditions. But here is the trouble: The manner in which many mills are constructed is such that favorable conditions for the belt are out of the question. In the first place, the pulleys upon the mandrel are too small in diameter and too narrow upon the face to admit of sufficient belt power at a reasonable tension, and to remedy this defect the belt is not only subjected to a ruinous tension, but heavy binders are applied to complete the job and render matters worse so far as the belt is concerned. It is often the case where a sixty-inch saw is used with the usual feed, that the belt is required to transmit 60 horse-power, when at its proper speed and tension it should not be required to transmit over from 30 to 40, but by the means of a heavy binder it is compelled to perform its work regardless of consequences; then, if it gives out in a short time somebody except the right one must take the blame. Experience has fully demonstrated that a leather belt in order to be durable and lasting should never be subjected to a tension to exceed 100 pounds to the inch in width, consequently the pulley should be of sufficient diameter and wide enough upon the face to admit of a belt of sufficient width to transmit the maximum power at that tension, without the use of a binder. It is estimated that a sixty-inch saw, making 600 revolutions per minute, with the average feed in pine lumber, requires not less than a maximum of 60 horse-power, which would require a pulley upon the mandrel thirty inches in diameter and eighteen inch face to give that power with a reasonable surplus for contingencies. A saw of that size running 600 revolutions per minute and furnished with a pulley thirty inches in diameter would give you a belt speed 4,712.40 feet per minute, and if the belt were eighteen inches wide and subjected to a stress of 100 pounds to the inch in width, the whole stress would be equal to 1,800 pounds. As the fractional power of all leather belts is equal to 40 per cent. of the stress it follows that the effective force of the belt will be equal to 720 pounds. To find the power of a belt we multiply the speed in feet per minute by 40 per cent. of the stress and divide by 33,000. Hence, 4,712.40 times 720 divided by 33,000 equals 93.42 horse-power and this should be sufficient to drive the saw up to its speed without the use of a binder or straining it otherwise beyond its powers of endurance. Under such conditions there is no reason why a belt should not stand as long as in any other part of the mill. Still we find many mills of this kind with a pulley of from eighteen to twenty inches in diameter and frequently not over from twelve to fourteen inch face and a belt of that width is compelled to drive it. By the same rule it will be found that a fourteen inch belt upon a twenty-inch pulley at 600 revolutions per minute will not give more than about fifty-five horse-power, while the same belt upon one of eighteen inches in diameter will only transmit thirty-six, and all the power required beyond that amount is only obtained by overstraining the belt, which soon destroys it and the only remedy for the difficulty complained of is to use larger pulleys and wider belts and leave the binders out of the question.

STRENGTHENING OLD BELTING.

BY means of an ingeniously arranged apparatus the strength of old belting is now renewed or augmented to such a degree as greatly to lengthen its service. To accomplish this, two large, hollow copper cylinders are provided, and into these steam is admitted, so that they are always heated. In a tank is a solution composed of beeswax, borax, glue, starch and molasses, prepared in equal quantities, the solution being in liquid form; and there are guide rollers, through which runs the leather belting, which is in process of treatment. The belt to be operated upon is started into the machine at a point where it can enter the tank, and while passing through the latter the leather receives an application of the solution; the press rollers immediately squeeze the compound into the fibre of the leather, and then the heat from the cylinders, over which the belt is being drawn, dries the compound. All the rollers and cylinders rest in the bearings. As repre. sented, the application of this compound to the belt, and immediately drying, is to add strength to the fibre of the leather in a remarkable degree.

MECHANICAL ARTICULATION.

TO make a sound by steam power loud enough to be heard ten or fifteen miles for signal purposes, as in the case of the steam siren, a 10-horse power boiler is used that must be red for all it is worth, for it takes steam to furnish lung power for a device of this kind, says the Boston Journal of Commerce. The steam is allowed to rush direct into the open air from a valve in the horn that opens and shuts 250 times in a second to give a pitch that will correspond with the human voice. The trouble with sound like this is that it is too regular, with all the pulsations just alike and calls for interruptions similar to those found in telegraphy to give signals. What is wanted is to rig up some way to have perfect control of every pulsation on the opening and closing of the valve for every discharge of steam, that the horn may work more like the telephone; in fact, make the steam siren speak for itself by working on the phonographic principle. A single word is composed of no more vibrations than there are pulsations made by the steam horn during the time it takes to pronounce it. This number could be spaced off on the rim of a large wheel as though intended for teeth to a gear, and a tooth cut for every space that will open and close the valve on its own hook independently of all the others; then when the wheel is given a single revolution each tooth will act on the lever of the steam valve in their regular order and produce the word they have been shaped out for. With a set of no more than twelve wheels quite a conversation could be kept up by simply changing the lever opening from one to another, as the case may require, but who will attempt to shape the first valve wheel? Already a sectional view of a phonographic cylinder has been made that will show the styles perfectly, and has been magnified and photographed till the vibrations for a single word can all be traced on a 12-foot circle. This ought to be large enough for any mechanic to be able to reproduce on a wheel 2 feet in diameter with a one-eighth milling cutter quite closely on the pantographic principle, and given the siren a distinct articulation. The first time it may sound a little hoarse, but might improve in this respect as the surface of the valve wheel wore smooth.

DESIGNING vs. MAKING.

IT is very easy to tell by a quick, searching glance whether a piece of machinery has been "designed" or only "made," in other words, whether the plans have been carefully studied and weighed for convenience and cheapness of manufacture, or whether they have been neglected and the machine built piecemeal, making the latter parts fit the first ones. This is too often the case with some machinery, and we find to our sorrow when we come to repair or replace some part, that what should be a minor repair necessitates taking down the whole machine to get at the piece to be replaced.

This counts against a machine when the repair bills are charged to it as should be the case in a well organized shop, and probably prevents another order for this machine being placed when another is wanted. It will pay to look your machine over and see if there is not some part which comes under this head and that can be improved, and these little improvements in get-at-able-ness all count in a machine's favor with the men who have them in charge.

PUBLICATIONS.

The "Progress of the World" of the Review of Reviews is not confined merely to a review and discussion of current events. In this department of the March number, for instance, appears a report upon the geographical and scientific explorations that have recently been completed, or are now being carried on, accompanied by maps and portraits of the explorers.

WINNIPEG AS A LUMBER CITY.

THE following story of a lumber boom for Winnipeg comes to us by way of our esteemed cotemporary, the Mississippi Valley Lumberman. A correspondent writing to that journal from Winnipeg says :

The most important enterprise affecting the lumber trade of this portion of Canada for many a long day—in fact since the trade came into existence—is now under consideration. The plan, if carried out, will completely revolutionize the entire lumber trade of this section. The scheme involves the construction of 100 miles of railway and the changing of the base of the lumber industry from the Lake of the Woods to the Red river. This is not a visionary enterprise, planned by speculators, boomsters or schemers. It is a well-considered plan, presented in a practical and feasible form and engineered by business men of the first magnitude in the industry.

Some two or three years ago a railway charter was secured for a road which was to be known as the Manitoba Southeastern, to run from Winnipeg in a southeasterly direction. A few miles of the road were graded, but nothing has since been done and the thing was regarded as simply one of those numerous railway schemes which were brought into existence for charter managing purposes. The existence of the charter had almost been forgotten until recently, when the Manitoba Southeastern has come to the front in a new role. The leading lumbermen of the Lake of the Woods district have become alarmed at the prospect of free trade in lumber, and they have been considering means of cheapening the cost of manufacture and reducing the cost of placing their product throughout the country. Practically the entire lumbering interest is centered at and about the town of Rat Portage, on the Lake of the Woods. The reason why it is so centered is that this is the only point on the lake reached by railway—the Canadian Pacific—and the pine timber country is tributary to the lake. The distance from the mills to Winnipeg is 150 miles and the trade of the mills begins at Winnipeg and extends westward. The mills, it will be seen, are thus located a long distance from their market, and with no railway competition very high railway rates and other disadvantages. They feel that they would not be able to compete with Minnesota manufacturers in case of free trade being established. The lumbermen have been pondering over this situation and they have evolved a plan which they believe opens a way out of all their disadvantages. They propose to build a railroad of their own from Winnipeg to the Lake of the Woods, establish their mills on the Red river, right in the centre of their trade, and bring the logs here to saw.

To carry out this programme they have secured control of the Manitoba Southeastern Railway, and propose working under this charter. This charter carries with it a bonus of 6,400 acres of land per mile of road, so that it is worth something more than the paper it is printed on. They can reach the lake in a southeasterly direction from Winnipeg within about 100 miles, thus shortening the distance over one-third as compared with the present Canadian Pacific line. By that road the logs would be hauled across and dumped into the Red river and sawed by mills to be erected or moved here from their present location at the lake.

The plan appears to be all perfected but the financing, and it is in the financing that it has been made public. The promotion of the enterprise is in the hands of Messrs. Cameron, Graham and Ross, all representative lumbermen. These gentlemen are negotiating with the Provincial Government for financial aid, in the form of a guarantee of interest, at 5 per cent. upon the lands of the company for 12 years to the amount of $11,000 per mile. They do not ask this as a direct bonus from the province, but simply as a guarantee to assist them in floating the bonds. The province would of course be responsible for the payment of the interest in case the company defaulted, but the promoters offer to put up their land grant as security, so that they give ample security for the full amount of risk taken by the government. The company also offer to guarantee a maximum freight rate, amounting to 8 cents per 100 pounds on lumber, cordwood 3 cents, and poles, posts, piles, etc., 4½ cents, and $3 per thousand feet on logs. These are about half the present rates from the mills to Winnipeg. They propose getting to work at once, so that the mills would be established in Winnipeg by the early summer of 1895. The promoters claim that they will be able to manufacture the lumber in Winnipeg at about the same cost as they are now under at Rat Portage, and that the present freight rate would be entirely saved. The retail price of lumber, they claim, would be reduced in Winnipeg from $4 to $7 per thousand. The mills have no local demand for refuse where they are now situated, and this has to be burned to get it out of the way, while in Winnipeg the sale of the refuse would almost pay the cost of yarding. In Winnipeg, where fuel is dear, good prices could be obtained for slabs, etc. If they can carry out their scheme the promoters say that they will be able to sell lumber in Dakota and northeastern Minnesota, instead of fearing competition from that quarter.

The proposed road would open up a fine agricultural prairie country, now without railway communication, for some distance east of Winnipeg, after which it would enter the pine country and continue on to the lake. It is also believed that the road would become a link in another through road to Lake Superior, which is so badly needed to give competition in export grain rates. There is a road now building eastward from Port Arthur, on Lake Superior, to the Rainy river district, and a little extension would join the two lines. It would be a great thing for Winnipeg, making it a lumbering city of considerable magnitude. The scheme has been received with great favor by the people here, as it is now felt that the cost of lumber is too great, and in fact an agitation is at present on foot to secure lower freight rates. The government is therefore being strongly pressed to grant the financial aid asked.

BLACK WALNUT FARMING.

BLACK walnut, like many other particular classes of wood, is fast becoming scarce. Mr. James Nichols, a large shipper of Virginia, who was interviewed the other day by a newspaper reporter has furnished some interesting information concerning this wood.

"Black walnut is worth twice as much nowadays," said Mr. Nichols, "as it was ten years ago. The supply is practically exhausted. Ten years ago there was a big quantity in sight in Southern Indiana—great trees eighty feet high to the first limb, and from three to five feet in diameter. But all that is gone, and Missouri has the only supply of any considerable amount, and that is melting away fast. These logs of mine (referring to a shipment of twelve carloads) come from the woodlands on top of the Katoct range. They are none of them what would be called first-class. A few years ago nobody would think of buying them. That, indeed, is why they are in my hands to-day. Thousands of just such logs have been cut and used for firewood by Virginia farmers, and every little while I hear nowadays of some old backwoods mossback who has burned up a $50 log in his $2 cook stove. That is a thing to make you swear, but those old fellows can't read or write, and see few outsiders, so they do just as they did fifty years ago.

"I found the other day a black walnut plank four feet wide nailed up in a Virginia barn, where it had been for twenty years waiting until its owner could get the three or four dollars necessary to pay for getting it made up into a good kitchen table. That plank, just as it stood, was worth money enough to buy the old man four good cherry tables. I tell you, it is hard to find four-foot black walnut logs in my neighborhood now. Six years ago I was travelling in the south-western part of West Virginia, where I saw some very fine timber land. I asked the people I met what land was worth around there.

"'Oh,' they said, 'if you go back aways it can be had for 50 cents an acre.'

"I was through that way last summer, and that same land, which I unluckily did not buy, was stripped of its heavy timber, and they were grubbing out numerous black walnut stumps, which they told me were worth anywhere from $50 to $100 for the splendid sound burl veneering to be cut from them.

"These little logs that we ship from the Katoctina will seldom square over fourteen inches, but they are sound and make a good quality of lumber. I pay about 12 cents a square foot in the log, owner grubbing the tree out by the roots according to my directions. If a tree will cut into a log fourteen feet long it does well. The farmers are glad to get rid of them, for the black walnut is not much of a shade tree. Nothing will grow under it on account of the peculiar acid-like quality of the tree, and there is hardly a tree that grows that sends its limbs and roots further laterally, so that it despoils a good deal of land. If a farmer can by expending $5 worth take out a tree that will bring him $12 to $15, and leave him soil enough to bring in $6 or $8 hereafter in crops, why, he is making a good thing of it. I get on an average $160 per 1,000 feet for the black walnut I take to market. There is a good margin between buying and selling, but the quantity to be had is so limited that it is not a safe or very profitable business to be engaged in. It would not pay me, or any one, to put my whole time into it.

"And let me tell you this : If you want to leave your children and grand-children a fortune, buy some worthless mountain land and plant black walnuts. You can get thousands of acres in some parts of Virginia and West Virginia, and the walnuts are to be had in almost endless quantity every fall anywhere within forty or fifty miles of Washington. The tree really grows rapidly, notwithstanding its strong acid character and peculiarly dark, firm grain. If you chose to cut a tree fifteen years old you could make money planting them for that length of time. It is a good crop to try."

TRICK OF A SAFETY VALVE.

AN engineer recently observed his steam gauge indicating a higher pressure than his safety valve spring was set for. He slackened the spring, but the gauge kept rising and the steam did not blow off. He slackened the spring further, still the steam did not blow. When the pressure rose to 200 pounds he became alarmed; and as he could not start the engine he started the injector and opened the water blow-off cock. The damper being closed, this had the effect to prevent further increase of pressure. On examining the safety valve it appeared that the brass seat of the valve was a bushing put into an iron casting, that it had become loose and that the steam had pressed it up against the valve. As the valve rose the seat followed it, and there could not have been a release of steam until the bushing was pushed out of its hole. Some serious accidents have occurred from this cause. It is not good engineering to so construct safety valves that it is possible for the valve-seat to become detached.

NOT ALWAYS THE CASE.

PERIODICALLY there floats through the technical press, says Power, an item to the effect that one-sixteenth of an inch of scale has been determined by accurate experiment to require 15 per cent. more fuel ; three-sixteenths, 23 per cent. While this may be strictly true for the boiler experimented upon, it can not, in the nature of things, be of universal application nor an index of the loss which may be expected upon another boiler from a given thickness of scale. A boiler with a meager amount of heating surface would suffer seriously from an impairment of the efficiency of that surface by scale, while a boiler with ample surface would suffer comparatively little. The item evidently started from a formula based by Nystrom upon the alleged fact that saturated scale has about one-thirtieth the conductivity of iron plate, and giving the diminishing values quoted as the amounts of heat transmitted through a given amount of heating surface.

HOW TO DO IT.

TO maintain perfect regulation, place the engine in the hands of a competent engineer, who is capable of adjusting and keeping the engine in good running order. A good engine, or piece of machinery, placed in the hands of an incompetent person, will never give good service or economical results.

A MADAGASCAR FOREST.

HOW powerless one feels when one attempts to describe the wonderfully varied and almost endless forms of vegetable life that pass their days in the great eastern front of Madagascar! I have heard the forests spoken of as monotonous. Nothing could be further from the truth. An English wood, consisting entirely of oak or fir trees, might be called monotonous, but the term can surely not be applied to a forest in which you rarely meet with two adjoining trees or shrubs of the same species. If one thinks merely of tree trunks and green leaves in the abstract, then perhaps it may be called monotonous, but even in this monotony there is infinite variety. Why, no two leaves are alike, they are of all possible shapes, sizes, and tints; and as for the tree trunks, they all differ from one another in girth, and in the guests which partake of their hospitality. Of ferns that live on the trunks of trees I know at least fifty different species, and even this, of course, does not exhaust the list. Of orchids there are probably a greater number even than ferns. Very frequently there may be seen a shrub growing out of a tree trunk, which seems to form part and parcel of the tree itself; but when its leaves are examined they are found to be quite different from those of its host. It is a Loranthus of which there are about a dozen species, or a Viscum, of which there are probably more. It is a veritable parasite, having pushed its roots right into the tree for the purpose of sucking its jucies, and thus flourishes at the expense of its neighbor. A species of lichen, the "Old Man Beard," hangs very abundantly from many of the trees. Other lichens, too, of various hues; fungi, and delicate ltttle mosses, the life of each one of which would be an interesting study in itself, also play a prominent part in this heterogeneous community.

NATURAL WOODS IN CARRIAGE BUILDING.

THE popularity of the natural wood finish, says The Hub, suggests the propriety of a departure from oak and ash in bodies, as has been the rule for several years past. There are many other rich woods which could be used to an advantage, and thus relieve the monotony, now so marked, due to the general use of light woods. Among the woods that might be used to advantage are beech and maple, for light colors. The beech has a particularly rich grain when quarter sawed; it is dense and durable, and not necessarily expensive. Maple, both hard and soft, has a rich grain; it surfaces well, is free from the absorbent qualities of ash, and can be procured in abundance.

There are dark woods which possess richly mottled grainings, and which are all that can be desired for carriage panels. These are butternut, black walnut, redwood and mahogany. Butternut has a rich light brown color, mottled by light and dark stripes, is easily worked, has good surfacing qualities, fills readily and brightens richly when varnished. Black walnut is too well known to require special mention, and now that it has ceased to be popular among cabinetmakers, the price puts it within the reach of manufacturers. Redwood is a wonderfully rich wood, and shows a delightful variety of surfaces and shades. It is one of the most durable woods that grow, and as it darkens by age, it grows richer as it grows older. Mahogany is the great leader among red woods. It can be used to an advantage, although no richer nor better than redwood.

The use of brown and red woods would greatly relieve the monotony, and tend to further popularize natural wood finish.

KEEP YOUR MILL CLEAN.

THERE is no good reason why a saw mill should not be kept in a reasonably tidy condition as well as other manufacturing establishments, says the Lumberman's Review. What is known as mill refuse is no longer a source of serious trouble to the practical mill man. If you have not already done so, provide a large grate surface under your boiler, feed it with refuse direct from the saws or planers, by modern and expensive appliances, and thus remove an eye sore from your mill yard, increase your heat and power, reduce operating expenses, keep your mill approaches neat and clean, in fact, kill a half dozen birds with one stone. If you can't use up all your mill refuse, buy a refuse burner and make a clean job of it.

THE MAGNOLIA METAL COMPANY'S ENORMOUS SALES.

The business of the Magnolia Metal Co., in its sales of magnolia metal has increased 12% from January, 1893, to January, 1894, over the sales of the previous year, notwithstanding one of the greatest panics that the world has ever seen, passed over the country during that time. The factory of this company has never closed down for one day on account of the panic, and a part of the time it had to run all night in order to keep up to the company's orders for magnolia metal. The outlook for the coming year of 1894 is very bright, and the Magnolia Metal Company anticipates an increase of at least 50% over the year 1893.

J. F. EBY HUGH BLAIN

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Having made a specialty for years of supplying **Lumber** and **Mining Camps** with Groceries, Flour, Feed and Smoked, Dried and Green Meats, etc., we solicit inquiries from you for your various camps.

SPECIAL:—
Write us for Catalogue and quotations.
Send us your address and we will quote the market from time to time.

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WHOLESALE GROCERS - TORONTO, ONT.

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Duplex
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Steam
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Pumps

If you require a pump for any duty, of the latest and most improved pattern, and at close prices,

WRITE US

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AUTHORIZED CAPITAL, $500,000 SUBSCRIBED CAPITAL, $200,000

FULL GOVERNMENT DEPOSIT.

When were your Boilers last inspected by a competent engineer
Do you know what pressure your Boilers can safely stand
Is your Steam Gauge registering the correct pressure
Are your Water Gauges free and in good working order
Is your Safety Valve working properly

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DO not trust to luck; the unexpeeted generally happens. Avoid the calamity of an explosion. Protect life and property by taking out one of our Inspection and Insurance Policies.

REAMER LUMBER CO. LTD.

WHOLESALE DEALERS IN

WHITE PINE

AND

HARDWOODS

41 Park Row New York

Representative Lumber Manufacturers and Dealers

TOWN	Railway, Express, or nearest Shipping Point	NAME	BUSINESS	Power, Style and Daily Capacity
Ottawa, Ont	Ottawa	**Booth, J. R.**	Lumber, Wholesale and Retail	Steam, Circular and Band Mill
Ottawa, Ont	Ottawa	**Bronson & Weston Lumber Co.**	2 Sawmills, White and Red Pine, Wholesale	Water, Gang and Band, 450m
Ottawa, Ont	Ottawa	**OTTAWA LUMBER CO.**	Lumber, Pine, Spruce, Hemlock, Wholesale	
Parry Sound, Ont	Utterson	**Conger Lumber Co.**	Lumber, Wholesale and Retail	
Parry Sound, Ont	Parry Sound	**Parry Sound Lumber Co.**	Saw, Shingle and Lath Mills, Pine, Wholesale	Water, Gang, Circular, Saw 90m, Shingles 70m, Lath 30m
Muskoka Mills, Ont	Midland	**Muskoka Mill and Lumber Co.**, Head Office, Arcade, 24 King st. w., Toronto	W. Pine Lumber, Lath and Bill Stuff, all lengths.	2 Mills, Water, 1 Band, 2 Gangs and 3 Circulars.
Alexandria, Ont	Alexandria	**McPherson, Schell & Co.**	Cheese Box Factory, Pine, Spruce, Cedar	
Almonte, Ont	Almonte	**Caldwell, A. & Son**	Sawmill, Pine, Lumber, Hemlock, Hardwoods	Circular, 3m
Barrie, Ont	Barrie	**Dymont & Mickle**	Sawmill, Pine, Spruce, Cedar, Hardwoods	Steam, Circular, 40m
Barrow Bay, Ont	Wiarton	**Barrow Bay Lumber Co., Limited**	Saw, Shingle and Heading Mill, Pine, Cedar Oak, Oak Railway Ties, Paving Blocks	Steam, Circular, 16m
Blind River, Ont	Blind River	**Blind River Lumber Co.**	2 Saw, Sh. and Lath Mls., Pine, Hem., Bl. Birch	Stm., Band, Cir., S. 75m, Sh. 60m
Bobcaygeon, Ont	Fenelon Falls	**Boyd, Mossom & Co.**	Lumber, Wholesale and Retail	
Barrie, Ont	Barrie	**Burton Bros.**	Lumber, Wholesale and Retail	
Waubaushene, Ont	Waubaushene	**Georgian Bay Consolid. Lumber Co.** Hd. office arcade 24 King st. w., Toronto	Pine only.	Waubaushene mill, stm., 200m; Pt. Severn mill, water, 120m
Calabogie, Ont	Calabogie	**Carswell, Thistle & McKay**	Lumber, Wholesale and Retail	
Callander, Ont	Callander, G.T.R.	**John B. Smith & Sons** Head Office, Strachan Ave., Toronto	White and Red Pine Lumber, Bill Stuff, Lath and Shingles	Steam, 2 Circular, 80m
Collins Inlet, Ont	Collins Inlet	**Collins Inlet Lumber Co.**	Lumber, Pine, Oak, Ash, Birch, Whol. and Ret.	
Glammis, Ont	Pinkerton	**McIntyre, N. & A.**	Saw, Shingle and Lath Mill, Timber Lands, Hemlock, Pine, Lumber, Hardwoods	Steam, Cir., Saw 14m, Sh. 20m
Hamilton, Ont	Hamilton	**BRADLEY, MORRIS & REID CO.**	Lum., Tim., Pine, Hem., Hwds., Whol. and Ret.	
Huntsville, Ont	Huntsville	**Heath, Tait and Turnbull**	Sawmill, Pine, Spruce, Hemlock, Hardwoods	Steam, Circular, 25m
Hamilton, Ont	Huntsville and Katrine	**Thomson, Robert & Co.**	Sawmill, Pine, Spruce, Hardwoods	Steam, Circular, 4m
Keewatin, Ont	Keewatin	**Dick, Banning & Co.**	Sawmill, Pine, Hardwoods, Wholesale	Steam, Circular
Keewatin, Ont	Keewatin	**Keewatin Lumber & Mfg. Co.**	Saw, Lath, Sh. and Pl. Mill, Moving Posts, Pine	Water, Band and Circular, 100m
Lakefield, Ont	Lakefield	**Lakefield Lumber Mfg. Co.**	Lumber, Wholesale and Retail	
Little Current, Ont	Sudbury	**Howry, J. W. & Sons.**	Lumber, Wholesale and Retail	
London, Ont	London	**Gordon, James**	Exp. and dlr. in Am. Hwds, made to specification	
Longford Mills, Ont	Longford	**Longford Lumber Co.**	Saw and Plan. Mill, Tim. Lands and Logs, Pine	Steam, Band and Circular, 100m
Norman, Ont	Norman	**Minnesota & Ontario Lumber Co.**	Lumber, Wholesale and Retail	
Louise, Ont	Elmwood, G.T.R.	**S. B. Wilson & Son**	Hardwoods, Shingles, Lath, Handles	Steam, Circular, 20m.
Toronto, Ont	Warren, C.P.R	**The Imperial Lumber Co., Limited.**	Pine	80 M. per day, Stm., 2 Cir. Saws
Toronto, Ont	Cache Bay, Ont.	**Davidson, Hay & Co.**	W. Pine, Lath, Shingles, Dim. Timber, Car Sills	Stm, 2 Band, Cir. & Gang, 140m
Toronto, Ont., Mill: Stony Lake	Lakefield	**S. J. Wilson & Co.**	Pine and Hardwood, Wholesale	Steam, Circular, 15m.
Toronto, Ont	Toronto	**F. N. Tennant**	Lumber, Wholesale	
Toronto, Ont	Toronto	**Donogh & Oliver**	Lumber, Wholesale	Com.
Toronto, Ont	Toronto	**Victoria Harbor Lumber Co.**	3 Saw, Shingle and Lath Mills, White Pine, Whol.	Stm., Cir., Gang and Band, 140m
Toronto, Ont	Toronto	**W. N. McEachren & Co**	Lumber, Wholesale	Com.
Toronto, Ont	Toronto	**James Tennant & Co.**	Lumber, Lath, Shingles, etc., Wholesale	Com.
Toronto	Toronto	**DeLaplante & Bowden**	Pine and Hardwood Lumber, Whol. and Retail.	
Toronto, Ont	Toronto	**James McBain Reid.**	Ry. and Ship Timber, any required dimensions	
Wiarton, Ont	Wiarton	**Miller, B. B.**	3 Sawmills, Lumber, Barrel Heads	Stm., Wr., Cir., Port. & Sta., 10m
Montreal, Que	Montreal	**Dufresse, O. Jr. & Frere**	Sawmill, Pine, Spruce, Hemlock, Hdwds., Whol.	Steam, Circular and Band, 50m
Montreal, Que	Montreal	**SHEARER & BROWN**	4 Sawmills, Oak, Ash, Elm, Pine, Hem., Dim.	2 Stm., 2 Wat., Band, Cir., 40m
Moodyville, B.C.	New Westminster	**MOODYVILLE SAWMILL CO.**	Sawmills, P. Fin, Spruce, Cedar, Hardwoods	Steam, Circular, 20m
New Westminster, B.C.	New Westminster	**Brunette Sawmill Co.**	Saw and Planing Mills, Sash, Doors and Blinds. Fir, Cedar, Spruce, Hardwoods	Steam, Gang and Circular
Canterbury, N.B.	Canterbury Stn.	**James Morrison & Son**	Sawmill. Pine, Hardwoods	Steam, Circular, 38m
Bridgewater, N.S.	Bridgewater	**DAVIDSON, E. D. & SONS**	5 Saw, Shgle. and Lath Mills, Pine, Spr., Hwds.	Water, Circular and Gang, 200m
South River, Ont	South River, G.T.R.	**South River Lumber Co., Ltd.**	Pine, Spruce, Birch, Hemlock, Shingles	Stm., Cir., 40m, Shingles, 35m, Lath, 15m

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The Montreal Car Wheel Co.

.... MANUFACTURERS OF ....

Charcoal Iron Chilled

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OFFICES:

NEW YORK LIFE INSURANCE BUILDING, MONTREAL

WORKS: LACHINE, QUEBEC

We make a specialty of Wheels suitable for the requirements of Lumbermen and Street Car Service, and can supply them Bored, Finished and Balanced.

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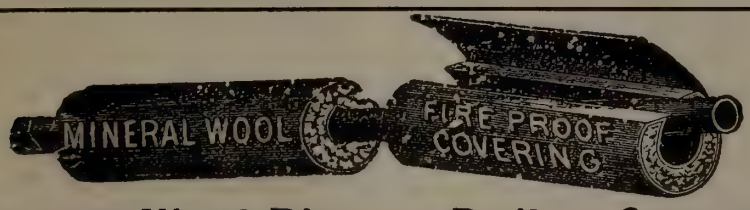

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If you want to save fuel . . . . .
" " " dry steam at long distance . .
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USE MINERAL WOOL SECTIONAL COVERING

THE best non-conductor is the cheapest covering. Mineral Wool heads the list as a fire-proof non-conductor. Hard pressed coverings are poor non-conductors, and are therefore the most expensive in the end.

A good pipe covering is one of your best investments. It is false economy to have uncovered pipes, as you are just paying the coal man what the covering man should have, and only ashes to shew for it. Give the matter your consideration, it means money to you.

We also carry full lines of Asbestos Goods, and Mineral Wool for fireproofing, deadening of sound, insulation, etc., etc. Send for Pamphlet.

CANADIAN MINERAL WOOL CO. LTD., - 126 BAY ST., TORONTO

Best Box Metal
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Stands any Gait,
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COPPERINE

Four Grades
do all your work
with economy

NO HOT BOXES

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from the largest machinery manufacturers, owners and users in the country

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Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 27th of each month to insure insertion in the following issue.

PARTIES HAVING BLACK ASH LUMBER and Cedar Fence Posts for sale send us particulars. ROBERT THOMSON & Co., 103 Bay St., Toronto.

WE WANT ALL KINDS OF HARDWOODS. Will pay cash. ROBERT THOMSON & CO., 103 Bay Street, Toronto.

FOR HEMLOCK, DIMENSION LUMBER, hardwood flooring, cedar shingles, piles, sawdust, etc., write J. E. MURPHY, lumberman, Hepworth station, Ont.

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BASSWOOD LUMBER, BY CAR OR CARGO. Offers invited. Address "Baswood," care of CANADA LUMBERMAN.

LUMBER AND SHINGLE MILL FOR sale in the Village of Dundalk; this is good new 50-horse power mill; will run lumber and shingles at same time; plenty of stock can be bought in the locality for four or five years at a reasonable rate. Apply to JOHN IRWIN, Brampton, Ont.

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AS BAND SAW FILER, NINE YEARS' EXperience; also thoroughly practical on Rotarys. Steady and temperate; good references. Best offer in December for next season and earliest to work, gets me.—H, HOWE, South Boardman, Mich.

SAW MILL CAPACITY 15,000 FEET

BEST WATER AND RAILWAY FACILITIES for shipping. Hard and soft wood limits in connection. Will be sold cheap. Address "W," CANADA LUMBERMAN.

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THE ADVERTISER CAN SECURE BIG prices for black ash, basswood, elm and maple in New York and surrounding markets, best of references given. Send lists of stock on hand. No shipment on consignment. Bona fide orders sent you before shipment.

Address "Commissions," care of CANADA LUMBERMAN.

FOR SALE

PORT ROWAN SASH AND DOOR FACTORY and Sawmill and Shingle Mills. The Factory is fitted with new 60-h.p. steel boiler, also with following new machinery by Macgregor and Gourlay, of Galt.

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About three miles of 25 lb. T-Rail; 12 Logging Cars complete, and a Shay Locomotive

IN GOOD CONDITION, FOR SALE ON ADvantageous terms.

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NEW AND SECOND-HAND STEEL AND iron rails for tramways and logging lines, from 12 lbs. per yard and upwards; estimates given for complete outfit.

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THESE LOGS ARE THE FIRST CUT FROM new timber limits; choice quality; are cut principally 16 feet long, and average from 5 to 6 logs per 1,000 feet, and can be delivered in the Georgian Bay by the 1st of June, 1894.

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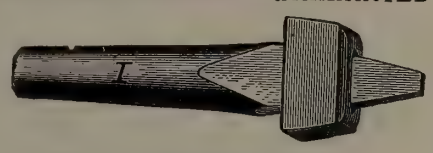
FOR CROSS-CUTS ONLY **WARRANTED**



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SIXTEEN REASONS,

AND HOW TO

AVOID THEM

Being instructions to filers on the care of large band saw blades used in the manufacture of lumber.

A book filled with valuable information on the care of band saws. Giving the reasons for breaking; analyzing each reason; giving instructions to dispense with the causes as laid down in each reason; and full details on filing and brazing. The proper styles of hammers to use are illustrated and described, and views of blades showing the blows of the different styles of hammers form an important part of the illustrations. Improper and unequal tension are then treated, and the manner of properly setting irregular teeth is described. In connection with the treatise is a history of the invention, manufacture and use of the saw from its origin to the present time. The work in whole makes an accumulation of information such as has never before been published.

The book is printed on fine paper, good clear type, and is handsomely and substantially bound in cloth. It will be sent to any address on receipt of the price, **ONE DOLLAR.**

Address— CANADA LUMBERMAN, Toronto, Ont.

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(CAMEL BRAND)

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HARD-MOUTHED HORSES

AND PULLERS CONTROLLED WITH ABSOLUTE EASE.

RUNAWAYS IMPOSSIBLE.

This statement is now repeated by thousands who have purchased

BRITT'S AUTOMATIC SAFETY BIT.

This Bit, by an automatic device, closes the horse's nostrils.

HE CANNOT BREATHE, AND MUST STOP.

SAFETY FROM RUNAWAYS ABSOLUTELY GUARANTEED WITH THIS BIT

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The only bit in the world that is endorsed, advocated, used and sold by the Society for the **Prevention of Cruelty to Animals,** ***The Highest Authority.***

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Lumbermen's Supplies a specialty.....

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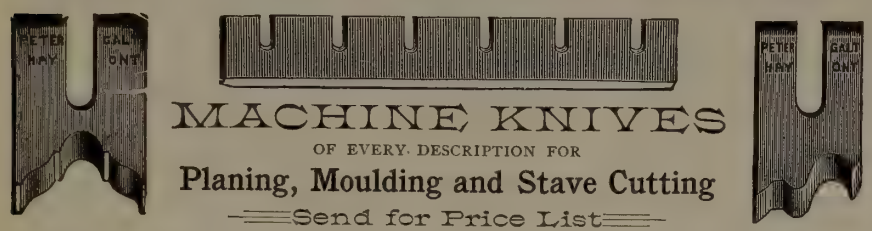

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Canoe, Yacht and Boat Sails made to order. Perfect Fits Guaranteed.

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(Locomotive, Valve Engine, Railway Coach and Car Oils)

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The Magnolia Metal Co., New York
(Endorsed by the United States and German Governments best Anti-friction Metal in Market)

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(American Lubricating Oils and Grease)

Oils shipped from any port on American side to suit customers.....

Before placing your Spring Order write for my prices.....

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F. N. TENNANT - LUMBER MERCHANT

No. 1, Toronto St., Toronto

F. E. DIXON & CO.

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Every Lumberman wants it — 35 cents buys it

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SAVES TIME SAVES MISTAKES SAVES MONEY

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Saw Millers and Lumber Dealers

All kinds of Building Material kept in stock

WE MAKE A ... SPECIALTY OF LONG BILL STUFF IN ROCK ELM, PINE, CEDAR AND HEMLOCK

Quotations furnished on application

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Is the Short Line to

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(Centres of the vast lumber interests of Michigan)

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AND

MILWAUKEE, WIS.

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The line thus formed is a short and direct route from

MONTREAL TORONTO

and all Canadian Territory

To ST. PAUL, DULUTH and Pacific Coast Points.

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ISSUES THEM ALL

One 20-year Survivorship Distribution Policy embraces all the newest features, and is the best form of Protection and Investment money can buy. It has no equal. Guaranteed values, attractive options and liberal conditions.

A WISE AND GENEROUS PLAN.

Our Annuity Endowment Policy ensures a certain annual income to yourself during 20 years after maturity of the Policy or to your family at earlier death; and the Annuity Life Policy guarantee a sure income to your family during 20 years after your death; first payment immediate. The rates are lower than on ordinary plans.

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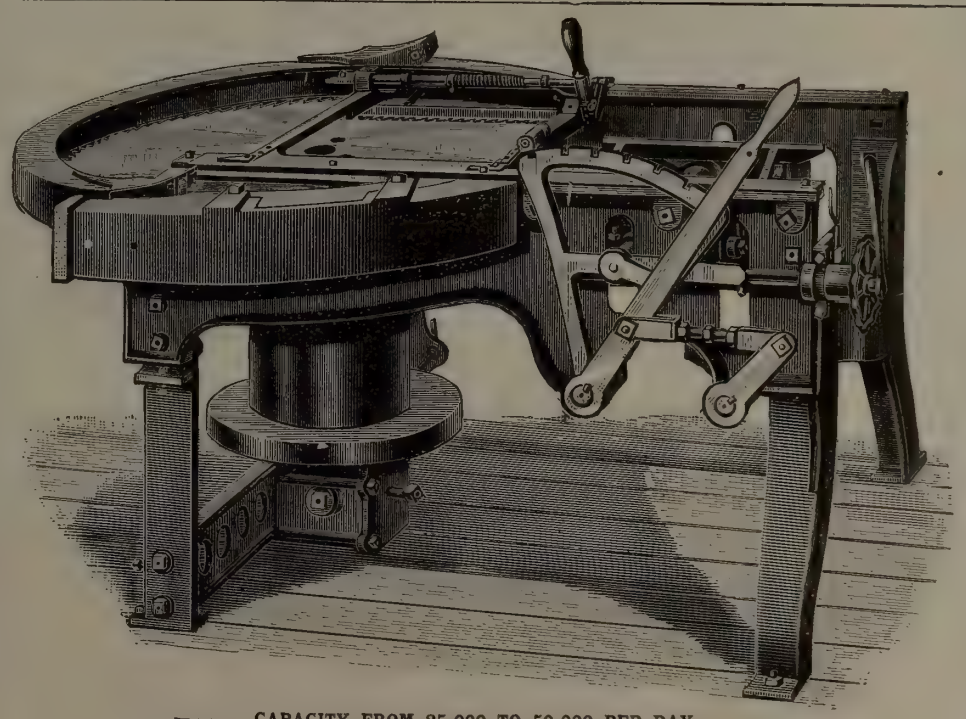

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MR. F. J. DRAKE, Belleville.

Dear Sir,—The shingle machine we bought of you over a year ago is doing well. Last year we averaged over 32,000 shingles per day all through the season. We did not lose 15 minutes' time from all stoppages, and all repairs so far have not cost 50c. We expect to make a still higher average cut this year.

All our other machinery purchased from you is as good as the shingle machine. Your drag saw, with friction drive, cannot be beaten. We run ours 180 strokes per minute; with 6½ ft. saw it would easily make blocks for two shingle machines. The splitter, with balance wheel 4 feet diameter, weighing 1,000 lbs., is perfect and runs without the least jar. The iron frame shingle jointer with 40-inch saw is the only good jointer we ever saw. In fact, all your machinery, line shaft, pulleys, etc., give us the best satisfaction.

We expect to require another mill in a few days, and, if we do, will send you the order for complete outfit.

Truly yours,

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P.S.—If any one wants to see a good working shingle mill send them to me.—M. D.

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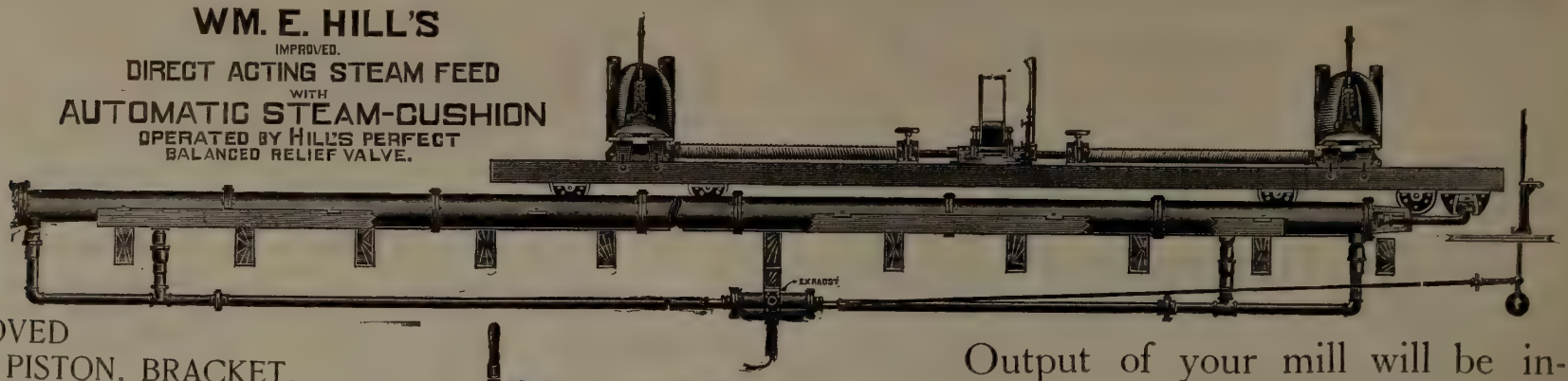

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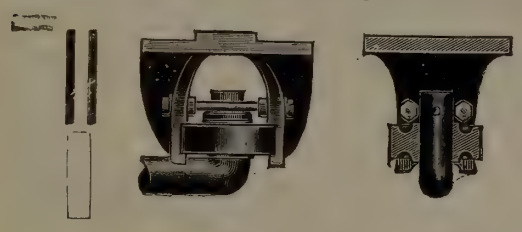

Output of your mill will be increased 10 to 25% by putting in this steam feed.

If your boiler capacity is sufficient now, it will not be necessary to increase it.

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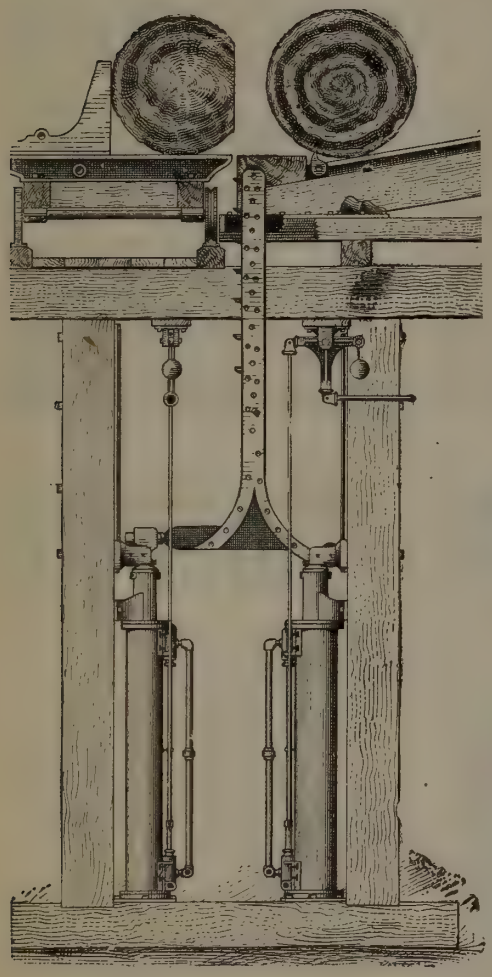

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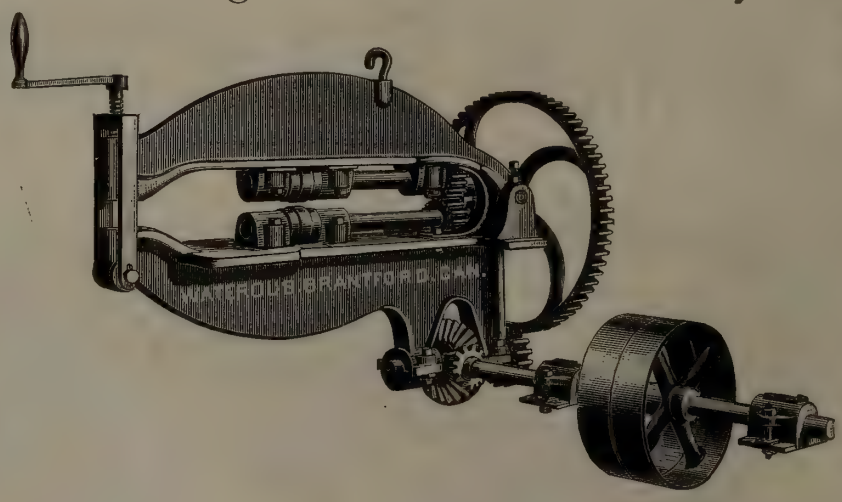
These are of equal importance to the Band Mill. Without the best saws and the best means of keeping them in order it is impossible to get the best results from the Band Mill.

IN BAND SAW TOOLS we build the largest and most improved line, having combined the best features of the leading American tools with many valuable improvements.



FOR INSTANCE

These horizontal stretching rolls open the saw, putting in the proper tension and doing away with a great deal of hammering that would be otherwise necessary. The work is done more evenly and quickly, requiring less skill from the operator.

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The Stationary latest improved Niggers are the simplest and best. They do away with the leaky universal steam joints, and are more easily set up and connected. Made under Hills patents, with all his latest improvements. Unless properly made, a steam Nigger is a positive disadvantage in loss of time and erratic action.

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We can supply you Saws made from the celebrated "Sandvik" steel, guaranteed in every particular and in perfect order to put on your wheels, at lowest possible prices. It will pay you to give us a trial order.

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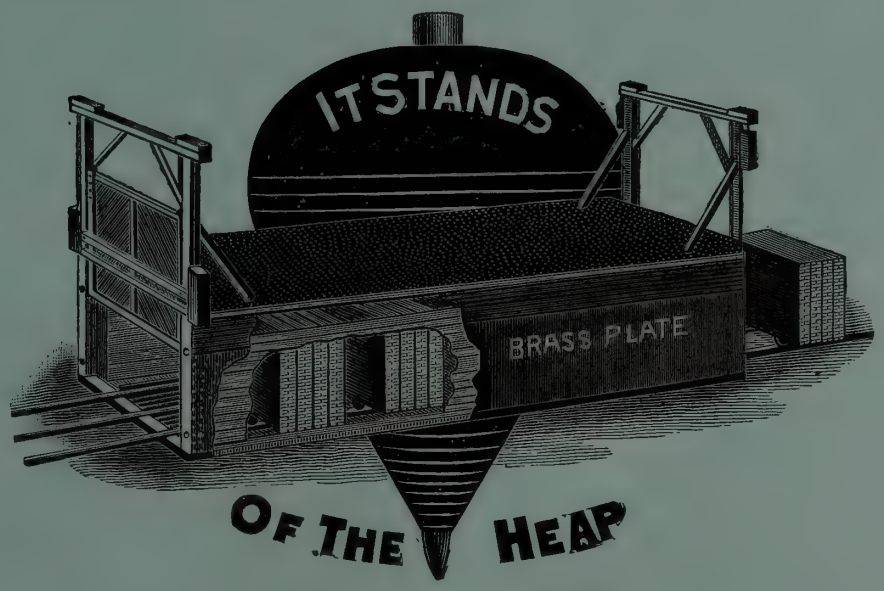

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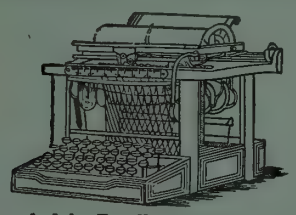

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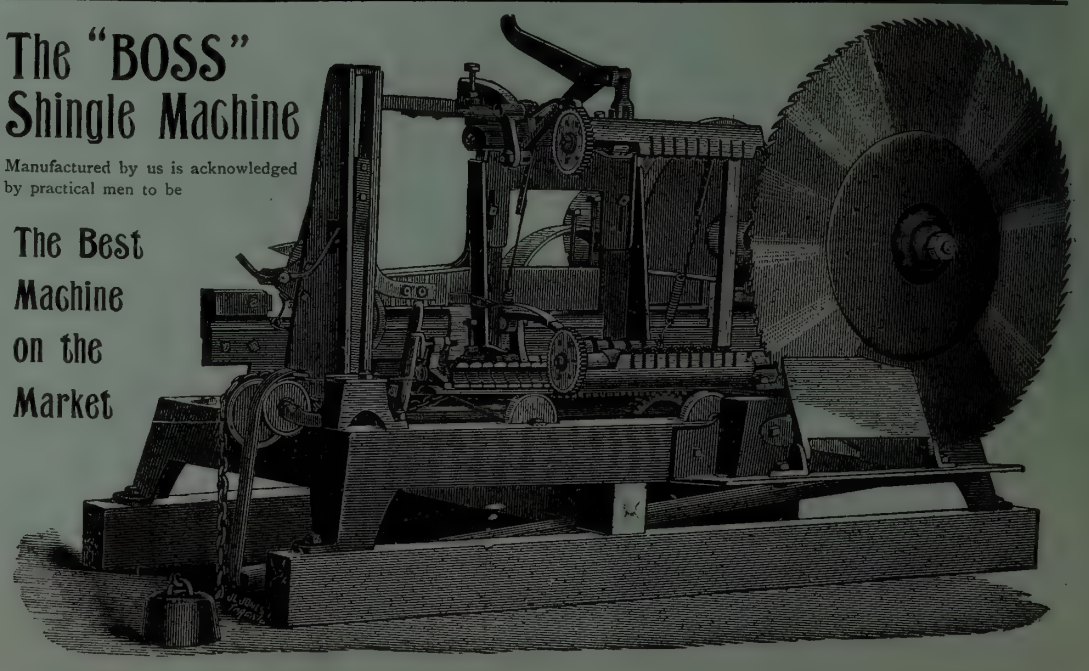

THE CANADA LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XV. NUMBER 4. | TORONTO, ONT., APRIL, 1894 | TERMS, 1.00 PER YEAR SINGLE COPIES, 10 CENTS

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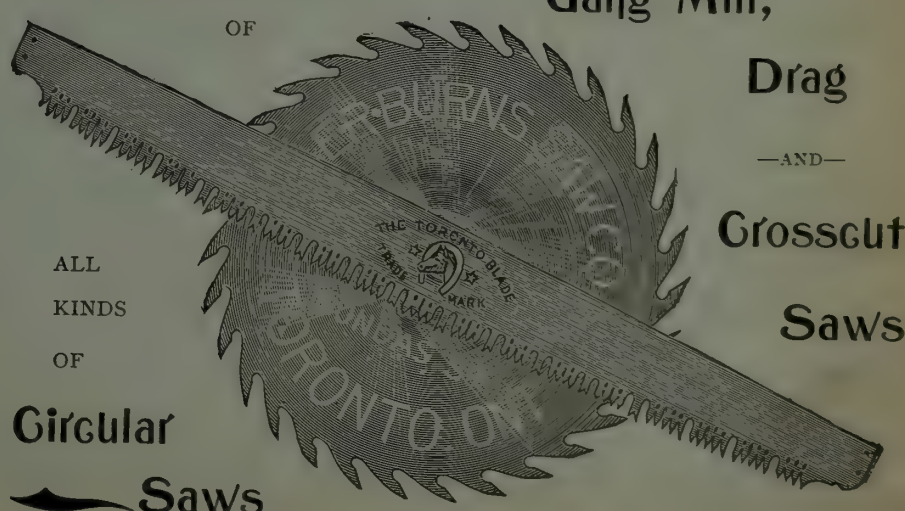

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4,047	feet	1-inch
85	"	1¼ "
11,723	"	1½ "
5,726	"	2 "
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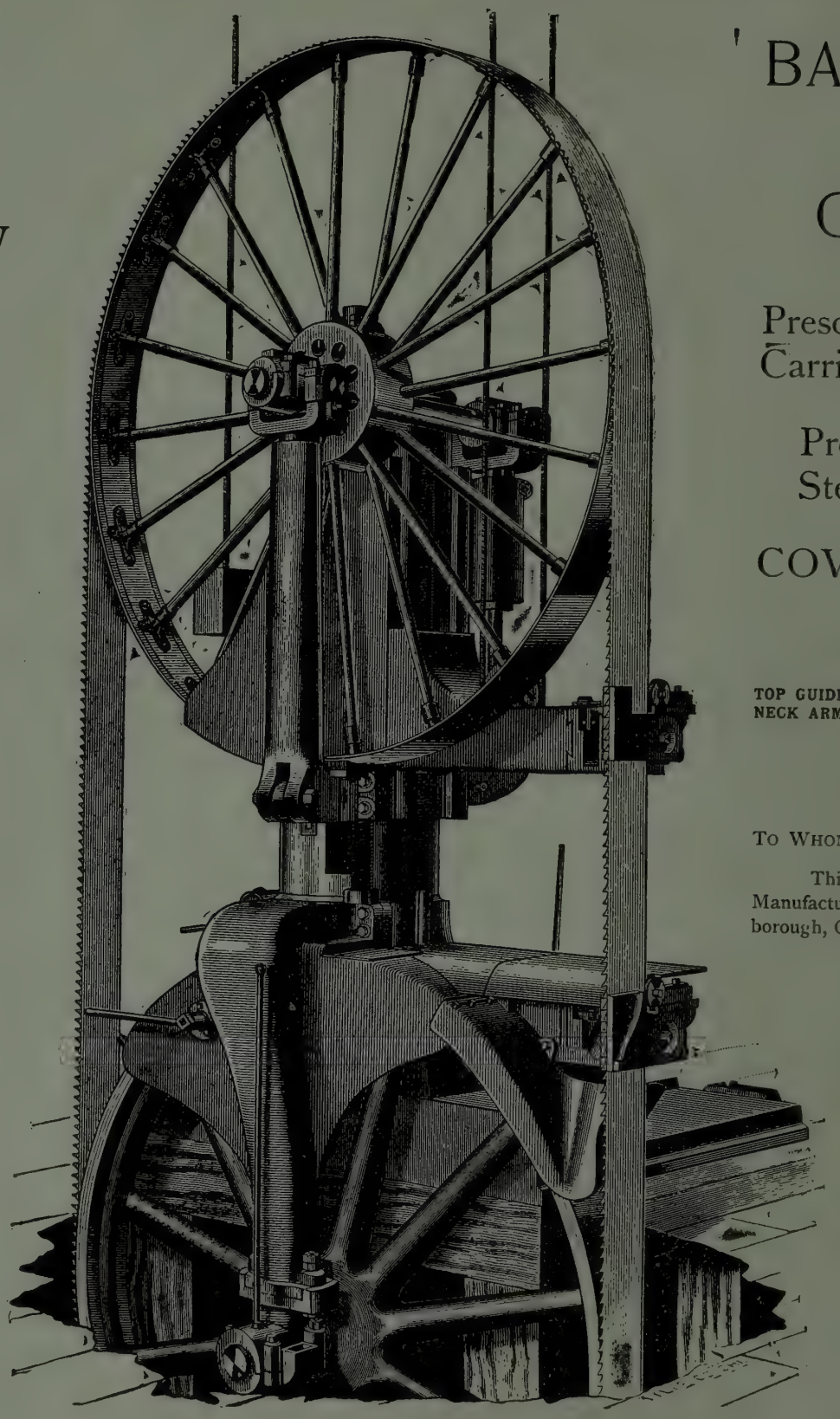
106,619	feet.	

Yours truly,
PERLEY & PATTEE



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(Signed)

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THE CANADA LUMBERMAN

VOLUME XV. NUMBER 4. } TORONTO, ONT., APRIL, 1894 { TERMS, 1.00 PER YEAR SINGLE COPIES, 10 CENTS

IN THE LUMBER WOODS.

THE current number of the Canadian Magazine, a journal that is making encouraging progress, and creditably represents the best thought of the Dominion, contains an interestingly written paper, with illustrations, on lumbering in Canada, written by Mr. E. C. Grant, the well-known manager of the Ottawa Lumber Company, of Ottawa, Ont. Mr. Grant writes, not alone with literary grace and skill, but is able from out of his long and practical experience to impart much valuable in formation concerning the actual work for cutting the standing timber, preparation of the drives, etc. We give here an abridgement of Mr. Grant's paper.

Prefacing the paper with a colloquid account of the engagement of a gang of logmakers for the winter's work, whose wages, it is said. will range from $15.00 to $60,00 per month, and the men having been started on their season's journey, Mr. Grant gives a faceitious description of the journey. There is the running of various rapids, the handling of the load, often coupled with tests of strength by the heartiest of the men, showing who can carry the largest load on his back. The camping over at night with an account of the improvised spread for supper is pleasantly told.

Destination reached the men quickly settle down to business. The foreman is the earliest riser in the shanty; he getting up to waken the cook, who prepares the breakfast, and gives the rest of the men a call about fifteen minutes before it is ready, which is more than ample time for the completion of a standard bush toilet. The cook really reigns supreme in his domain, and, as a rule, is quite a character, and should he be endowed with the proper qualifications, he will be a great favorite with the men and give them great amusement in their idle moments. If he is quick at repartee, he will be able to repel the jocular attacks on him which they all make from time to time. So much of his time is taken up attending to his cooking and baking that he is allowed an assistant, called a "chore boy," who cuts the wood, washes up the dishes, and makes himself generally useful.

The first men to start out are the logmakers, who generally go in gangs of about four each. Each four is in charge of a head log-maker, who, as a rule, is an old hand and able to judge the quality of a tree as it stands, and who notes a great many trees, which to an inexperienced person might appear sound, would upon being felled, be found to contain either bad shake, spunk, rot, or other defect, and not worth the labor spent in bringing them to earth. If square timber is to be made, as well as logs, then when the tree is felled the head logmaker will be able to tell at a glance how much of it will make a perfect square, and if satisfactory, a chalked line will be produced and fastened to each end of the tree, over the part to which the piece is to be squared. Then it is pulled up in the centre and suddenly let go, causing it to strike the log sharply and leave the mark of the chalk the entire length. The same thing is done on the other side of the upper surface; and two men, called liners, take their positions on the top of the log, and with their axes chip out the sides to within about a quarter of an inch of the chalked line. Then the hewer comes along with his broad-axe and finishes these sides, making an even surface plumb with the lines. The log-makers, who have been going through the same process on other trees, return in the afternoon to the ones that they were at in the morning, and, turning them over, treat the other two sides in a like manner; and the hewer who has been following them up, also comes around again and completes the stick. Any pieces that are left over, or will not make timber, are cut up into saw logs of lengths ranging from twelve feet six inches to sixteen feet six inches, these being the lengths commonly used for the manufacture of lumber.

HAULING LOGS TO STREAM.

The logs of timber being finished, along come the road-cutters, who clear a space wide enough to permit of the logs being hauled to some lake or tributary of the main stream.

The logs all having been drawn on to the ice, a good deal of delay is often caused, waiting until it breaks up and allows the driving to commence. When the ice starts to move it does not take long to clear the creeks, as, the water being high, it is an easy matter to roll the logs down the banks into the stream. As the logs pour out of these streams into the main river, they are caught in a pocket, or boom, which is made of long, flatted pieces of timber securely fastened together with chains which are passed through holes in either end of them After collecting all the logs and timber which have been taken out, the drivers construct a capstain crib, to the bow of which a capstain is securely fastened, while at the stern they fasten the booms. Then one end of a rope is attached to the capstan, while the other end is taken off in a boat to a distance of about one hundred yards and "snubbed" to a large tree. After this has been done the men return to the crib and start working at the capstain until the logs have been drawn up to where the rope has been snubbed. The same process is repeated until a point is reached where the river is navigable.

A RAFT.

Then the logs are taken to the point of consumption by a towing company. Before reaching this point, however, they may have come to a rapid where the booms have to be loosened and the contents allowed to run through them as best they may. If the water is fairly deep and the rapids not very rocky, there is not much difficulty to contend with, but should the logs begin to jam, there is no telling when the jam will break. I have seen two or three hundred thousand logs tangled up to such an extent that the men had to resort to explosives to move them.

A great deal of knack is brought into action during one of these jams. It is a great thing to be able to locate the key logs, which, when once displaced, start the logs moving. As the drivers run a great risk of being caught by the logs, when they start to move, they have to use every precaution. When the key log is found, they drive a long spike into it, with a ring attached to the other end; then a rope is tied to the ring and the log is pulled out of position by the men on the shore, after giving the others time to get out of the way.

As one can readily see, this mode of locomotion would be most injurious to the square timber: which, when it reaches a more navigable part of the stream, is treated in the following way: All the pieces, as near as possible, of a uniform size, are gathered together and made into cribs about twenty-three feet wide and anywhere from thirty to forty feet long. The length does not matter, but, as they have to pass through a number of slides, the width must not go over twenty-three feet or they would be unable to do so. After the cribs have all been made up they are fastened together with what is called cat-pieces. These cat-pieces are made of a piece of three inch deal with a hole in either end, through which the stakes that have been driven into the cribs are passed. Then a sufficient number of small cabins are made, each to accommodate four men, and placed on the loading sticks of the cribs, and, the raft-oars having been sawn, we are ready for another start. A steam tug takes us in tow and drops us at the head of the first rapid, where we snub the raft and prepare to make the descent.

As the cribs run through the rapid they are caught up at the bottom and again fastened together and prepared for the next tow, and so on until they reach the point at which they are taken apart and loaded on ship-board for some foreign market, for the square timber is very seldom used for home consumption. While the rafts are passing by Ottawa, en route, you may often see a party of visitors running some of the slides on the cribs, or else partaking of a meal on the raft cookery, a novel experience to many.

TALKS WITH WOOD-WORKERS.

IT has been suggested that the LUMBERMAN could profitably use a portion of its space each month with practical talks to the many wood-workers who are readers of this journal. Wood-working is an important section of the lumber industry, and anything that can be said to strengthen the hands and help to improve and facilitate the work of those whose business it is to make into the perfect article the timber after it has passed through the hands of the saw mill man, will strengthen the lumber industry as a whole. It will be a pleasure to the writer to chat with readers along these lines once a month, and with the object of making these talks as useful as possible, I am in hopes that readers will do their part in contributing points, suggestions and information from out of their every-day experience.

* * * *

I have been shown an article on "Mortising Machines," which will appear in this number of the LUMBERMAN. Workmen have different views as to mortising, and it may be that all readers will not agree with Mr. Harmon, the writer of the article in question. It seems to me, however, that he has brought out some strong practical points as to the best methods of utilizing a mortising machine. It is doubtful whether all workmen have recognized the force of what is said in regard to mortising soft wood. We are apt to do many things without thinking, and because hard wood has been always bored before mortising we may have come to the conclusion that this rule would apply to all woods. Mr. Harmon says that this does not necessarily follow. Many other suggestions out of actual experience are made by this writer.

* * * *

Anyone who has had much to do with equipping a wood-working shop knows how quickly the machinery runs into money. Having locked up, as it is supposed to be, a considerable amount of capital in machinery the owner is naturally anxious that he should not be called upon too speedily again to replenish this department of his business. If good judgment and wise economy has been shown in buying the various machines the plant will last for a good while. It not unfrequently happens, however, and the remark can be made here, that the fullest economy is not always shown in the purchase of machinery. Because of the poor character of the machinery, it may not be long in use before something gets out of kilter. But no matter how good the machinery may be it will wear out after a time, and it is here that many men make a mistake. Machinery requires men to run it, and it has well been said that it costs as much to employ a man to run a worn-out machine as a good one. I would be disposed to put this even stronger; it costs more to employ a man to run a worn-out machine than a good one, for the reason, that no matter how capable the man may be he is not going to put in the same work each day tinkering away on an old machine. Let the "boss" take notice of this, and in a quiet hour figure out the cost for replenishing a worn-out machine, and against that what it is costing him per day to pay a first-class workman to get only partial work out of said old machine.

* * * *

So many have been the improvements made in planing machines we are apt to suppose that a state of perfection in these machines has been reached. But what folly. The brain of man in these closing days of the 19th century is too active to permit of perfection even in planing machines. The records of the patent office show that constant improvements in planers and matchers are being made right along. Do you not think so, fellow-workers?

* * * *

The question of transmission of power in every machine shop is a many-sided one. Perhaps there is no subject more discussed in different ways in mechanical journals of the day than that of transmission of belts, the adhesion of ropes and the driving power of bands or other tractive apparatus for transmission. It is to be expected that mechanics will hold widely different opinions on a question of this kind, and that views will be made public that others will look upon as nothing but fallacy. A writer in Industry has been exposing what he considers a mechanical fallacy in an adhesion of ropes, bands, etc. He says: "Adhesion instead of being a virtue is commonly a vice, lessening first cost at a loss of double as much in maintenance. There is no lack of tractive force, in fact, there is too much of it in most driving gearing, and we recommend that when an agent comes around to explain what a high duty he can attain with a rope, or how much the driving power of a band can be increased, the safest way is to place no confidence in such schemes and have nothing to do with them. If ropes slip, more ropes are needed; if belts slip they are too narrow. If a shaft is required to perform a certain work, we provide one at least three times as large as the torsional strain demands; a wide factor of efficiency is provided in wheel teeth, beams, framing, indeed in nearly all the elements of machinery until we come to belts and ropes for transmission. These are commonly strained to their full capacity, hence the demand for increasing 'adhesion.'"

* * * *

Just as there is no end of nostrums, alleged to cure every ill the flesh is heir to, so there is no end to the number of wrinkles that are constantly being shoved under the nose of the worker in mechanical lines to help in some department of his work. Some of these are, no doubt, good, and from the travelling man one will not unfrequently pick up a real good thing. But it is a case where there needs to be good care used, or one may easily get rid of his quarter. Men loose valuable time and sometimes spoil good material; this being the case I am disposed to say with a writer in the Lumber World, "Beware of the 'wrinkle' man." To illustrate the admonition this writer tells of a recent wrinkle that will interest wood workers. The wrinkle was clothed in these words: "A good furniture polish may be made by putting equal parts of spirit of wine, vinegar and olive oil in a large bottle, and shaking thoroughly every day for a week, when it will be ready for use. This polish should be applied to the furniture with a soft woollen cloth and thoroughly rubbed in. If the furniture is very dirty it may be rubbed clean with a woollen cloth dipped in kerosene." Answering the question, What do you think of that? the same writer points out what little practical use it can be. He says for one thing it is barely probable that a pint of olive oil and a pint of vinegar and a pint of spirit of wine mixed and treated as directed may form a three pint mixture that will clean polished wood. A break in either elements will make a new compound that may act very differently from the one struck by the man who made this wrinkle. Again, is the province of a polish cleaner to be "rubbed into" the polish? As the polish depends upon the surface, what will become of the polish when the perfect surface of the varnish is changed by the "rubbing in" of an emulsion of olive oil, spirit of wine and vinegar? Will not any "woollen cloth" scratch any fine polish on wood? And what effect will "kerosene" have on a polish? I have tried this "wrinkle," using the articles named as they are sold in general. The result? Well, a piano finish was utterly spoiled by it without "thoroughly rubbing it in." A carriage-body finish was deprived of its shine totally. On chairs and sofas it spoiled the finish. It dulled the faces of so-called "French walnut" veneers. Ordinary fillered-oak, thickly covered with varnish, came out speckled and spoiled.

JAS.

A REMARKABLE DAM.

ONE of the most remarkable dams in the world for height and construction is that by which the Vyrnwy river, Northern Wales, is enabled to supply water to the city of Liverpool, some seventy miles distant. In building this dam a great trench was excavated across the valley for a length of 1,100 feet, a width of 120 and a maximum depth of sixty. The masonry was started in this trench; it consists of immense irregular blocks of slate, wedged together and thoroughly bedded in Portland cement mortar, the faces being formed of cut stone block, fitted together with great care, the greatest height of the dam being 161 feet. Its most remarkable feature is the lack of any channel to carry off floods, the surplus in the lake flowing down the front of the dam covers an area four and three-fourth miles long, from one quarter to five-eighths of a mile wide and holds largely over 12,000,000 gallons. The aqueduct, leading from the intake tower to the distributing reservoir, about two miles from the city, is sixty-eight miles long, and consists principally of a large cast iron pipe line from thirty-nine to forty-two inches in diameter. There are a number of reservoirs and tanks along the line, and at one place is a great filtering plant.

CANADIAN LUMBERING IN OHIO.

THE Timberman, of Chicago, tells of a peculiar feature of the lumber business in Ohio in which Canadians have a somewhat strange interest. It appears that a few weeks ago a certain lumberman of Defiance, Ohio, was placed under arrest on a charge of violating the alien contract labor law. Those charged with the violation of the federal statutes deny that they are amenable thereto, as they engage their labor on the American side of the line, though they do employ a large number of Canadians. But however this may be, the fact has developed that a large business has been done for many years in that part of Ohio in the shipment of timber to Quebec for export. Large numbers of men were employed cutting timber and preparing it for export the work being done under contract with Quebec merchants. The story of the development of this business is told as follows: Back in the early fifties, when northwestern Ohio was still largely a forest country, the Canadian-French crossed the lakes and established head-quarters at Defiance in the very heart of the magnificently timbered Maumee valley. From that place gangs of hewers and choppers were sent out into the forests, converting the oak, walnut and poplar into timber which was floated down the river and thence by lake to Quebec. It has been a large industry, which has afforded employment to thousands of men and benefited not only the laborers brought from Canada, but contractors, merchants, etc., in Ohio, particularly along the Maumee valley from Toledo up. It is estimated that during the five months of the present season there will be taken from the forests for this purpose 1,200,000 cubic feet of timber, which will average in Ohio 33 cents per cubic foot, or a total of about $400,000; all foreign money brought to Ohio in one season by the timber industry. And this has led to the action referred to on the part of federal officials at Toledo.

A LUMBER SPEECH.

DISCUSSING the Government's Tariff Bill in the Commons a few days ago, Mr. Bennett, of East Simcoe, as representing a constituency in which is embraced the large lumber interests of the Georgian Bay territories, said: He blamed the Ontario Government for disposing of timber limits to American speculators without restricting them to the manufacture of the logs in Canada. The result had been that millions upon millions of feet of logs had been taken out of the country. The Dominion Government had imposed a $2 and then a $3 export duty on logs. The effect of this was to bring about the reopening of saw mills on the shore of Georgian Bay, but in 1888, largely due to the intercession of Mr. Charlton, the export duty was removed, in consideration of the fact of the American duty on lumber being reduced from $2 to $1 per thousand feet. The result had been to almost destroy the lumber industry, which was the mainstay of Georgian Bay towns, and the expatriation of 12,000 people, who were engaged in that industry. Why, he asked, should all these people be expatriated by the Government simply to please Mr. Charlton and Mr. Edwards. He asked the House to consider this question honestly, and interfere for the protection of the people whose rights had been denied by the Ontario Government. The lumbermen had made money even when the American duty on lumber was $2 a thousand. He demanded that now the masses should be given a chance instead of the pampered class. The Americans must have our white pine, and if under the Wilson Bill the duty of $2 a thousand were reimposed on lumber the American consumer would pay the duty and not the Canadian producer. Mr. Bennett expressed the hope that the demand of the thousands of people dependent upon this industry for their livelihood would be heeded by the Government. He proposed that an export duty of $3 to $5 a thousand feet should be imposed upon logs. Mr. Bennett strongly advocated the completion of the Trent Valley Canal, and expressed the hope that the Government would be awake to this matter. He considered this to be a more important national undertaking than the project of deepening the St. Lawrence canals.

VIEWS AND INTERVIEWS.

Felling Trees By Electricity.

To what ends may electricity be not applied? A successful trial has been made in Sweden to fell trees by means of electricity. The method is very simple and consists in passing the platina wire around the stem of the tree heating it to a glow, cutting through the same much in the same way as one would divide a piece of soap with a piece of twine. One of the chief advantages is that the end of the log being burnt gives the log a better quality.

Heat of Trees.

Investigations have been pursued in Belgium by M. W. Prinz for the purpose of ascertaining the internal temperature of trees. He finds, that as a rule, a large tree is warmer than the air in winter, and a little colder than the air in summer. The mean annual temperature of a tree is practically the same as that of the surrounding air, but the monthly mean differs by several degrees. Heat changes are transmitted slowly to the heart of a tree, the temperature of the interior differing sometimes as much as ten degrees C., from that of the air. When the air temperature is below the freezing point, the temperature of the tree appears to remain just above the freezing point of its sap, and in the hot days of summer the internal temperature was not known to vary more than two degrees from 15 degrees C. (59 degrees F.)

The Timber Cruiser.

The aborigines have their own peculiar methods of acquiring knowledge and arriving at certain conclusions. Our boyhood days have been delighted with stories of the native red man and his ways of living. But the story comes to us, as told by Julius Chambers in a recent issue of the Century, that forms even a strange parallel to the life of the red man. The tale is of the timber crusier who is more a child of the forest, says Mr. Chambers, than the native he succeeds. He is the percursor of the lumberman and the saw mill, two important factors in our progressive civilization. He is untaught. Generally he knows nothing of astronomy but the sun's course and the polar star, because the heavens are so often wholly out of sight in the tangled forest that he relies on their guides. The mysterious secrets of terrestrial nature, handed down to him by generations of pathfinders gone before, keep him informed. On the prairie he knows that the tips of the grass always incline toward the south, and that they are less green on the northward side. In the forest the slender twigs on the boughs bend southward so slightly, it may be, that only the trained eye can detect the deflection ; yet it is there. The moss on the tree trunks is always on the north side ; the bark is smoother and more supple on the east than toward the west, and southward the mildew never comes.

Some Big Trees.

The trees of the forest have thoroughly established themselves in literature. The poet sings of them ; the descriptive writer finds few themes on which he can dilate with greater ease and picturesqueness than the giants of the woods or it may be tiny shrub of our gardens. The esthetically inclined finds in the tree, its constitution, and foliage, a subject for endless study. The student of forestry knows full well the important part the trees of the forest play in the regulation of climatic conditions and the fixing and sometimes the unfixing of agricultural pursuits. But in general literature stories of the size of some of our great trees occupy, perhaps, the most popular place. It is a little hard to say just how correct these stories may some times be, for every writer is apt to think he can tell the best tree story It has, however, been pretty fully established that the big tree is surpassed in size only by the eucalyptus of Australia, while the redwood may claim the honor of being the third largest tree in the world. The largest known redwood is 365 feet in height and twenty feet in diameter. The big tree attains a greater diameter, but does not reach a proportionately greater height. Thus there are big trees recorded having a diameter of forty-one feet, but we have seen none mentioned as being over 400 feet in height. The height of the largest known eucalyptus tree is stated to be 470 feet, but the diameter is only twenty-seven feet. So while taller than the largest big tree, if their proportions are the same, the California tree has about twice the bulk of the one which grows in Australia. With odd exceptions, however, we find perhaps the best average of big trees in the Dominion among the splendid trees of British Columbia on the Pacific Coast.

Foolish Bravado.

Can the number of accidents in our mills and shops be lessened? As we have more than once pointed out in LUMBERMAN columns were there a little less foolish bravado and a more serious regard for the value of one's own life there would not be so many accidents. The subject is one where line upon line is an absolute necessity. It is, as another has remarked, familiarity with danger seems to breed often a contempt for it, and an utter carelessness. Our contemporary, The Tradesman, remarks, we have seen the "Mohawk Dutchman," the celebrated expert with a band scroll saw, rub the ball of his thumb in dirty grease and then cut the grease off with the rapidly running saw as clean as could be done with soap and water. We have seen a man put his finger under a powerful trip hammer in motion just to show how well he could manage the machine. Many other foolish things are done just to "show off." But most of the accidents happen through a carelessness resulting from familiarity. As long as an operator is afraid of his machine he is not apt to get hurt. Many human minds are so constituted that they cannot bear a sustained effort in one direction ; that is, cannot be always equally on the alert in regard to a certain contingency. A train dispatcher or switch tender may hold a place for years without ever making a mistake, and at last make a terrible one from some cause he could not explain. The only way to lessen the number of casualties—they cannot be avoided entirely—is to take precautions.

FOREST PROTECTION.

PROF. B. E. FERNOW, the forestry chief of the United States government, has summed up the forestry legislation of Europe in the following manner in the April Century :—

In Germany the various governments own and manage, in a conservative spirit, about one third of the forest area, and they also control the management of another sixth, which belongs to villages, cities and public institutions, in so far as these communities are obliged to employ expert foresters, and must submit their working plans to the government for approval, thus preventing improvident and wasteful methods.

The other half of the forest property, in the hands of private owners, is managed mostly without interference, although upon methods similar to those employed by the government, and by trained foresters, who receive their education in one of the eight higher and several lower schools of forestry which the various governments have established.

The several states differ in their laws regarding forest property. Of the private forests, 70 per cent. are without any control whatever, while 30 per cent. are subject to supervision, so far as clearing and devastation are concerned.

The tendency on the part of the government has been rather toward persuasive measures. Thus, in addition to buying up, or acquiring by exchange, and reforesting waste lands—some 30,000 acres have been so reforested during the last 25 years—the government gives assistance to private owners in reforesting their waste lands. During the last 10 years $300,000 was granted in this way.

In Austria, by a law adopted in 1852, not only are the state forests (comprising less than 30 per cent. of the total forest area) rationally managed, and the management of the communal forests (nearly 40 per cent.) officially supervised, but private owners (holding about 32 per cent.) are prevented from devastating their forest property to the detriment of adjoiners. No clearing for agricultural use can be made without the consent of the district authorities, from which, however, an appeal to a civil judge is possible, who adjusts the conflict of interests.

Any cleared or cut forest must be replanted or reseeded within five years ; on sandy soils and mountain-sides clearing is forbidden, and only culling of the ripe timber is allowed.

In Hungary also, where liberty of private property rights, and strong objection to government interference, had been jealously upheld, a complete reaction set in about 15 years ago, which led to the law of 1880, giving the state control of private forest property as in Austria.

Under a law adopted in Italy in 1888, the department of agriculture, in co-operation with the department of public works and in consultation with the forestral committee of the province and the respective owners, is to designate the territory which, for public reasons, must be reforested under government control.

The owners may associate themselves for the purpose of reforestation, and for the purpose may then borrow money at low interest from the State Soil-Credit Institution, the forest department contributing three-fifths of the cost of reforestation upon condition that the work is done according to its plans, and within the time specified by the government.

In Russia, until lately, liberty to cut, burn, destroy and devastate was unrestricted ; but in 1888 a comprehensive and well considered law cut off, so far as this can be done on paper, this liberty of vandalism. For autocratic Russia this law is rather timid, and is in the nature of a compromise between communal and private interests, in which much, if not all, depends on the good will of the private owner.

A federal law was adopted in Switzerland in 1876 which gives the federation control over the forests of the mountain region embracing eight entire cantons and parts of seven others, or over 100,000 acres of forest. The federation itself does not own any forest land, and the cantons hardly 1000,000 acres, somewhat over 4 per cent. of the forest area, two-thirds of which is held in communal ownership, and the rest by private owners.

The federal authorities have supervision over all cantonal, communal and private forests, so far as they are "protective forests;" but the execution of the law rests with the cantonal authorities, under the inspection of federal officers.

In France, not only does the state manage its own forest property (one-ninth of the forest area) in approved manner, and supervise the management of forests belonging to communities and other public institutions (double the area of state forests) in a manner similar to the regulation of forests in Germany, but it extends its control over the large area of private forests by forbidding any clearing except with the consent of the forest administration.

NOTES ON STEAM.

The expense of restoring worn-out piston rods is much greater than the difference in cost between a good and a poor packing. If fibrous packings are used select those which have the greatest amount of elasticity. Those having a flat surface next the rod allow of a more perfect bearing and require less pressure to keep them tight. Packings should not remain too long in use, or long enough to become hard, otherwise the rod will be sure to be scored. A perfect piston rod is one of the surest indications of a careful engineer, as a scored rod indicates the careless and unthinking engineer.

We would like to inquire what a safety stop is on a governor for, if not to be used? It is by no means an uncommon thing to go into an engine room and find the blocking-up pin left in the governor of a Corliss engine or the lever hooked up, or the collar thrown around on a Greene, or the top motion on a Wheelock not in position. The excuse that the engineer has is usually no excuse at all ; that he is always around, and if anything happens he is right at hand. These devices can be thrown in position for use in a second, and surely an engineer can spare that amount of time every day. When an accident happens it is almost invariably when some one is not at the throttle, and it only takes a few seconds to bring an engine to the danger point of speed. Do not be found with this protection against racing not in position, if there is one on your engine, is our advice to engineers.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS AND MILLERS' GAZETTE

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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

NOTICE OF REMOVAL.

SUBSCRIBERS, advertisers, and others concerned are particularly requested to note that the offices of THE CANADA LUMBERMAN have been removed from the Canada Life Building to the CONFEDERATION LIFE BUILDING, Richmond and Yonge Streets. All communications should in future be addressed to C. H. MORTIMER, publisher CANADA LUMBERMAN, Confederation Life Building, Toronto.

CHANGE OF OWNERSHIP.

FOR some years I have been talking to readers of THE LUMBERMAN through these columns, but with this issue my connection with the journal ceases. Mr. C. H. Mortimer, the well-known publisher of the Canadian Architect and Builder and Canadian Electrical News has purchased the entire assets and good-will of the paper and with this issue assumes the duties of editor and publisher. That he is capable of maintaining THE LUMBERMAN in the front rank of Canadian trade journalism there is no room for doubt. I trust that not only will the patronage heretofore extended to me be continued to the present owner, but that the amount of advertisements and subscriptions will be supplemented. To the lumber and wood-working trades my thanks are extended for favors in the past. In conclusion I would say: "Stick to your own trade paper and it will stick to you."

A. G. MORTIMER.

IN assuming the management and ownership of THE CANADA LUMBERMAN, I deem it only necessary to state that no effort shall be wanting to maintain the Journal at the point of highest interest and value to persons identified with the lumbering and wood-working industries. Mr. J. S. Robertson, who has been connected with THE LUMBERMAN in an editorial capacity for three years past, in the same manner will continue to serve the interests of its readers. Subscribers and readers are cordially invited to make use of the columns of THE CANADA LUMBERMAN for the purpose of expressing their opinions on any subject affecting the lumbering and wood-working interests. If even a comparatively limited number would act upon this suggestion, the Journal would of necessity become increasingly interesting and instructive to every reader. I would appreciate also suggestions and criticisms of a friendly character from subscribers tending toward the improvement of the paper. A straightforward business policy will be pursued toward advertisers and subscribers which I trust will prove satisfactory to all with whom I and my agents may have to deal. Finally I would express the hope that under my management THE CANADA LUMBERMAN will continue to improve and prosper.

C. H. MORTIMER.

THE TARIFF ON WOODS AND LOGS.

THE reference by the Minister of Finance in his Budget speech to the lumber industry was less alarming than to some other branches of trade. A concession was made to Manitoba and the Northwest in placing manufactured lumber, including rail ties, staves, shingles, pickets, etc., on the free list. The Minister said there was no one feature of the examination into the condition of things in that part of the country, which impressed itself so forcibly on his mind as the combine, which existed for the distribution and sale of lumber. Anxious to meet the protest, that has come from Manitoba against a high tariff, and the combines which it is supposed to encourage, this one method, at least, was adopted to break, what Mr. Foster characterized, as "a monopoly that bore heavily on the people in that country, where lumber is so essentially necessary in making barns and houses." There is a codicil, however, to the concession which provides that if any country shall impose a duty upon the articles in the schedule enumerated or any of them when imported into such country from Canada it shall be lawful for the Governor in council, from time to time by proclamation published in the Canada Gazette to declare that an export duty shall be chargeable upon logs exported into such country from Canada. The articles enumerated are as follows: "Pine, douglas fir, fir balsam, cedar and hemlock logs not exceeding $3 per thousand feet board measure. In case of the export of any of the above enumerated logs in shorter lengths than pine feet, then a rate per cord may be levied in the same way, equivalent to the above enumerated rate per thousand feet, board measure. An export duty shall be chargable accordingly, after the publication of such proclamation: provided that the Governor-General in council may by proclamation publish in like manner, from time to time, remove and reimpose such export duties."

Another change made is the adding of wood pulp, mechanically ground and chemical wood pulp, bleached or unbleached, to the free list. This change is causing a good deal of concern in the Canadian wood pulp industry. A result of the step is to place Canadian manufacturers of wood pulp at a decided disadvantage Its full import, however, will depend some on the outcome of the Wilson tariff bill. In the meantime our wood pulp men may be expected to exercise all the influence they possess against the change.

A MATTER OF SHINGLES.

THE question is being asked: What is likely to be the effect of the introduction of red cedar shingles into this province upon the white pine shingle trade? The same question is causing concern in the Eastern States, because of the large influx there of red cedar shingles from Washington territory. On the principle that competition is the life of trade it may be that the push and energy shown by the red shingle men will prove a good thing for white pine shingle manufacturers. The red shingle men of British Columbia certainly deserve credit for the intensity and pluck they have thrown into their business. They have become boomsters, it has been alleged. But booming business is all right when an article will warrant what is claimed for it. This we must grant is the case with red cedar shingles. The time has gone by when we can look askance at the product of the Pacific coast and treat it as simply a nine days' wonder. The red cedar shingle is a good shingle, and even if we discounted some of the wonderful stories that are told about its durability there is enough left in its favor to give it a foremost place among the shingles manufactured in the present day.

We are not among those who see any cause for alarm because of the inroads of this new competitor. There is a great deal to be said for the white pine shingle The one thing is the white pine men have been keeping too quiet, and have been letting the red men do all the talking and aggressive work. A result of the present condition of the shingle trade is that white pine men are likely now to make known the reasons why white pine shingles should continue to be in popular favor.

It has not been alleged of the red cedar shingles of British Columbia, so far as we have been able to learn, as a result of the boom, that manufacturers have become careless, and are making up a product that will not give lasting satisfaction. This charge is being made against some of the cedar shingles of Washington Territory.

Without detracting in any way from the good things to be said of the red cedar shingle, the white pine man has a strong case. He may claim with some fairness the advantage of his shingle in a climate like Ontario, where we get extremes of heat and cold, and where freezing weather will at certain times of the year quickly succeed wet weather. Besides there is a difference in prices in white pine and cedar shingles that gives advantage to the former.

By no means an unimportant element in the consideration of this question is the claim of even white pine shingle manufacturers themselves, that the time has come in our province when white pine can be more profitably cut into lumber than into shingles.

EDITORIAL NOTES.

THE association idea does not take hold of Canadian lumbermen as it does of their congeners across the border. We have had occasion to remark this before and the reports of the various State lumber conventions that are coming before us at this time brings the matter anew to our notice. We know that not a few leading lumbermen of the province would like to see an association of Canadian lumbermen, and perhaps the mention given of the matter here may start the ball rolling.

IT may be claimed that the argument is only local; it is nevertheless true that the people residing in the towns and villages along the North Shore feel keenly the loss that comes to them because of the exporting of large quantities of logs from those territories, in place of having them manufactured in the mills, that dot that portion of the country, and which are now closed. This feature of the lumber question was forcibly brought before the public a week ago in a speech of Mr. Bennett, member in the Commons for East Simcoe, extract from which we publish in another column.

WORD reaches us through the report of the Dominion Geological Survey, that will cause surprise, we believe, to many lumbermen. Under authority of the Dominion government the Survey has recently accomplished an exploration of interior Labrador. The statement is made, as a result of these explorations, that the climate in the interior of Labrador, where there are many large and sheltered valleys, is far milder than has been supposed. This vast district is thickly wooded with spruce, interspersed with poplar. There are many square miles of spruce timber, the growth being largely of trees which will square 18 inches. This will be of great interest to Canadian lumbermen. Railroads will need to penetrate the regions, either in the points from the province of Quebec or from Hudson Bay.

AN encouraging element in connection with Canadian wood pulp is contained in the information that it is obtaining a hold in England, in competition with Scandinavian pulp. English paper manufacturers, it is said, are becoming interested, and realize that there is a vast field for their own capital in the extensive forests of spruce in Canada. The Paper Mill says: "It is among the possibilities that a great deal of English money will be put to use in developing the pulp industry in this country, in the near future. Englishmen are restive under the comparative monopoly which the Scandinavians and Germans have had in pulp, and the business of selling American pulp in England which has grown up during the past few months has suggested a way of breaking up. While they would not care to become customers for America, they will probably take kindly to the idea of making their own pulp in a British Province."

THE difficulty of clearly estimating the possible cut that may come from a forest of standing timber has been a subject of frequent comment among lumbermen. It is true that woodmen have developed the faculty of calculation in this respect in a very high degree, but their work can hardly yet take a position among the exact sciences. In illustration of this fact cases are constantly coming before us showing how wide of the mark the cleverest experts will sometimes be. In connection with the several lumber sales that have taken place in our own province within the past year or two, we have known timber-lookers to have gone forth to spy out the land, and reported certain limits to be worth certain figures. Others, believed to be equally shrewd and knowing, have gone over the same ground and fixed up a widely different estimate of the supposed quantity of standing timber. Added to these instances, I learned a little time ago of a Michigan case that goes to confirm all that has been said of the uncertainty of these estimates. Louis Sands, of that state, bought last summer a pieee of pine land, supposed to contain on an estimate 13,000,000 feet, for which he paid $74,000. It is now conceded that this track will cut 16,000,000 feet, and yet others who looked over the ground with a view to purchasing could not find over 6,000,000, much less 13,000,000 feet. Those who are disposed to laugh at the frequent estimates that we get of the quantity of standing timber in the leading pine provinces and states can point with a good deal of force to such instances as I have here cited, and query, What do you know about it?

* * * *

When in the north country a few days ago I learned that Howry & Sons, the large Michigan lumbermen, who are carrying on extensive operations in the Georgian Bay territory, had purchased the old S. G. Smith mill, at Fenelon Falls, and will cut their logs, at least a part of them, on the Canadian side this summer. This mill has been idle for six or seven years. It will be good news to the people of the north to learn that the Howrys are to become Canadian operators. Talking of Howry & Sons operations in the woods this winter my informant remarked that these had been conducted on a wide scale. There is lots of "go" in this concern, said he, and whilst the figure they paid for their limits was a large one, they are evidently intent in getting all they can out of them.

* * * *

A few days ago I dropped into the office of Mr. F. N. Tennant, and in answer to the enquiry, how were red cedar shingles moving? was told that, though early in the season, he had placed a large quantity of them in the province, especially in Western Ontario. It is Mr. Tennant's opinion that the red cedar shingles are affecting the sale of the better quality of white pine shingles. For the lower grades of white pine shingles there is a good demand. Whilst there is no remarkable rush of business in lumber generally throughout the province, Mr. Tennant's experience is that there is a very satisfactory revival of trade. Last month proved with him one of the largest months of business for a considerable period, and the first week of April has opened up very auspiciously. It is remarkable, said Mr. Tennant, how well prices for lumber are keeping up. They do not range just as high as this time last year, but there was then a special boom on; the disposition now is to hold quite firm to good figures. Trade in the city is altogether slow. In fact, there is no building going on this summer worth speaking of.

* * * *

Few names are better known in lumber circles in the Dominion, and especially in the east, than that of Kennedy F. Burns, of the maritime provinces. Readers of the LUMBERMAN will remember that nearly three years ago a portrait with character sketch of Mr. Burns, was published in these columns. He was then representative in the House of Commons for a leading constituency down by the sea. Within the past year his name has been quite prominently mentioned in connection with the Lieutenant-Governorship of New Brunswick. He is a big enough man for any of these places, and does justice to any work that he undertakes. Lately Mr. Burns spent some time in England in the interest of his large lumber operations, and has been successful in selling the whole of his winter's cut at 75 cents a thousand over last year's rate. The future of lumber in the maritime provinces is, in his judgment, better than it has been for years. Deals will be worth $9 a thousand in St. John in the coming summer, and may even go higher than this. Mr. Burns says the lumber cut of Restigouche, Gloucester and Northumberland counties, as well as other counties in the province, has not been nearly so large as last year, and this reduction in stocks will effect prices favorably.

* * * *

Particularly with Michigan lumbermen the business relationship between them and many operators in our own country is so close, that I am constantly on the look-out for any item of news that can be picked up regarding the plans and intentions of our lumber friends in Michigan. Remarking on this point, I am reminded of a comment made by Mr. Bray, of the Parkin Lumber Co., of whom I have something to say elsewhere. We were talking about the changes in methods of logging in the present day contrasted with those of ten and fifteen years ago, when Mr. Bray was active in the woods. He spoke of the magnificent scale on which some of the Michigan lumbermen conducted operations. "Take Howry & Sons," said he, "they are thorough going Americans, and they do things up fine in the woods. Lots of money is spent in the making of fine roads, the elaborating of shanty methods, etc." But to matters concerning lumber in Michigan, Mr. A. Comstock, an extensive and wealthy lumberman of Alpena, has been predicting a large shortage in the annual lumber crop this year that will be occasioned by the sudden thaw which set in in the open woods early in March. "It came to us all in a minute," said he, "and we were perfectly helpless. There had been snow enough for our operations previously, but within a few hours after the thaw set in everything was slush and we were tied up so that we could not move a log. It will cause a shortage of at least 100,000,000 feet in the lower and about 150,000,000 feet in the upper peninsula. In the districts which are immediately tributary to Michigan, including Wisconsin and the Canadian border, the shortage in the lumber crop will foot up at least 500,000,000." All this means a largely reduced output of lumber in Michigan this year. Canada will be drawn on for a good supply of logs. Mr. Otis Shepard, president of the Shepard & Morse Lumber Co., of Ottawa and Boston, and vice-president of the Saginaw Lumber and Salt Co., has said of trade in Canada that he found prices in both grades and mill run firm and that the prospects for a good trade in the East looked bright.

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Mr. Thomas Meaney, manager for Robt. Thompson & Co., who have also an office at Hamilton, does not anticipate any large amount of building in either cities this summer. "In fact," he says, "there is hardly anything projected as yet. Throughout the province, however, there is a fair measure of activity and a good deal of lumber going out." He tells me what others in the trade remark, that prices are holding up well. This applies more particularly to dressing grades and below. The United States market is equally dull for the higher class of lumber. The drawback there is the uncertainty regarding the fate of the Wilson bill. It certainly drags its way slowly along and Mr. Meaney tells me that not a few United States lumbermen are under the impression that at the last it will be defeated. This, he, of course, would consider an injury to the Canadian lumber trade. Talking particularly of building operations in Toronto, said Mr. Meaney, "this city will never again see another building boom." I remarked that this was a strong statement, the word never was a very long one. "It is so, however," he repeated, "the supply men and the labor men have been successful in securing legislation from the Ontario government that will prevent men from entering into that reckless class of speculative building that gave, at the time, so much life to the building boom here, and that proved, as well, perhaps, the strongest feature in bursting that boom. Any man who could handle a saw and hammer and who might be worth his $1.50 or $2.00 a day, went extensively into building. These men possessed no capital, but the boom was on and the loan societies were prepared to advance them large sums of money. Only one result could follow from the extravagance of these business methods and the lumbermen and other supply men came in for the heaviest losses. The working men by virtue of their lien law had some protection. The loan society gave these light-weight contractors the money and they seldom paid the supply men, if they could manage otherwise. Under the new act of Mr. Mowat the workmen and the supply men will have a primary claim on the building and the loan societies are expected to satisfy themselves when they advance money that these claims have been met, if not, they will have the pleasure of doubling up on their payments by paying over again."

* * * *

Spending a few hours in the progressive town of Lindsay, a few days ago, I took the opportunity to visit the mills of the Parkin Lumber Co. who are extensive manufacturers of shingles. They give their entire effort, in fact, to the manufacture of shingles. The business was originally conducted by S. G. Parkin & Sons, and within the past year has taken the shape of a limited liability company. The Parkins, outside of being shareholders, are not actively engaged in lumbering, being contractors for the supplying of electric power to the town of Lindsay. Mr. A. C. Dutton, of Springfield, Mass., is president of the company, and Mr. James Bray, sec-treasurer, and active business manager. The mill is a new one and very perfectly equipped, a description of it appearing in these columns some months ago. I had the pleasure of chatting with Mr. Bray about lumber affairs. He is a man who knows lumbering from A to Z, there not being a department of the business, perhaps, he has not at one time or another engaged in. "For a long time," he said, "I spent every winter in the woods, and know, I guess, as much about logging as the next man, and of its pleasantries, as well as vicissitudes. For some time I was shanty clerk and obtained experience in a business way in that position. Speaking of the drives, as the time comes near for that work, I have done my share of that thing. To-day my friends have installed me as manager of this business, which is one of no small size. We started the mill running on the 2nd of April and will continue it to its fullest capacity until the end of the season. I anticipate a good summer's trade." Responding to my enquiry whether the introduction of the red cedar shingles of British Columbia would interfere with the trade of white pine shingles in Ontario, Mr. Bray said: "I do not fear competition from this source. We manufacture less or more cedar shingles here, and at present the mill is working on this class of goods from cedar obtained from the swamps in this locality. I do not disparage the red cedar shingle. It's a splendid shingle and I only wish we had their wood here, but I anticipate, in any case, they must always be handicapped by the high rates of freights." I asked Mr. Bray, if he thought there was anything in the contention of white pine men, that it would pay better to work up the best logs into lumber rather than shingles. He said: "We do not consider any white pine too good for shingles, and manufacture ours out of the very best pine we can procure. The old way was to use only the culls for shingles, but this was a great mistake." Coming back again to the question of drives, Mr. Bray, looking out of his office window, giving ear to the whistling and howling of the wind, for I tell you when the wind does blow, there is lots of scope for it in that north country, he said, "I do not like the looks of the weather. A fortnight ago I despatched a company of men to get started with the drives and things looked favorable, but just now the weather is against us. However, I do not anticipate any serious delay. So far as this section of the country is concerned, I think the drives are going to come along all right. So soon as the ice breaks up we will have abundance of water."

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE event of the month has, of course, been the opening of Parliament and the introduction of the Government's revision of the tariff, the discussion of which now waxes warm. So far as lumber is concerned the particular interest most agitated is the wood pulp industry. It has been felt ever since the introduction of the McKinley Bill that this branch of the lumber trade was unfairly dealt with. From the Canadian point of view there has not been any intelligent explanation of why spruce should have not held just as favorable a position in the regulations as white pine. The opinion of Mr. Eddy has already been given in the LUMBERMAN columns, that pulp wood will yet prove itself to be a greater industry for Canada than white pine. Protests from the manufacturers of wood pulp at the Merriton mills, at the Cornwall mills and at the New Brunswick mills have been entered against wood pulp being placed on the free list. Hon. W. B. Ives, on the other hand, who is himself in the business in the Eastern townships, seems to think that the duty will not interfere with the Canadian mills. White pine men are interested in waiting to ascertain what may be the outcome of the Wilson tariff.

INDIFFERENT LENGTHS.

A deputation composed of Mayor Thompson and Councillor McCort, of Thessalon, Messrs. Burton Bros. and Major Elliot, have been here asking to have the navigation of that part of Algoma improved.

Probably not less than 400 shantymen have already arrived in the city to locate here for the summer months. The present season is spoken of as one of the worst on record in the Ottawa Valley for taking out logs. All through the winter the roads have been far from good, there is fully two feet of water across some of the larger lakes where the traffic is cut off. Shantymen are praying for a cold snap to help them in winding up their season's business. The season has been an unfavorable one for the taking out of large timber. There seems to be little doubt that the amount of logs that will come down from the shanties this year will be less than that of 1893.

In the case of Boyd & Co. vs. Smith, judgment has been given in the Exchequer Court. Boyd & Co. are well-known lumbermen, of Bobcaygeon, and Smith, who has charge of booms on the Fenelon river, seized their logs for toll. Boyd & Co. took an action against Smith, meantime depositing $2,245 in the court for dues. The court has now given judgment in favor of Boyd for $300, and if action is not taken within thirty days by the Government, then the $2,245 will be returned to the firm.

OTTAWA, Can., March 29, 1894.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

A STATEMENT that has recently been published showing the wide export field covered by Washington lumber is being quoted by the local journals here as an object lesson to B. C. lumbermen to throw fresh life into their business methods. It is quite true that the depression in the markets of South America and Australia have cut off supplies for export in Washington, as well as here, yet the figures show that our neighbors shipped during 1893 80,621,926 feet lumber and 6,926,325 lath. The destination of these shipments took in Chilli, Germany, China, Belgium, Japan, Mexico, England, France and other points. But our people will get there, no doubt, for the lumbermen of this province are keen and energetic business men.

COAST CHIPS.

At the annual meeting of the New Westminster Board of Trade, two lumbermen were elected to official positions, namely, John Wilson, of Brunette Saw Mill Co., president, and J. G. Scott, of the Pacific Coast Lumber Co., to the council of the board.

The Moodyville Saw Mill Co. have lately cut one cargo for export and are expecting two or three more vessels.

Mr. D. S. Savage, secretrary and treasurer of the Ontario and Western Lumber Co., Rat Portage, paid this province a visit lately.

The Moodyville Saw Mill Co. purposes building a light line of rail three miles in length, in order to extend their logging at Grief Point, Malospina Strait.

A final judgment has been given in the case of Scott vs. B. C. M. T. and T. Co. Scott lost a leg by an accident in the Hastings Mill, Vancouver, and the jury awarded him $2,500 damages; the judgment now given reverses this.

Elisha Robinson for several years mill foreman of the Brunette Saw Mlll Co. died a few days ago after undergoing an operation for a dangerous abcess in his neck. Deceased was 33 years of age and came from Stormont, Ont., to the province twelve years ago.

The position of the Shawnigan Lake Lumber Co, has been altered by the retirement of Ewen Morrison; the partners now are William Munsie and T. Elford.

The Chilian bark India is expected at Vancouver from Valparaiso before long to load a return cargo.

Though our shingle men are showing a good deal of energy in pushing business, it is not supposed that the cut this year will be very large. There is considerable of last year's cut still on hand.

NEW WESTMINSTER, B. C., March 28, 1894.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN].

EVIDENCES of spring work among the mills of the province are commencing to show themselves. The rivers are fast being cleared of ice and it is thought that the season altogether, will be a favorable one for the drives.

Lumbermen are encouraged by a tendency to firmer prices in the British market, especially for spruce and white pine.

The fate of the Wilson tariff bill continues to effect trade in different lines. Were the duty on lime lowered it would help the sale of cordwood and tend to increase prices some at the main ports.

The provincial government are pleased with the result so far of their new 21-year lease system. The returns are beyond their expectation. It is a case, however, as was feared at the time where the larger operators are controlling the business chiefly.

The first cargo of deals for the season arrived a few days ago from Advocate Harbor, N. S.

A new mill will be built this spring at Campbelltown by the Muskoka Mill and Lumber Co., of Toronto. It will be remembered that they acquired considerable limits at the government sale a year ago.

Receipts from stumpage on crown lands in the province last year were $105,740, the cut being smaller, the receipts for current year will be lighter.

W. H. & J. Rourke, of St. Martin's, will have their new mill running early this spring. The cut in the vicinity of St. Martin's this year has run about 6,000,000, half of it being cut by the Messrs. Rourke.

The Jewett mill site above Fredericton, on the St. John river has been purchased by Donald Fraser, of River de Chute. He will erect a lath, shingle and board mill and at the same time continue to operate his mill at River de Chute.

ST. JOHN, N.B., March 25, 1893.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE statistics of the lumber trade of this state for 1893, which show quite a decrease in business compared with previous years, are enforcing the repeated contention of lumbermen that this once banner state for white pine is fast losing its strength. It is granted that in the southern portion of the lower peninsula the pine is well consumed, and what woods are left consist chiefly of hemlocks and hardwoods. In the Saginaw district our mills for some time have been looking to Canada and other points for their supplies. On the Lake Huron shore stocks are exceedingly light, and large supplies are brought to this point from Canada. The lumber cut of 1893 was in round numbers 647,000,000 feet less than the output for 1892. The following table makes comparison of the lumber and shingle stocks on hand in this state at the close of the years named.

LUMBER AND SHINGLES MANUFACTURED.

	Lumber (feet).	Shingles.
1885	3,578,138,732	2,574,675,900
1886	3,984,127,175	2,988,124,232
1887	4,162,317,778	2,677,858,750
1888	4,292,189,014	2,846,201,000
1889	4,207,741,224	2,602,930,250
1890	4,085,767,849	2,469,878,750
1891	3,599,531,668	1,826,174,250
1892	3,794,256,754	2,140,647,875
1893	3,147,996,147	1,832,027,550

COMPARISON OF STOCKS ON HAND.

	Lumber (feet).	Shingles.
1885	1,252,942,251	211,229,500
1886	1,354,101,834	283,838,000
1887	1,428,224,132	195,218,000
1888	1,463,226,000	335,952,256
1889	1,447,503,997	372,807,250
1890	1,436,878,279	376,875,750
1891	1,218,683,167	199,211,250
1892	857,057,403	186,220,000
1893	1,246,369,160	351,749,100

PRESENT PROSPECTS OF TRADE.

There is a good deal of difference of opinion as to the prospects of the opening season's trade. One prominent local lumberman has said that we are not going to be relieved from the present depression for some time to come, and he looks for nothing but hand-to-mouth trade for the spring and summer, and further states that his correspondence with various sections of the country, leads him to believe that the retail yards are running with very light stocks, and that the wholesale yards are not largely stocked up. In their anxiety to make sales, many dealers are reported to be cutting lumber lower than it can be purchased for. Opposing this view, there are others who look quite hopefully to a good trade during the present season.

BITS OF LUMBER.

Isaac Bearinger, Saginaw's millionaire lumberman, a large holder of Canada timber limits, has recently built a magnificent $200,000 fire-proof building, which will be one of the commercial attractions of the place.

The saw mill industry of Alpena, has started the season's work in the running of the lumber mill of Mr. Albert Pack, a well-known name in Canadian lumber circles. The mill will be operated until the logs now in the mill boom are manufactured, besides ten and twenty train loads of logs that are to be brought by the Alpena and Northern railway road from pineries of Mr. Pack in Presque Isle county. This will take about three weeks, then the mill will stop until the regular sawing season commences.

An instance of how the depletion of the pineries of this state has affected certain towns is shown in the case of Muskegon, once familiarly called "The Lumber Queen of the Earth," which will have nine saw mills in operation this summer, which are expected to cut 200,000,000 feet. When in the height of its glory this lumber town had 41 mills.

The Lansing Lumber Co. will rebuild its mills recently destroyed by fire. The insurance amounted to $89,000.

Prof. W. J. Beal, professor of Botany in the Michigan State Agricultural College, in a lengthy article to the press on the forest trees of Michigan, says there are 80 species of forest trees native to the state, which attain a foot or more in diameter.

The box factory that is being erected by Ross, Bradley & Co. will be ready for running early in April. This firm began business in 1881 unloading that year 4,000,000 feet of lumber, a figure that has now grown to over 40,000,000 feet annually.

An impression prevails here that Tawas will be one of the points in the state where lumbering operations this year will be carried on on a light scale. The Holland and Emery Lumber Co., really the life of the place, will, it is said, sell all the logs they can. This firm expected to take out about 70,000,000 feet in Canada, of which, already, they have sold 40,000,000 feet. If a satisfactory figure can be had for the remaining 30,000,000 feet they will be sold and the mills likely remain idle.

John B. Brown, of this place, has obtained a verdict in the United States Courts against Thos. H. McGraw and R. K. Hawley, of New York, for $43,922. The case arose out of a pine log deal.

SAGINAW, Mich., March 27, 1894.

WHEN ACCIDENTS OCCUR.

FLESH wounds.—Wash with clean cold water. Apply lint soaked in water, and bind with a clean cotton bandage.

Bruised eye.—Bind on a linen pad soaked in brandy. To remove dirt, use point of led pencil.

Sunstroke.—Apply ice or ice-water to the head, and keep in a cool place.

Apoplexy.—Raise the head and body. Bare the head and neck, and promote circulation of fresh air.

Bruises.—Apply ice, or bathe part with ice-water.

Fainting.—Keep head low. Bare the neck; dash cold water on the face, head and neck. Promote circulation of fresh air.

Burns.—For severe burns, apply cotton wool soaked in linseed oil.

Bleeding.—If the blood spurts, an artery is severed. Bind the limb tightly above the wound with a handkerchief or scarf, twisting it with a stick. If the blood does not spurt, a vein is divided. Bind the limb tightly below wound; raise the wounded limb above level of body, and press near the wound with thumb. Apply clean bandage to stop flow of blood, and take patient to the surgeon.

A THREE CENT STAMP DOES IT.

ON receipt of a three cent stamp we will mail free to any address a copy of our little hand-book entitled "Rules and Regulations for the inspection of pine and hardwood lumber," as adopted by the lumber section and sanctioned by the Council of the Board of Trade, of Toronto, June 16, 1890. Address, CANADA LUMBERMAN, Toronto, Ont.

THE NEWS.

CANADA.

—Gillies Bros. have commenced driving on Lone Creek, Ont.

—Neibergall's and Buchanan's mills at Staples, Ont., have started work for the season.

—C. A. McCool & Co's. saw mill at Mattawa, Ont., is expected to be running shortly.

—The Pembroke Lumber Co., has a large drive of logs on the South branch of the Petawawa.

—Chas. Battrick, of Midland, Ont., will build and operate a shingle mill at Bying Inlet this season.

—A Waterous portable saw mill has been set to work on the claim of John C. Fraser, near Edmonton, Alta.

—Many million feet of logs, it is thought, will be "hung up" this year owing to the early break up of winter.

—The Brunette Saw Mill Co., of Vancouver, B. C., have sold four cargoes of lumber and are endeavoring to charter ships to load.

—G. Kastner, of Wiarton, Ont., is pushing work on his new saw mill. He has a large supply of logs at Oxenden and Colpoys.

—The firm of Lamoureux Bros., sawmill, Edmonton, Alberta, has been changed to Chave & Co. The new company have begun sawing.

—The Campbellford Herald says there may not be a drive of logs floated in the river Trent this year, except what may be necessary for the mills in Campbellford.

—Atkinson, Rufus & Co., lumber, etc., Estevan and Alameda, have moved to Hartney, and a new partnership is being formed; A. J. and J. H. Hughes being admitted partners.

—A local correspondent writes of the saw mill of Chas. Birge, and the planing mill and sash and door factory of Leitch & McKinney, at Hornings' Falls, Ont., as doing a good business.

—Gilmour & Co., of Trenton, Ont., have already expended over $200,000 in preparing water courses, and other needed operations, along the route from their new limits to the southern lakes.

—The Shawnigan Lake Lumber Co., (Limited), succeeds the unincorporated company of that name. Their yards are at Victoria and at Wellington, B. C. Wm. Munsie, T. Elford, John W. Coburn, Andrew Haslemand Lewis Mounts are the directors, and the saw mills of the company, whose capital stock is $160,000, are at Shawnigan lakes.

—A demand of assignment has been made upon William W. Gibsone, trading under the style of W. Gibsone & Co., lumber merchants, Quebec. Gibsone started business in November, 1891, having obtained a contract from Dobell & Co., to cut lumber on their limits. His capital was small, and he has had hard work to get along. Liabilities not stated.

—The shingle mill industry of British Columbia is represented by the following range of mills:

	Daily Capacity
H. H. Spicer & Co. Vancouver	300,000
W. L. Tait & Co., Vancouver	70,000
B. C. Mills, Timber & Trading Co., Vancouver	70,000
Hastings Shingle Mill Co., Vancouver	70,000
A. McNair, Vancouver	70,000
Thos. Kirkpatrick, Vancouver	50,000
Geo. Cassidy, Vancouver	50,000
D. Kendall, Vancouver	50,000
B. C. Cedar Lumber Co.	50,000
W. L. Johnston & Co., Vancouver	70,000
Brunette Mills, New Westminster	85,000
Galbraith & Son, Vancouver	50,000
Pacific Coast Lumber Co., New Westminster	150,000
B. C. Millls, Timber and Trading Co, New Westminster	105,000
Revelstoke Lumber Co., Revelstoke	35,000
N. Hanson, Wasa	35,000
G. O. Buchanan, Kaslo	35,000
Knight Bros., Chillewack	35,000
Total	1,380,000

The total dry kiln capacity is 895,000 per day. H. H. Spicer & Co., of Vancouver, operate the only ten block machine in the province, the other mills using double block, hand machines or upright "Boss" machines.

—The story comes from Carleton Place, Ont., of a curious phenomenon observed on the Chalk River limit of the Gillies Bros. Co. A gang of men, who were engaged cutting logs, noticed smoke as from a small fire rising up over the opposite side of a ridge from where they were at work, and it being near noon they thought it must be from a fire started by some of their companions, as it is customary for the men to take their lunch to the woods with them in the morning and sometimes to start a fire to warm it. So they concluded to go over the ridge at noon time and thus save themselves the trouble of making a fire. Imagine their surprise, on reaching the top of the crest, and looking down on the opposite side to see that the fire was in the tops of two green pine trees, and not on the ground or started as they had supposed. On investigation it was found that the trees were leaning one towards the other, so that near the tops they crossed, and bore heavily against each other. The swaying motion caused by the wind had chafed them so that there was a dry, hard spot on each, where the gum had been oozing out. This day, through the extra length of time the gale had continued, the heavy pressure caused by the friction of the trees rubbing together had evidently caused them to ignite. The trees were cut down and made into logs.

GENERAL.

—The plant of the Memphis Lumber Co., Memphis, Tenn, was burned a fortnight ago. Loss $100,000; partly insured.

—The Canadian Pacific, Great Northern, Northern Pacific and Union Pacific are all prepared to haul shingles and lumber from Washington territory on same basis.

—Both of the big saw mills in Tacoma, Wash., are shut down, and the general outlook is blue. The dullness is attributed to the bad conditions that prevail outside the coast.

—London, Eng., imported 12,840,682 feet of mahogany lumber last year, chiefly from the Central American states. The supply of this valuable wood, which once grew in great abundance in Cuba, and the finest color of any in the world, is said to be nearly exhausted.

FIRES AND CASUALTIES.

FIRES.

—Jesse Cook's saw mill and planing mill at Zephyr, Ont., was destroyed by fire on 30th ult. Loss $10,000; no insurance.

—Two men, Larry Murphy, and Eli Kimberby, engaged at lumbering at Straight Lake, Ont., were killed a week ago in a C. P. R. accident.

PERSONAL.

The president of a lumber company in the Southern States is a woman.

Mr. John Charlton, M. P., was a recent visitor to the Saginaw River cities in the interests of his lumber business.

Lord Rosebery, Great Britain's new Premier, adds lumbering to his many other avocations. He is a large stockholder in the Southern States Land and Timber Company, an English corporation that has several large mills in Florida and its general offices in Pensalola.

THROTTLING vs. AUTOMATIC CUT-OFF ENGINES.

UPON this question the American Machinist in a recent issue says: There can be but little doubt, we think, that in some instances the throttling engine, with fixed cut-off, will equal in all respects, the automatic cut-off, and we believe it is possible to conceive of an engine being operated under such conditions that the former would show slight superiority. But in the great majority of purposes for which steam engines are employed it seems that the reverse must be true.

The great point of superiority of the automatic cut-off principle comes from the fact that most steam engines are subjected to variable loads, and quite generally some fluctuation in steam pressure. If this was not so then a properly designed throttling engine would be unobjectionable. For, of course, there is a point of cut-off for any engine tflat is the most economical, and a cut-off can be fixed for that point that shall, at least, be as good in all respects as that under the control of the governor. But because there is such a point of cut-off it does not follow that it is best to fix it, and reduce the pressure as by throttling for lesser loads. This economical point of cut-off varies with the steam pressure, and the automatic cut-off governor so varies it, which is right in principle. That is, if a cut-off at one-quarter stroke is the best for a given pressure, if the pressure is somewhat higher than that, it is better to take advantage of that high pressure by cutting off earlier than to reduce the pressure by throttling or otherwise. This is very near, but probably a universal fact. For example, with the point of cut-off correct for a given pressure it is possible—we think probable—that a little, not much, throttling may be better than a change to earlier cut-off. And in case of very materially higher pressure considerable throttling may be advisable. This would depend upon the quality of steam, and upon other circumstances, perhaps; at any rate it is to be shown that there is enough in it to afford a margin for the economical use of the throttling governor, except in selected instances.

The reaction in favor of throttling is not likely to be violent, but it is interesting. Engineers who set out to-day to improve the throttling engine have to aid them a good deal of general information that was not on hand at the time the automatic cut off engine made its appearance. Should serious effort be made to bring the throttling engine into competition with the automatic cut-off the attempt will be on quite different grounds from what it would have been made on twenty years ago, and it would not be safe to predict the outcome. It is possible only to fall back on the argument—which does not amount to much—that it cannot be seen how the effort can be successful, and await results.

CANADIAN SPRUCE FOR MAINE.

MR. EDWARD JACK, of Fredericton, N. B., sees an easy way for the manufacturers of Maine to secure easy access to the vast forests on the upper St. John, in Quebec, transporting the output to Boston with little or no trouble. His outline of the plan is like this:

"From a point about three miles above the Grand Falls of the Saint John to the mouth of the Saint Francis river, the former river is the boundary between the United States and the Dominion of Canada. Where it reaches the Saint Francis it follows that river for a number of miles, then striking off in a northwesterly direction, and crossing many tributaries of the Saint John which have their sources in the Province of Quebec. The Saint John river is thus, for eighty miles, the boundary between the two countries. Two railways skirt the river—the Canadian Pacific from Grand Falls to Edmundston and the Temiscouata railway from Edmundston to Connor's Station—the latter distance being 32 miles; at Connor's Station and from that place to the Saint Francis the strong, deep current of the Saint John has become still, and the river widens out, so that between the Saint Francis river, which empties into the Saint John about four miles above Connor's Station and that station, hundreds of millions of feet, board measure, of saw logs can be held at all seasons in the most perfect safety. From Connor's Station across the Saint John to the State of Maine the distance will be but about fifty or sixty rods; consequently, the Canadian spruce logs can be held in the river here to be made into pulp or even sawn into deals, whence they can be transported to River du Loup, on the St. Lawrence river, a distance of 113 miles. The cost of the transfer of pulp from Connor's Station to Boston is 17 cents per hundred. 118 miles from Connor's Station will place the Spruce product of the Upper Saint John on the wharf at River du Loup, the whole distance being by rail, and at this wharf vessels from Europe can load and discharge. Thus the vast forests on the Upper St. John, in Quebec, can be utilized in such a manner as to give manufacturers of pulp in Maine, within fifty or sixty rods of Connor's station, the output can go in bond to Boston via the Temiscouata or Intercolonial or other roads, or it can be carried by barge up the St. Lawrence either to New York or to the cities on the lakes. Thus the duty will be saved. There are many millions of acres of spruce land on the Saint John above Connor's Station, and at and above that station is the only place above the Grand Falls where logs can be held to any extent in the upper Saint John."

ALL ABOUT SAW MILLS.

A young miss in the schools of a saw mill town in Michigan has evidently investigated the saw mill business thoroughly and read the following essay on the subject recently, which we republish for the benefit of our readers who may not have had practical experience: "Saw mills is very useful. If it was not for saw mills we wouldn't have no sawdust for to stuff our dolls. If I was a doll I would rather Die than to be stuffed with straw. Straw is very ticklesome when you haint got anything Else on your Inside. I know a good deal more about saw mills but my paper is all gone."

Letters from our readers are always welcome.

"That's a venerable joke," sighed the sawyer as he listened to the "chestnut" of the road man.

WOODMAN, chop that tree! Chop root, trunk, branch and bough! In youth its twigs switched me, and I'll get even now!

TRADE REVIEW.

Office of CANADA LUMBERMAN,
April, 10, 1894.

THE GENERAL SURVEY.

GENERAL spring activity is observable in lumber business at all points. The men, have, in most cases come out of the woods and preparations are being made for the drives. Just how successfully these will come along is a matter of some uncertainty at the present time. From reports received from the Ottawa section, it is anticipated that there will be considerable logs hung up this season. The weather broke up suddenly, and left loggers at some points in an awkward predicament. The quantity cut in Ottawa will run, probably, 20 to 25% less than last year's cut. In the Georgian Bay territory, whilst some individual lumbermen have put in as large a cut as last year, yet, taken altogether, there has not been the same activity, and there will be a decrease in the quantity at those points. In another page of the LUMBERMAN we have noted the fact that Howry & Sons, large Michigan lumbermen, will operate the S. G. Smith saw mill at Fenelon Falls this season, which means that lumber will be cut there that would otherwise have gone to this firm's mills in Michigan. The decrease in the cut here is finding a counterpart in Michigan, Winconsin, and other states, the financial depression of the past year being suggestive of caution.

This decrease in the output of logs from the bush, will not have any effect on the market, for a large quantity of lumber has been held in the United States owing to the depression and consequent decrease of consumption. It is hardly to be expected prices will be maintained at the same figures as last year.

As regards the local trade of Ontario we are hearing favorable reports from the rural sections. There is no startling boom, but dealers have figured so closely for months back, that with anything like a revival in trade they will find it necessary to stock up their yards, and there will be a fine trade done throughout the province this spring and summer. So far as Toronto is concerned building operations will be slow and lumber, will, of course, be in sympathy with this dullness.

British Columbia lumbermen are anticipating a fair season's trade. In that province, both in shingles and lumber, the trade has had to fight a war of price-cutting for some time. This spirit worked havoc with the shingle trade, but a combination was formed a month or more ago, which has placed that branch of lumbering in an improved position and our advices are that the combination is holding firm. The local lumber mills have come together and are in hopes of thwarting the cut-throat policy pursued for some time. No combination has been formed but a new scale of prices has been fixed, which we understand has been agreed upon by all. An important feature of the new arrangement is, that all persons purchasing lumber will be required to furnish security for the payment of their bills. This arrangement will have the effect of putting the contractors on a better basis, for it will prevent unscrupulous men from taking contracts at ruinously low rates, which in the main has cost the mills heavy losses. The export trade of British Columbia is not showing any very surprising signs of improvement, freights are lower than they have ever been before, but foreign buyers are few. A revival of business in South America, China, New South Wales and Australia is much needed to help the export trade. A considerable portion of last year's cut of shingles still remain on hand and it is not thought that there will be a very large shingle trade done this year.

The opinion has been expressed by Mr. Kennedy, the well-known New Brunswick lumberman, that trade in the lower provinces will be better this year, owing to an expected improvement of lumber business in the United Kingdom.

UNITED STATES.

Were it to be a case of making comparisons between conditions of the lumber market on the opening of spring trade this year with conditions of a year ago the contrast would be very marked. Buyers were then thick as the proverbial mosquito in the summer months and sellers could be as saucy as they liked without fear of losing sales or not securing their price. Nothing of this kind exists to-day. From all leading lumber centres comes the report of extreme carefulness and caution. What we say under the heading of Saginaw presents as dull a feature of the market as is found anywhere at Tonamanda and Buffalo there is a little less apthy with lumbermen, but still no activity. Not at any point is there a strong desire to do any large buying. Dealers are buying as they want stock, but do not care to stock up and carry any volume. All along, prices have held up as would hardly have been expected throughout a continuous dull period, but the impression grows that this pertinacity will not continue and that prices will break. No doubt, it is in anticipation of a movement of this kind that many buyers are holding off at the present time. Lumbermen do not hesitate, whatever may be their politics, to attribute a large share of the dullness to the tariff bill. Two months ago it was taken for granted that the Wilson bill would have become law almost right away and whether that would have meant free lumber as it looked then or something else the matter would have been definite. But political complications now makes the outlook very uncertain and polititcians apparently would talk the question all summer, though this conduct might send business to the dogs.

FOREIGN.

Signs are not wanting that the lumber trade of Great Britain will show a marked improvement this summer. The feeling in this direction is stronger than it has been for some time. Certainly the period of depression has been a very continued one and commerce, generally, is still far from active, but if no untoward condition arise in the shape of a strike or something of that character, it is thought a good deal of lumber will be distributed during the next few months. This is the view that is entertained by our Canadian lumbermen, who have large dealings in the United Kingdom. Quite encouraging news comes from South America and it is believed that from the Ottawa section and also from British Columbia a large volume of lumber will go out to South America the present season. So deep has been the commercial depression that has overshadowed Australia for the past three years that it is hardly safe to predict too much of a revival, but it is believed that things have taken a turn and this important field of export will commence to call for a good share of lumber from Canada.

HARDWOODS.

Local hardwood men with whom we have talked do not express any reason for complaint with the business that they are doing. Nearly all find a good market for whatever output they are able to complete. Taking the broader field, there are some signs in connection with the export of hardwood lumber that call for caution. We are told that in foreign markets, Germany for example, that altogether too heavy consignments of hardwoods have gone forward lately, and this fact is causing some suspicion in the minds of foreign lumbermen. The report is given of a Germany firm that it is said has 10,000 walnut logs on hand. These people say that in March 1893, they had a stock of about 2,000 walnut logs on hand, they have this year 12,000. Other indications seem to tell of a demoralized condition of affairs in Germany and elsewhere.

TORONTO, ONT.

TORONTO, April 10, 1894.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch	2 50	2 60
XX shingles 16 inch	1 50	1 60
Lath, No. 1		2 15
Lath, No. 2	1 80	1 85

YARD QUOTATIONS.

			F. M.		
Mill cull boards and scantling	$10 00		1 1-2 in. flooring, dres'd	26 00	30 00
Shipping cull boards, promiscuous widths	13 00		" " rough	18 00	22 00
" stocks	16 00		" " dres'd	25 00	28 00
Scantling and joist, up to 16 ft	14 00		1 1-4 in. flooring, undressed, B.M.	16 00	18 00
" " " 18 ft	15 00		1 1-4 in. flooring, dres'd	18 00	20 00
" " " 20 ft	16 00		" " undres'd	12 00	15 00
" " " 22 ft	17 00		Beaded sheeting, dressed	20 00	35 00
" " " 24 ft	19 00		Clapboarding, dres'd.		12 00
" " " 26 ft	20 00		XXX sawn shingles per M.	2 60	2 70
" " " 28 ft	22 00		Sawn lath		2 60
" " " 30 ft	24 00		Red Oak	30 00	40 00
" " " 32 ft	27 00		White "	37 00	45 00
" " " 34 ft	29 50		Basswood, No. 1 and 2	28 00	30 00
	23 50		Cherry, No. 1 and 2	70 00	90 00
" " " 36 ft	31 00		White ash, 1 and 2	24 00	35 00
" " " 38 ft	33 00		Black ash, 1 and 2	20 00	30 00
" 40 to 44 ft	37 00				
Cutting up planks, 1 and thicker, dry	25 00	28 00			
" board	18 00	24 00			
Dressing blocks	16 00	20 00			
Picks Am. inspection.		30 00			

HARDWOODS—PER M. FEET CAR LOTS.

Ash, white, 1 to 2 in.			$18 00	$20 00	Elm, soft	1	" 1½	$11 00 $12 00
" " 2½ to 4			20 00	24 00	" "	2	" 3	12 00 13 00
" black,	1	" 1½	16 00	18 00	" rock	1	" 1¼	14 00 16 00
Birch, sq.,	1	" 4	17 00	20 00	" "	1½	" 3	15 00 18 00
" "	4x4	" 8x8	20 00	22 00	Hickory	1½	" 2	28 00 30 00
" red	x	" ½	20 00	22 00	Maple	1	" 1½	16 00 17 00
" "	2	" 4	22 00	25 00	"	2	" 4	17 00 18 00
" yellow	1	" 4	14 00	15 00	Oak, red, p'n	1	" 1½	28 00 30 00
Basswood	1	" 1¼	15 00	16 00	"	2	" 4	30 00 32 00
"	1½	" 2	16 00	18 00	" white "	1	" 1½	28 00 30 00
Butternut	1	" 1½	23 00	25 00	" " "	2	" 4	30 00 35 00
"	2	" 3	25 00	28 00	" quart'd	1	" 2	48 00 52 00
Chestnut	1	" 2	25 00	30 00	Walnut	1	" 3	85 00 100 00
Cherry	1	" 1½	50 00	60 00	Whitewood	1	" 2	32 00 36 00
"	2	" 4	60 00	65 00				

OTTAWA, ONT.

OTTAWA, April 10, 1894.

Pine, good sidings, per M feet, b.m	$32 00 40 00
Pine, good strips, " " "	27 00 35 00
Pine, good shorts, " " "	20 00 27 00
Pine, 2nd quality sidings, per M feet, b.m	20 00 25 00
Pine, 2nd quality strips, " " "	18 00 22 00
Pine, 2nd quality shorts, " " "	15 00 18 00
Pine, shipping cull stock, " " "	14 00 16 00
Pine, box cull stock, " " "	11 00 13 00
Pine, s.c. strips and sidings " " "	11 00 14 00
Pine, mill cull	8 00 10 00
Lath, per M	1 60 1 90

QUEBEC, QUE.

QUEBEC, April 10, 1894.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	14 @	18
For fair average quality, according to average, etc., measured off.	16	20
For good and good fair average, " " " "	23	27
For superior " " " " "	28	30
In shipping order " " " " "	29	35
Waney board, 18 to 19 inch " " " " "	30	36
Waney board, 19 to 21 inch " " " " "	37	40

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	45	51

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	30	34

BIRCH.

16 inch average, according to average and quality	20	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $37 to $42 for 3rd quality.
Bright spruce, according to mill specification, $40 to $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality.

SAGINAW, MICH.

SAGINAW, Mich., April 10th.—More so than at other points, the spring season opens up with little evidence of life in the lumber trade. Few sales are being made and the disposition is firm with many buyers to hold off in anticipation of a break in prices. The statement is made that log run is selling now at probably $2 below price of a year ago. From $13 to $20 are quotations on log run. $8.50 and up is being asked for the Norway bill stuff and $11 and $11.50 for boxes. The reports of trade that reach this point from the East do not give encouragement for large trade. Affairs there, we are told, are dull. No alterations in shingle quotations is to be noted.

FINISHING LUMBER—ROUGH.

Uppers, 1, 1¼ and 1½	45 00	Fine common, 1 in	35 00
2 in	46 00	1¼ and 1½ in	36 00
Selects, 1 in	40 00	2 in	37 00
1¼ and 1½	41 00	C, 7, 8 and 9 in	30 00
2 in	42 00		

SIDING.

Clear, ½ in	24 00	C, ½ in	19 00
⅞ in	48 00	⅞ in	34 00
Select, ½ in	21 00	No. 1, ½ in	13 00
⅞ in	40 00	⅞ in	23 00

TIMBER, JOIST AND SCANTLING.

2x4 to 10x10, 12, 14 and 16 ft.	$11 00	20 ft	14 00
18 ft	13 00	22 and 24 ft	15 00

For each additional 2 ft. add $1; 12 in. plank and timber $1 extra; extra for sizes above 12 in.

SHINGLES.

XXX 18 in. Climax	3 65	18 in. X (cull)	1 00
XXX Saginaw	3 40	XXX shorts	2 25
XX Climax	2 25	XX	1 50
18 in. 4 in. c. b	1 25		

LATH.

Lath, No 1, white pine	2 25	Lath, No. 2, W. pine, Norway	1 65

NEW YORK CITY.

New York, April 10.—Any improvement in the volume of sales over what has been made for some months past is encouraging. So it can be said that an increase in business of the past month portends better things for the future. There is, locally, evidences of a good deal of building this summer and this will mean an increased consumption of lumber. Here, as in other places, too, stocks in the yards are quite low and if building opens out any ways lively, there will have to be a good deal of buying. Quite a little panic has been created in spruce through a movement that is credited to Southern manufacturers, who are said to have instructed their agents to make sales at once and not let price stand in the way. The result has been that spruce in place of carrying $16.50, $17 and $18, as was the case a few months ago, can now be had at $14, $15 and $16. The demoralization of spruce prices has had its influence on hemlock. Nothing very special can be reported of white pine ; all the better grades are not in it.

WHITE PINE—WESTERN GRADES.

Uppers, 1 in	$44 00@45 00		Coffin boards	20 00	22 00
1¼, 1½ and 2 in	46 00	47 00	Box, in	$17 00@17 50	
3 and 4 in	55 00	58 00	Thicker	17 50	18 50
Selects, 1 in	40 00	41 00	Ccil'g, base, fig. No. 1	40 00	42 00
1 in., all wide	41 00	43 00	No. 2	35 00	37 00
1¼, 1½ and 2 in	43 00	44 00	No. 3	24 00	26 00
3 and 4 in	52 00	53 00	Shelving, No. 1	30 00	32 00
Fine common, 1 in	36 00	37 00	No. 2	25 00	27 00
1¼, 1½ and 2 in	38 00	40 00	Molding, No. 1	36 00	37 00
3 and 4 in	46 00	48 00	No. 2	34 00	36 00
Cutting up, 1 in. No. 1	28 00	30 00	Bevel sid'g, clear	22 50	23 00
No. 2	21 00	23 00	No. 1	22 00	22 50
Thick, No, 1	29 00	32 00	No. 2	20 00	20 50
No. 2	24 00	26 00	No. 3	16 00	17 00
Common, No. 1, 10 and 12 in	22 00	23 00	Norway, c'l, and No. 1	23 00	25 00
No. 2	20 00	21 00	No. 2	20 00	22 00
No. 3	17 00	18 00	Common	18 00	19 00

ALBANY, N.Y.

Albany, N. Y., April 10.—The opening of navigation, which has been earlier than usual this season, is giving a spurt to lumber shipments. The out-go for some months to the East by railroad had been very slow. Trade is mending, but it is not anticipated by lumbermen that any extensive purchases will be made or contracts for large quantities closed.

PINE.

2½ in. and up, good	$56	$60	10-in. common	$15	$16
Fourths		58	12-in. dressing and better	28	34
Selects		50	Common	15	17
Pickings		45	1¼-in. siding, selected, 13 ft.	40	45
1¼ to 2-in. good	52	55	Common	15	17
Fourths	47	50	1-in. siding, selected	38	42
Selects	42	45	Common	15	17
Pickings	37	40	Norway, clear	22	25
1-in. good	52	55	Dressing	16	18
Fourths	47	50	Common	11	15
Selects	42	45	10-in. plank, 13 ft., dressing	c.	c.
Pickings	37	40	and better, each	42	55
Cutting-up	22	27	10-in. plank, 13-ft. culls, each	23	25
Bracket plank	30	35	10-in. boards, 13 ft., dressing		
Shelving boards, 12-in. up	30	32	and better, each	28	32
Dressing boards, narrow	19	21	10-in. boards, 13-ft. culls	17	21

LATH.

Pine	$2 40	Spruce	$2 30 $2 40

SHINGLES.

Sawed Pine, ex. xxxx	$4 40	$4 50	Bound butts, 6 x 18	$5 90	$6 00
Clear butts	3 15	3 25	Hemlock	2 15	2 30
Smooth, 6 x 18	5 50	5 60	Spruce	2 20	2 30

BUFFALO AND TONAWANDA, N.Y.

Tonawanda, N. Y., April 10.—An improvement is to be noted in trade during the past month. At the same time caution marks the operations of buyers. The dullness of winter seems to have educated many into a hand-to-mouth policy of buying, and as yet they have not got over the habit. The feeling is here, that present prices for lumber will not prevail the season through.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in	$47 00	50 00	Shelving, No. 1, 13 in and up, 1 in	31 00@33 00	
2½ and 3 in	55.00	57 00	Dressing, 1¼ in	26 00	28 00
4 in	58 00	60 00	1¼ x 10 and 12		28 00
Selects, 1 in	38 00	40 00	1½ in	24 00	25 00
1¼ to 2 in	40 00	42 00	2 in	26 50	28 00
2½ and 3 in	50 00	52 00	Mold st'ps, 1 to 2 in	33 00	35 00
4 in		54 00	Barn, No. 1, 10 and 12 in	23 00	24 00
Fine common, 1 in	35 00	38 00	6 and 8 in	22 00	23 00
1¼ and 1½ in	37 00	38 00	No. 2, 10 and 12 in.	18 00	19 00
2 in	39 00	40 00	6 and 8 in	18 00	19 00
3 in		45 00	No. 3, 10 and 12 in.	14 00	16 00
4 in		45 00	6 and 8 in	14 50	15 50
Cut'g up, No. 1, 1 in.	28 00	30 00	Common, 1 in	16 00	18 00
1¼ to 2 in	34 00	36 00	1¼ and 1½ in	18 00	20 00
No. 2, 1 in	18 00	20 00	2 in	20 00	22 00
No. 2, 1¼ to 2 in	24 00	26 00			
No. 3, 1¼ to 2 in	18 00	19 00			

BOX.

1x10 and 12 in. (No 3 out)		14 00	Narrow	13 00@14 00	
1x6 and 8 in (No. 3 out)		13 50	1¼ in	15 00	18 00
1x13 and wider	15 00	17 00	1½ in	15 00	18 00
			2 in	15 00	18 00

SHINGLES.

18 in. XXX, clear	3 85	4 00	16 in., *A extra	2 60	2 70
18 in. XX, 6 in. clear.		2 85	16 in. clear butts		2 10

LATH.

No. 1, 4 ft.	2 50	2 60	No. 1, 3 ft.		1 10
No. 2, 4 ft.		1 95			

OSWEGO, N.Y.

Oswego, N. Y., April 10.—A better feeling prevails in trade here and orders are coming in quite freely.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$47 00@48 00				
Pickings, " "	39 00	40 00			
No. 1, cutting up, " "	34 00	35 00			
No. 2, cutting up, " "	24 00	25 00			
In strips, 4 to 8 wide, selected for moulding strips, 14 to 16 ft.	32 00	34 00			

SIDING.

1 in siding, cutting up picks and uppers	32 00@39 00		1¼ in selected	38 00@43 00	
1 in dressing	19 00	21 00	1¼ in dressing	20 00	22 00
1 in No. 1 culls	14 00	15 00	1¼ in No. 1 culls	15 00	17 00
1 in No. 2 culls	13 00	14 00	1¼ in No. 2 culls	14 00	15 00
			1 in. No 3 culls	11 00	12 00

1X12 INCH.

12 and 16 feet, mill run	21 00	24 00			
12 and 16 feet, No. 1 and 2, barn boards	19 00	20 00			
12 and 16 feet, dressing and better	27 00	31 00			
12 and 16 feet, No. 2 culls	15 00	16 00			

1X10 INCH.

12 and 13 feet, mill run, mill culls out	21 00	23 00			
12 and 13 feet, dressing and better	26 00	28 00			
1x10, 14 to 16 barn boards	18 00	19 00			
12 and 13 feet, No. 1 culls	16 00	17 00			
12 and 13 feet, No. 2 culls	15 00	16 00			
14 to 16 feet, mill run mill culls out	21 00	23 00			
14 to 16 feet, dressing and better	26 00	28 00			
14 to 16 feet, No. 1 culls	17 00	18 00			
14 to 16 feet, No. 2 culls	15 00	16 00			
10 to 13 feet, No. 3 culls	11 00	12 00			

1¼X10 INCHES.

Mill run, mill culls out.	$22 00@25 00		No. 1 culls	17 00	18 00
Dressing and better	27 00	35 00	No. 2 culls	15 00	16 00

1X4 INCHES.

Mill run, mill culls out	17 00	21 00	No. 1 culls	14 00	15 00
Dressing and better	24 00	30 00	No. 2 culls	13 00	14 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20 00	25 00	6, 7 or 8, No. 1 culls	16 00	17 00
			6, 7 or 8, No. 2 culls	14 00	15 00
6, 7 or 8, drsg and better	25 00	30 00			

SHINGLES.

XXX, 18 in pine	3 70	3 90	XXX, 18 in. cedar	3 50	3 70
Clear butts, pine, 18 in.	2 70	2 90	Clear butt, 18 in. cedar	2 50	2 70
XXX, 16 in. pine	3 00	3 20	XX, 18 in. cedar	1 90	2 00
Stock cedars, 5 or 6 in.	4 50	5 00			

LATH.

No. 1, 1¼	2 30		No. 2, 1¼	2 25	
No. 1, 1 in.	1 80				

BOSTON MASS.

Boston, Mass., April 10.—At this point, we have yet to learn that there is a boom in lumber. The winter has been a dull one and it is quite uncertain how soon things are going to waken up. The opening of spring as yet, has not given us any encouragement.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards		$12 00	¾ inch	$ 9 25	9 75
Coarse No. 5		16 00	11-16 inch		9 00
Refuse	11 00	12 00	⅝ inch		8 50
Outs	9 00	10 00	Clapboards, sap ext.	52 50	55 00
Boxboards, 1 inch	10 75	11 00	Sap clear	47 00	50 00
⅞ inch	9 75	10 00	Sap, 2nd clear	38 00	40 00
			No. 1		25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in	$52 00@54 00		Fine com., 3 and 4 in	42 00	46 00
1¼, 1½ and 2 in	52 00	55 00	No. 2, 1 in. Fine com.	28 00	30 00
3 and 4 in		60 00	1¼, 1½ and 2 in	29 00	31 00
Selects, 1 in	45 00	46 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in	48 00	50 00	No. 2	36 00	37 00
3 and 4 in		51 00	No. 3	28 00	30 00
Moulding boards, 7 to 11 in. clear	36 00	38 00	Cut ups, 1 to 2 in	24 00	32 00
60 per cent. clear	34 00	36 00	Coffin boards	21 00	23 00
Fine common, 1 in	40 00	41 00	Common all widths	22 00	26 00
1¼, 1½ and 2 in	41 00	43 00	Shipping culls, 1 in	15 00	15 50
			do 1¼ in.	15 50	16 50

SPRUCE—BY CARGO.

Scantling and plank, random cargoes	14 00@15 00		Coarse, rough	12 00@14 00	
Yard orders, ordinary sizes	15 00	16 00	Hemlock bds., rough	12 00	13 00
			" " dressed	12 00	14 00
Yard orders, extra sizes	16 00	18 00	Clapbds., extra, 4 ft.	29 00	30 00
			Clear, 4 ft	30 00	31 00
Clear floor boards	19 00	20 00	Second clear	23 00	24 00
No. 2	16 00	17 00	No. 1	12 00	16 00

LATH.

Spruce by cargo	2 50@2 75

SHINGLES.

Eastern sawed cedar, extra	$3 00	$3 25	Eastern shaved sawed cedar, 1st quality	5 00	
clear	2 30	2 75	2nd quality	4 75	
2nd's	2 00	2 35	3rd "	3 85	4 00
extra No. 1	1 50	1 75	4th "	3 00	3 25
			Spruce No. 1	1 50	

TRADE NOTES.

Following is a copy of a letter recently received by the Magnolia Metal Co., New York :

FAIRBANKS' STANDARD SCALES.

OFFICE OF
THE FAIRBANKS COMPANY, 83 Milk Street, Boston.
Cable Address—"Fairbanks."

Magnolia Metal Company, New York, N. Y.

Gentlemen :—We are compiling a new catalogue, comprising all the articles which we are now selling in our department of Railway and Manufactory Supplies. We desire to take this opportunity to add to the line of goods which we are handling, and would like to make arrangements with you to take up the sale of your goods and illustrate the same in our catalogue. The book we intend to issue will consist of 300 pages of the size of 8 x 11½ outside measure, and will be placed in the hands of every customer of ours, both at home and abroad. We handle only the highest grade of goods, and believing that your manufactures are strictly first-class in every respect, we wish to give you an opportunity to have them listed in our catalogue to the extent of one or more pages, provided you are willing to bear the expense, which will not be great. The cost of distribution will be borne by us.

Please favor us with an early reply, as we are making this offer only to a limited number of manufacturers, and our book will shortly be ready for the press.

Yours truly,
The Fairbanks Company.
(Signed) R. L. T. Evans.

BY THE WAY.

At certain seasons of the year lumbermen study with as much anxiety weather probabilities as does the farmer and market gardener. The harvest of grain, or it may be of new-grown potatoes or early green stuffs, over which we smack our lips in the opening spring days, depend for their growth on the needed supply of rain and sunshine. The same elements control the size of the log crop from season to season. Shantymen may have put in a heavy season's work in the woods, and felled with all their well-known strength and energy an almost countless number of trees. But whether the trees, after they have been felled and cut into logs, are to get beyond the forests where they first saw light is something no "fellar" can tell until he draws near to the end of the winter's logging. Let spring weather come on with a rush and the snow disappear, as is said to have been the case at certain points in the Ottawa and Georgian Bay territories this season, and the crop will be a short one. A considerable quantity of logs will be left, it is said, on the skids in the Georgian Bay district because of the sudden thaw that came along early in March. Colonel Bliss, an American lumberman, who has been cutting in this district the past winter, says he had only about 600,000 feet left on the skids, but he is more lucky than some others.

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The buzz of the saw mill is welcome music to thousands of men, women and children in scores of towns and villages in different parts of our beautiful Dominion. It tells of commercial activity, and of bread and butter in more generous quantity to many families that have had to subsist on small rations during the winter term. As nearly April Fool's day as can be the mills strive to get going, but here again old Father Probs must be consulted. A general opening of the mills depends upon the ice going out. Take the Ottawa section at the present time. If the ice goes out from the upper lakes within a few days, as expected, the mills in that great lumber district hope to be running about the middle of the present month, but should the weather continue cold the opening will be delayed. The quantity of logs that will come to the Chaudiere mills this season will be less than a year ago. Mr. G. B. Green, manager of the Upper Ottawa Improvement Co., does not expect his company to tow within 25 per cent. of the logs this summer they did last year. He explains the expected shortage to the fact that during the winter the deep snow retarded the cutting of logs, and now the sudden break up in the weather had stopped drawing. So it looks at other points, the word we have from Michigan being quite as discouraging in this respect.

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What is to be the fate of the Wilson tariff bill is just one of the most difficult things to predict. So long as it was being discussed from the commercial point of view it could be followed with some measure of intelligence. But Senator Hill, of New York, and his friends are now after it, and their anxiety is to down Cleveland, regardless of the business considerations of the country. Lumber interests in the United States are no doubt being affected by the present situation, for the reason that it cannot now be said whether or not it is safe to make investments on the basis of lumber from Canada coming in free. On the other hand, if by any turn of the political kalediscope, increased restrictions should be placed on Canadian lumber going into the States, we have already had an intimation from the Minister of Finance that the government will consider seriously the question of putting an export duty on logs now going across the border free. Our own impression is that when the Wilson bill has eventually been disposed of lumber will be found on the free list, but the movement may be delayed long enough to restrict business both in Canada and the States for the present season.

Four million feet of logs were cut on Salmon river, N. B., last winter.

Alpena, Mich., will receive about 40,000,000 feet of logs from Canada this season.

The saw and planing mill of Jesse Cook, at Zephr, Ont., was destroyed by fire on 30th ult. Loss $10,000; no insurance.

MORTISING MACHINES.

By F. J. Harmon, in "Wood Worker."

EVERY shop should be equipped with a good power mortising machine. One fitted with the improvement of a self-turning chisel is desirable, but it does not pay, especially for heavy work, to use a machine that reverses the chisel by dropping the table. It may be well enough to use such a machine for very light work, but even then I do not like to be forced to lift the foot 12 or 18 inches, letting the work and table fall to the bottom limit of its travel, and then be obliged to raise things up again before the work can be carried along. I have done this even on big car mortising machines, but I will never buy a machine of that kind for my own use. The best reverse is a small lever arrangement located close to where the left hand would naturally be located when holding the work to be mortised.

The machine should have the boring attachment belted separate. A pretty good way is to have it fitted with the hollow shaft arrangement, or one shaft inside the other, one to drive the chisel, the other the auger. Then two tight and two loose pulleys can be put along side each other and the two belts controlled by a single shipper built with two guides. When the shipper occupies a central position, both belts are on the two loose pulleys, or, upon a single wide loose pulley, but as two belts seldom ever drive at the same exact rate of speed, and also because it may be desirable to run the auger faster than the chisel, it is better to have a separate loose pulley for each belt. Now, when both belts are shipped to the right, one goes on the chisel-driving pulley, the other to the loose pulley vacated by the first belt. But when the bit, or auger, is driven, its belt goes off to the left and the other belt comes to its place.

The shipper handle should be rigged so close to the mortiser that it can be actuated without the operator having to move from his tracks. Indeed, I like even better than the regulation shipper handle, to rig a rope attachment for operating the belt shifter. Let the rope run vertically past the post or frame of the machine, and if necessary let it past down through the floor, there to be attached to the belt shifter, and by means of pulley sheaves carried to the desired position beside the machine. Another rope is attached to the other end of the shipper and run over a pulley to a vertical position and a weight attached which is heavy enough to move the shipper and start the machine. Then, to operate the belt shifter it is only necessary to pull down or lift up on the rope. For this reason the counter weight attached to shipper must be heavy enough to operate it any time when the other weight is removed, by lifting on the main rope.

All soft woods should be mortised without boring, but in case of very deep, narrow mortises it is well to bore a single hole before commencing with the chisel. Hard wood should be bored before mortising. In some kinds of very heavy work it is well to put in a narrow chisel and make two or more cuts. This puts much less strain on the machine and is nearly as rapid, owing to the possibility of taking a thicker chip with the narrower tool.

When a good deal of deep mortising has to be done, say for door stiles, I make a square end tool 1⅛ inch narrower than the mortise and about ½ inch thick. Put this tool into the machine in place of the chisel, after that tool has been used all that is necessary, then with the blunt tool all the chips can be driven out cleanly and quickly. A tool of this kind saves a good deal of time in cleaning up a mortise, against what would be required in "beating out" by hand. But with this tool, as with the hand concern described later, it must be used carefully or the work may be split open. It is possible to drive mortise chips in with very great power, so great, in fact, that the surrounding wood will not and cannot stand it, and the result is a crack that will damage, if it does not spoil the work in hand beyond even the possibility of glue-pot repairs.

The hand tool above alluded to is made of good, hard hickory, maple or oak, hickory preferred, and sap-wood at that. A piece about 1¼ inches square is planed up, the length being eight inches more than the thickness of the stuff make the stick 12 inches long. Put one end of the stick in the vise and with a draw-knife shave down the free end until it is thin enough to go into the mortise, taking care to keep the thin part right in line with the middle of the handle or thick part, otherwise the tool will spring. Another very good way is to mark off the exact shape of the tool, then saw it out on the band saw.

In mortising by hand, I like to bore a single hole to start with in all except the very softest woods, say white pine. After the hole is bored, commence to cut down with the chisel, working towards one end of the mortise. Keep on until within ⅛ inch of the mark, then put the chisel squarely on the mark and drive it neatly down, taking great care not to cut under or to slant the other way. The nicety of the mortising depends largely upon the manner in which this last and light cut is made. Next commence again at the hole and work in the opposite direction until the end of the mortise is reached, then finish that in the same manner as the first end. The piece should then be turned over and the other side chiselled. The driving out stick should then be used. Place the mortise over some object with a hole in it, or project it over the bench a little, then drive the stick down through the mortise at the point where there are the fewest chips. Be careful and not drive too hard. Work the stick through gradually, perhaps turning the work if necessary. After once through the rest is easy. Advance the stick ¼ or ½ inch at a time, faster if the chips go out easily, and soon the entire mortise will be cleared. If the chiseling has been well done but little trimming will be needed. The tool must be held very true and driven squarely, to avoid leaving a bunch on one side of the mortise and a hollow on the other side. If trimming must be done, take a firmer chisel as wide as will easily go into the mortise, and skive high parts boldly down, taking on every part of the wood which shows itself when sighting through the mortise from one line to the other.

In grinding mortising chisels do not let the face get rounding. Keep the chisel flat on the stone when grinding the face, which should be ground as little as possible. Power chisels with corner lips must be handled with great care, and used with very light chips in knots or hard wood.

SETTING PLANER KNIVES.

WORKERS in wood are not all of one opinion as to the best way of setting planer knives. The following suggestions, however, from a correspondent of the Wood Worker, as referring to a heavy 30-inch double surface, has much in it that is practicable and sensible. The correspondent who signs himself Nemo, says :

"To start with, after taking off the dull knives, we have a sharp steel scraper, generally made from a half-round or flat file, with which we scrape off the pitch and gum from the edge of each face of the cylinder. After that is thoroughly cleaned we turn the cylinder so that one side is level (on a four-sided cylinder there would be two sides straight). We then drop a knife down on the bolts on the back of cylinder, then turn the cylinder forward until the knife is nearly level. We have a straight-edge ¾ inches thick by 1½ inches wide and 30 inches long, in which there is a rebate cut ⅛ inch wide ; the ⅜-inch is the amount of set we give the knives.

"Two men take the straight-edge and hold it up against the face of the cylinder, then push out the knife until the edge strikes the edge of the rebate. They hold it there tight with one hand, while with the other they tighten all of the bolts. Then they take the wrenches, and go over them again, putting them all down tight. After the knife is tight, they turn the cylinder forward one-half over and put the mate to the first knife on (the knives are balanced up in pairs).

"In putting the knives on the lower cylinder they shove the back bed around out or the way and take one of the bars out so they can get at the cylinder, then set the knives the same as they did on the upper cylinder. There are two bars to the lower cylinder, one on each side, which are adjustable. After they have put on sharp knives they raise these bars up so the knives will not cut too much, and as the knives are worn down by filing they lower these bars to correspond.

"In front of the upper cylinder is an adjustable pressure-bar. When we want to run the planer, after putting on sharp knives, we start the machine and put in two boards that will nearly fill the width of the planer, and feed them in a little ways beyond the upper cylinder, then stop the feed and adjust the pressure-bar so it will hold the boards down on the bed steadily and not allow them to chatter. If the lumber is coarse and knotty, we watch the work for a while, as it is liable to chip or tear. In that case, we stop the machine, and while it is running slowly, before it stops, feed the boards ahead a little by hand, when the knives that are doing the cutting will show a light streak of dust on the edge. On those knives we run a file over the edge lightly, giving the cutting edge a very short bevel. Once or twice doing that will nearly always stop all chipping or tearing.

"I will also give the way we have of setting siding or beading knives on a matcher-cylinder. It is not a patented way, but we find it a very quick and handy one. We use a small pattern that the shape of the work to be done is drawn upon, in this way : We take a piece of lattice stuff, about ¼ inch thick, 1⅛ inch wide, and a little shorter than the length of the cylinder. In that we drive a small nail in the edge close to one end ; from that nail we mark off the distance the inside head cuts from the cylinder. That is the point we have to work from. On the face of the pattern we make a line parallel with the edge, the same distance the knives are set out from the cylinder, then taking the beading or siding knife and mark on the pattern, with a sharp pencil, its proper place. After a pattern is once made any one that can set knives on a cylinder can set the knives for either ceiling or patent siding. The shape of pattern looks like that used for cove siding.

"There is one fault with this way of setting, and that is if the knives on the cylinder are filed away some, the pattern knives will cut too deep. Then you will have to set them back to correspond, and sometimes it is quite a nice little trick to get them right, especially if the siding has a long bevel."

LUMBER PRICES IN MANITOBA.

THE report of the Minister of the Interior, recently issued, gives a list of lumber prices at different points in Manitoba. The average cost of lumber to the consumer, at Winnipeg, is placed at $18, while at Brandon, 150 miles further west, it is placed at $11 to $15 per thousand. It seems strange, says The Commercial, of Winnipeg, that, according to these figures, lumber is cheaper farther from the source of supply than at Winnipeg. The figures are no doubt misleading, prices probably being based on a different class of lumber. Brandon is a manufacturing point for spruce lumber, the logs being brought down the Assiniboine river from the Riding mountain country. This class of lumber is sold much cheaper than pine, and the price of lumber at Brandon is no doubt based on spruce, while at Winnipeg it is based on pine. Pine lumber could not be sold as cheap at Brandon as at Winnipeg (much less $3 to $7 cheaper) without loss, as it costs considerable more to lay it down at the western town. Brandon, however, has always been a very cheap lumber market for the consumer, but a very dear market for the wholesale dealers, who have made heavy losses through the frequent failures of the Brandon retail dealers. The one fact accounts for the other. People up around Brandon have got cheap lumber at the expense of the wholesale dealers who supplied it. Cutting in prices has been the rule in that market, followed by frequent failures, and the trade has been in a continual state of demoralization.

A USEFUL RECIPE.

A FIREPROOF and waterproof substitute for paint, for use in boiler and engine rooms, consists of six quarts of freshly slacked lime, well sifted, to which is added one quart of rock salt and a gallon of water, the mixture being then well boiled and skimmed clean. To five gallons of this mixture are added a pound of alum, half a pound of copperas (stirred in slowly), three-quarters of a pound of potash, and four quarts of fine sand or hardwood ashes, well sifted. To this may be added any coloring material desired. It is said to be as durable as slate, and to be especially applicable to brickwork and similar surfaces.

NOTES ON BELTING.

A LARGE proportion of the so-called accidents to belts, in which they jump from one cone to another, or run into neighboring gears, are due to excessive pliability. Owing to their greater lateral stiffness, thick belts are much to be preferred to thin ones. So much do I believe that the property of stiffness increases the life of belts that I make it a rule to use as thick a belt in all cases as the diameter of the pulleys will permit. A manifest advantage of belts made of two or more thicknesses of leather lies in the fact that imperfection of the leather will produce but little effect in a double or triple belt, while in a single it is fatal. Messrs. Lewis Bancroft have, in their experiments, demonstrated the fact that "no marked difference could be detected in the power required to run a wide double belt or a narrow light one for the same tension as modern speeds." And again, we see ropes up to two inches in diameter transmitting power with great efficiency, and with apparently but little loss of power owing to their thickness. Therefore a thick belt will be practically no less efficient than a thin one on account of its stiffness.

Many experiments have shown that the pulling power of belting for a given arc of contact is almost independent of the area of the belt in contact with the belt, and that it depends chiefly upon the sectional area of the belt, and its total tension; so that a triple belt will transmit about as much power as a single belt three times its width.

With wide belts, and belts running at high speed, it is especially desirable that the thickness should be increased. If thin belts are used at high speed, they almost invariably run in waves on the slack side, particularly if the load which they are transmitting changes suddenly. These waves frequently continue in the belt while it is rounding the driven pulley, so that one can sometimes even see light in places between the belt and pulley rim when standing in the proper position. This wrinkling of belt, and the snapping that occurs as the waves straighten out, wears it very fast, and causes the splices to part, frequently in a few months. The remedy for this trouble I have invariably found to be an increase in the thickness of the belt. When a sufficient thickness is used, the belt settles down on the same pulleys and under the same conditions to a long, steady curve on the slack side, and the wrinkling and snapping cease.

It would seem also as though a certain ratio of thickness to the width of belt should be maintained, particularly in high-speed belts, otherwise the belt is apt to chase from side to side on the pulleys. This chasing would seem to be due chiefly to the oscillation of the belt around its longitudinal axis on the slack side, the belt being thereby tightened, first at one edge and then at the other, each side as it is tightened tending to run toward the center of the pulley. This oscillation, and the resultant chasing, are almost sure to cease when the thickness of the belt is increased in proper proportion to its width. As an illustration of this principle, the writer has in mind the case of a belt 78 inches wide and 9-16 inches thick, running about 5,500 feet per minute, which could never be prevented from chasing from side to side on its pulleys for any length of time without the use of an idler pulley. This chasing was due to the oscillation about its longitudinal axis, which was caused by the small thickness of the belt in relation to its width. A belt ⅞ inches thick and 72 inches wide, used on the same pulleys, was almost entirely free from the chasing, and I am convinced that an increase to 1⅛ inches in thickness would have rendered it sufficiently stiff to permanently remove the trouble. It should be noted that the thicker belt proved to be far more economical, durable, and satisfactory in every way than the thin belt. If the principle is correct, of using thick belts on account of their lateral stiffness and consequent durability, it becomes of the utmost importance to determine the minimum diameter of pulley which can be used with a given thickness of belt, and still have the belt last well. The writer is quite sure that the double leather belts ⅜ inch thick will last well and give excellent satisfaction on pulleys as small as 12 inches in diameter, as he has had many belts in use for years under these conditions. For some time past he has had a triple leather belt 12 inches wide, 0.56 inch thick, running about 4,500 feet per minute, with an idler pulley pressing lightly upon it, and transmitting about 100-horse power to a pulley 12 inches in diameter. This belt has up to date given excellent satisfaction, and has already lasted much longer than the two double leather belts which preceded it.

Regarding the question of fastening the two ends of the belt together, I think it is safe to say that the life of belting will be doubled by splicing and cementing the belt, instead of lacing, wiring, or using hooks of any kind. When belts are subjected to the most severe usage, the spliced portion should be riveted, iron burrs being preferable to copper. For double belting, the rule works well of making the splice for all belts up to 10 inches wide, 10 inches long; from 10 inches to 18 inches wide the splice should be the same width as the belt, 18 inches being the greatest length of splice required for double belting.

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Of course you will want CAMP SUPPLIES. Your Fall orders must be nearly exhausted. BEFORE ordering your Spring Supplies write us for samples and quotations. We quote Currants and Raisins 'WAY DOWN, and our JAPAN TEAS are special value. Just drop us a line.

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OUR NORTHWEST LUMBER SUPPLY.

EMBODIED in the report of the Minister of the Interior laid before parliament at the present session are the particulars of the several crown timber agents under the control of the Dominion Government. Briefly summarized these reports say: "The price of lumber within the Winnipeg agency varies from $9 to $18 a thousand feet, according to the quality and kind of lumber. There are 29 mills in operation within the agency cutting under government license. The revenue received from the British Columbia crown timber agency during the last year was $32,780, being an increase of $1,864. Of the amount collected, the sum of $4,693 has been receivee for bonuses of berths put up to public competition. The total area acquired was about 34.56 square miles, averaging a bonus of $136.07 a square mile. The total quantity of lumber manufactured for the year amounted to 16,089,067 feet, as compared with 20,062,680 feet for last year, and sold at the rate of $9 to $10 a thousand. There were 13 mills within this agency operating under license from the Dominion government. The total amount of dues collected within the Calgary agency during the year amounted to $17,983, an increase of $3,168. The price of lumber at Calgary was from $10 to $18; at Fort McLeod, from $10 to $39; Cypress Hills, $10. Seven saw mills were operating within this agency last year under the government license. The total amount of dues collected within the Edmonton agency was $3,795 being a decrease of $1,495, as compared with previous year. The price of lumber at Edmonton during the year was $16 to $23 a thousand feet. The agent reports four saw mills in operation within this agency. The total amount of dues collected within the Prince Albert agency was $5,671, being a decrease of $4,347, as compared with the previous year. Lumber sold at Prince Albert from $17 to $40 a thousand. There are three saw mills in this agency cutting timber under license.

Saw mill returns received at the head office gave the following quantities of building material as having been manufactured and sold during the year within the five agencies: Sawed lumber, manufactured, 38,104,797 feet; sold, 37,660,002 feet. Shingles, manufactured, 2,687,499; sold, 3,383,407. Lath, manufactured,455,750; sold, 480,500. One hundred and twenty-seven licenses to cut timber over a total area of 2,669.45 square miles were issued during the year. The area licenses in the province of Manitoba, the provisional territorial districts, and on Dominion lands in the province of British Columbia are as follows: Manitoba, 621.08 miles; Alberta, 1,389.05 miles; Assinboia, 66.75 miles; Saskatchewan, 203.83 miles; British Columbia, 388.74 miles. The number of applications received during the year to cut timber was 111, of which 94 were for licenses and permits to cut timber on Dominion lands in British Columbia. The number of applicants during the previous year was 94.

Ocean freights at St. John, N. B., continue firm, ranging from 38s. 9d. to 42s. 6d.

Mr. C. A. Godfrey, representing Walter H. Kendall, of Vancouver, B. C., was a recent visitor to the office of THE LUMBERMAN. Mr. Godfrey reports the lumber business to be looking up in British Columbia.

A union of boiler owners has been formed in south Sweden for the purpose of bringing about a more economical and rational working of boilers, etc., similarly to what has been done with such good results in Germany. The time for the formation of such a union is considered particularly appropriate, inasmuch as some much-needed legislation in connection with boilers may soon be looked for.

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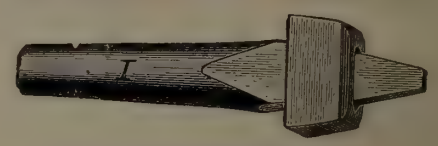

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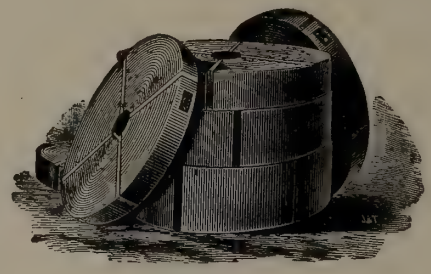

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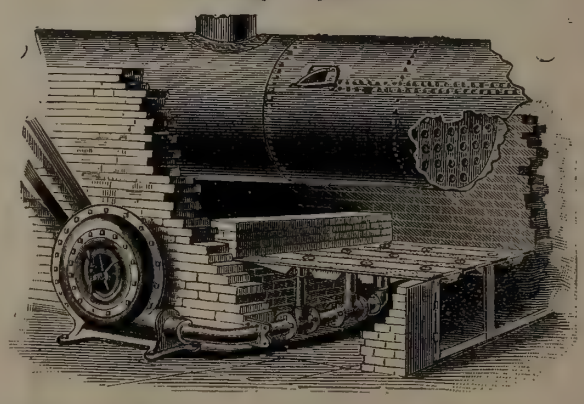
JAMES NAYLOR & SON, Hoops, Staves, Heading, etc., Essex, Ont.: "The Blast Grates please us beyond expectation. We had spent hundreds of dollars in contrivances to burn our elm sawdust, but without success. We now burn it all, and keep better steam than before with dry wood."

E. H. DOYLE, PROPRIETOR, Detroit Hoop and Stave Co.: Wyandotte, Mich.: "Their work is simply marvellous. They have paid for themselves every fifteen days this season. We steam with refuse 20,000 feet of logs, 30 cords of bolts, a mammoth dry-kiln, and run five engines and all our machinery with two 66-inch by 16-foot boilers, and steam blowing off all the time. One fireman, sixty years old, does the firing, and he has a chair that he uses a third of the time. We use carriers and a bull dog furnace. Your grate is a boon to mankind."

AARON GORDON, Staves and Hoops, Dresden, Ont.: "I do not consider a saw mill complete without Blast Grates."



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TESTIMONIALS:

NELSON, TENNY & CO., Saw and Planing Mills, Minneapolis, Minn.: "We have given your Hollow Blast Grates a full test during the present summer at our saw mills in this city and are very much pleased with them. They have greatly increased the draught of our furnaces, so that we have had no trouble in burning the wet sawdust and making all the steam needed."

STEINHOFF & GORDON, Dealers in all Kinds of Cooperage Stock, Wallaceburg, Ont.: "We are greatly pleased with your grates. We can make all the steam we require no matter how wet our fuel is. For burning sawdust they are unequalled."

D. P. McDOUGALL & CO., Manufacturers of Lumber, Maxville, Ont.: "In reply to your letter inquiring about Blower and Grates, may say that so far we are satisfied that we have "struck it" for burning sawdust."

THOS. C. DAWSON, Saw Mill, Renfrew, Ont.: "The Grates are giving good satisfaction. I am well pleased with them and everyone who sees them working thinks they are just the thing."

FOR FULL INFORMATION ADDRESS The Canadian Hollow Blast Grate Co. - Essex, Ontario JOHN MILNE, PRESIDENT AND GENERAL MANAGER.

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Ottawa, Ont.	Ottawa	**Bronson & Weston Lumber Co.**	2 Sawmills, White and Red Pine, Wholesale	Water, Gang and Band, 450m
Ottawa, Ont.	Ottawa	**OTTAWA LUMBER CO.**	Lumber, Pine, Spruce, Hemlock, Wholesale	
Parry Sound, Ont.	Utterson	**Conger Lumber Co.**	Lumber, Wholesale and Retail	
Parry Sound, Ont.	Parry Sound	**Parry Sound Lumber Co.**	Saw, Shingle and Lath Mills, Pine, Wholesale	Water, Gang, Circular, Saw 90m, Shingles 70m, Lath 30m
Muskoka Mills, Ont.	Midland	**Muskoka Mill and Lumber Co.,** Head Office, Arcade, 24 King st. w., Toronto	W. Pine Lumber, Lath and Bill Stuff, all lengths.	2 Mills, Water, 1 Band, 2 Gangs and 3 Circulars.
Alexandria, Ont.	Alexandria	**McPherson, Schell & Co.**	Cheese Box Factory, Pine, Spruce, Cedar	
Almonte, Ont.	Almonte	**Caldwell, A. & Son**	Sawmill, Pine, Lumber, Hemlock, Hardwoods	Circular, 3m
Barrie, Ont.	Barrie	**Dymont & Mickle**	Sawmill, Pine, Spruce, Cedar, Hardwoods	Steam, Circular, 40m
Barrow Bay, Ont.	Wiarton	**Barrow Bay Lumber Co., Limited**	Saw, Shingle and Heading Mill, Pine, Cedar	
Blind River, Ont.	Blind River	**Blind River Lumber Co.**	Oak, Oak Railway Ties, Paving Blocks 2 Saw, Sh. and Lath Mls., Pine, Hem., Bl. Birch	Steam, Circular, 16m Stm., Band, Cir., S. 75m, Sh. 60m
Bobcaygeon, Ont.	Fenelon Falls	**Boyd, Mossom & Co.**	Lumber, Wholesale and Retail	
Barrie, Ont.	Barrie	**Burton Bros.**	Lumber, Wholesale and Retail	
Waubaushene, Ont.	Waubaushene	**Georgian Bay Consolid. Lumber Co.** Hd. office arcade 24 King st. w., Toronto	Pine only.	Waubaushene mill, stm., 200m; Pt. Severn mill, water, 120m
Calabogie, Ont.	Calabogie	**Carswell, Thistle & McKay**	Lumber, Wholesale and Retail	
Callander, Ont.	Callander, G.T.R.	**John B. Smith & Sons** Head Office, Strachan Ave., Toronto	White and Red Pine Lumber, Bill Stuff, Lath and Shingles	Steam, 2 Circular, 80m
Collins Inlet, Ont.	Collins Inlet	**Collins Inlet Lumber Co.**	Lumber, Pine, Oak, Ash, Birch, Whol. and Ret.	
Glammis, Ont.	Pinkerton	**McIntyre, N. & A.**	Saw, Shingle and Lath Mill, Timber Lands, Hemlock, Pine, Lumber, Hardwoods	Steam, Cir., Saw 14m, Sh. 20m
Hamilton, Ont.	Hamilton	**BRADLEY, MORRIS & REID CO.**	Lum., Tim., Pine, Hem., Hwds., Whol. and Ret.	
Huntsville, Ont.	Huntsville	**Heath, Tait and Turnbull**	Sawmill, Pine, Spruce, Hemlock, Hardwoods	Steam, Circular, 25m
Hamilton, Ont.	Huntsville and Katrine	**Thomson, Robert & Co.**	Sawmill, Pine, Spruce, Hardwoods	Steam, Circular, 4m
Keewatin, Ont.	Keewatin	**Dick, Banning & Co.**	Sawmill, Pine, Hardwoods, Wholesale	Steam, Circular
Keewatin, Ont.	Keewatin	**Keewatin Lumber & Mfg. Co.**	Saw, Lath, Sh. and Pl. Mill, Moving Posts, Pine	Water, Band and Circular, 100m
Lakefield, Ont.	Lakefield	**Lakefield Lumber Mfg. Co.**	Lumber, Wholesale and Retail	
Little Current, Ont.	Sudbury	**Howry, J. W. & Sons.**	Lumber, Wholesale and Retail	
London, Ont.	London	**Gordon, James**	Exp. and dlr. in Am. Hwds, made to specification	
Longford Mills, Ont.	Longford	**Longford Lumber Co.**	Saw and Plan. Mill, Tim. Lands and Logs, Pine	Steam, Band and Circular, 100m
Norman, Ont.	Norman	**Minnesota & Ontario Lumber Co.**	Lumber, Wholesale and Retail	
Louise, Ont.	Elmwood, G.T.R.	**S. B. Wilson & Son**	Hardwoods, Shingles, Lath, Handles.	Steam, Circular, 20m.
Toronto, Ont.	Warren, C.P.R	**The Imperial Lumber Co., Limited.**	Pine	80 M. per day, Stm., 2 Cir. Saws
Toronto, Ont.	Cache Bay, Ont.	**Davidson, Hay & Co.**	W. Pine, Lath, Shingles, Dim. Timber, Car Sills	Stm, 2 Band, Cir. & Gang, 140m
Toronto, Ont., Mill: Stony Lake	Lakefield	**S. J. Wilson & Co.**	Pine and Hardwood, Wholesale	Steam, Circular, 15m.
Toronto, Ont.	Toronto	**F. N. Tennant**	Lumber, Wholesale	
Toronto, Ont.	Toronto	**Donogh & Oliver**	Lumber, Wholesale	Com.
Toronto, Ont.	Toronto	**Victoria Harbor Lumber Co.**	3 Saw, Shingle and Lath Mills, White Pine, Whol.	Stm., Cir., Gang and Band, 140m
Toronto, Ont.	Toronto	**W. N. McEachren & Co**	Lumber, Wholesale	Com.
Toronto, Ont.	Toronto	**James Tennant & Co.**	Lumber, Lath, Shingles, etc., Wholesale	Com.
Toronto	Toronto	**DeLaplante & Bowden**	Pine and Hardwood Lumber, Whol. and Retail.	
Toronto, Ont.	Toronto	**James McBain Reid.**	Ry. and Ship Timber, any required dimensions	
Wiarton, Ont.	Wiarton	**Miller, B. B.**	3 Sawmills, Lumber, Barrel Heads	Stm.,Wr., Cir., Port. & Sta., 10m
Montreal, Que.	Montreal	**Dufresse, O. Jr. & Frere**	Sawmill, Pine, Spruce, Hemlock, Hdwds., Whol.	Steam, Circular and Band, 50m
Montreal, Que.	Montreal	**SHEARER & BROWN**	4 Sawmills, Oak, Ash, Elm, Pine, Hem., Dim.	2 Stm., 2 Wat., Band, Cir., 40m
Moodyville, B.C.	New Westminster	**MOODYVILLE SAWMILL CO.**	Sawmills, P. Fin, Spruce, Cedar, Hardwoods	Steam, Circular, 20m
New Westminster, B.C.	New Westminster	**Brunette Sawmill Co.**	Saw and Planing Mills, Sash, Doors and Blinds. Fir, Cedar, Spruce, Hardwoods	Steam, Gang and Circular
Canterbury, N.B.	Canterbury Stn.	**James Morrison & Son**	Sawmill. Pine, Hardwoods	Steam, Circular, 38m
Bridgewater, N.S.	Bridgewater	**DAVIDSON, E. D. & SONS**	5 Saw, Shgle. and Lath Mills, Pine, Spr., Hwds.	Water, Circular and Gang, 200m
South River, Ont.	South River, G.T.R.	**South River Lumber Co., Ltd.**	Pine, Spruce, Birch, Hemlock, Shingles	Stm.. Cir., 40m, Shingles, 35m, Lath, 15m

Lumbermen desirous of being represented in this Directory can obtain information in regard to rates by communicating with the Publisher.

LUMBER TRUCK WHEELS

The Montreal Car Wheel Co.

.... MANUFACTURERS OF ....

Charcoal Iron Chilled

RAILROAD WHEELS

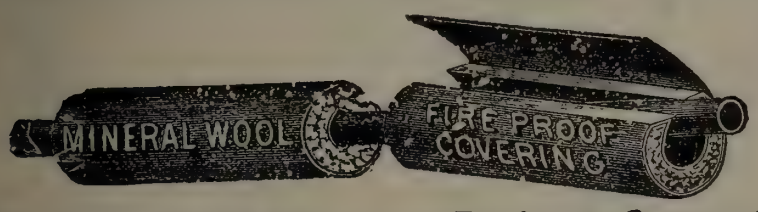
OFFICES:

NEW YORK LIFE INSURANCE BUILDING, MONTREAL

WORKS: LACHINE, QUEBEC

We make a specialty of Wheels suitable for the requirements of Lumbermen and Street Car Service, and can supply them Bored, Finished and Balanced.

CORRESPONDENCE SOLICITED



Mineral Wool Pipe and Boiler Covering

If you want to save fuel . . . . .
" " " dry steam at long distance . .
" " to prevent condensation . . .
" " " " cold water pipes from dripping
" " " " " " freezing

} USE MINERAL WOOL SECTIONAL COVERING

THE best non-conductor is the cheapest covering. Mineral Wool heads the list as a fire-proof non-conductor. Hard pressed coverings are poor non-conductors, and are therefore the most expensive in the end.

A good pipe covering is one of your best investments. It is false economy to have uncovered pipes, as you are just paying the coal man what the covering man should have, and only ashes to shew for it. Give the matter your consideration, it means money to you.

We also carry full lines of Asbestos Goods, and Mineral Wool for fire-proofing, deadening of sound, insulation, etc., etc. Send for Pamphlet.

CANADIAN MINERAL WOOL CO. LTD., - 126 BAY ST., TORONTO

Best Box Metal .....Extant
Stands any Gait, Weight or Motion

COPPERINE

Four Grades do all your work with economy

No Hot Boxes

COPPERINE

Holds the best TESTIMONIALS from the largest machinery manufacturers, owners and users in the country

ALONZO W. SPOONER
SOLE MANUFACTURER
PORT HOPE, ONT.

WANTED AND FOR SALE.

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 24th of each month to insure insertion in the following issue.

PARTIES HAVING BLACK ASH LUMBER and Cedar Fence Posts for sale send us particulars. ROBERT THOMSON & Co., 103 Bay St., Toronto.

WE WANT ALL KINDS OF HARDWOODS. Will pay cash. ROBERT THOMSON & CO., 103 Bay Street, Toronto.

FOR HEMLOCK, DIMENSION LUMBER, hardwood flooring, cedar shingles, piles, sawdust, etc., write J. E. MURPHY, lumberman, Hepworth station, Ont.

WANTED

BASSWOOD LUMBER, BY CAR OR CARGO. Offers invited. Address "Baswood," care of CANADA LUMBERMAN.

LUMBER AND SHINGLE MILL FOR sale in the Village of Dundalk; this is good new 50-horse power mill; will run lumber and shingles at same time; plenty of stock can be bought in the locality for four or five years at a reasonable rate. Apply to JOHN IRWIN, Brampton, Ont.

WANTED SITUATION

AS BAND SAW FILER, NINE YEARS' EXperience; also thoroughly practical on Rotarys. Steady and temperate; good references. Best offer in December for next season and earliest to work, gets me.—H. HOWE, South Boardman, Mich.

SAW MILL CAPACITY 15,000 FEET

BEST WATER AND RAILWAY FACILITIES for shipping. Hard and soft wood limits in connection. Will be sold cheap. Address "W," CANADA LUMBERMAN.

COMMISSIONS

THE ADVERTISER CAN SECURE BIG prices for black ash, basswood, elm and maple in New York and surrounding markets, best of references given. Send lists of stock on hand. No shipment on consignment. Bona fide orders sent you before shipment.

Address "Commissions," care of CANADA LUMBERMAN.

FOR SALE

PORT ROWAN SASH AND DOOR FACTORY and Sawmill and Shingle Mills. The Factory is fitted with new 60-h.p. steel boiler, also with following new machinery by Macgregor and Gourlay, of Galt.

Large Matcher and Planer combined, Band Saw, Power Mortiser, Shafter, Jointer and Sandpaperer.

Apply,
Box 16, Port Rowan, Ont.

LOGGING TRAMWAY FOR SALE

About three miles of 25 lb. T-Rail; 12 Logging Cars complete, and a Shay Locomotive

IN GOOD CONDITION, FOR SALE ON ADvantageous terms.

For further particulars apply to

JOHN J. GARTSHORE,
49 Front Street West,
Toronto.

RAILS FOR TRAMWAYS

NEW AND SECOND-HAND STEEL AND iron rails for tramways and logging lines, from 12 lbs. per yard and upwards; estimates given for complete outfit.

JOHN J. GARTSHORE,
49 Front St. West, Toronto.

FOR SALE

From 5 to 6 Million Feet of First-class

VIRGIN WHITE PINE SAW LOGS

THESE LOGS ARE THE FIRST CUT FROM new timber limits; choice quality; are cut principally 16 feet long, and average from 5 to 6 logs per 1,000 feet, and can be delivered in the Georgian Bay by the 1st of June, 1894.

For particulars apply to

J. D. SHIER,
Bracebridge.

MACHINERY FOR SALE.

ONE 18 x 20 ENGINE IN GOOD ORDER, with 7-inch shaft 8½ feet long, on which are two large pulleys and fly wheel, 10 feet diameter. Will be sold cheap. Also a THREE BLOCK CARRIAGE, Sewrey's make, with three Boss Dogs—V track—in first-class order; two Heavy Slush Chains, with gear; one Circular Saw Mandrill, 30-inch Pulley, guides, tightener, etc.

Apply to

MICKLE, DYMENT & SON,
GRAVENHURST.

Rochester Bros.

: : COMMISSION AGENTS

Limits bought and sold on commission. Limits travelled and carefully prepared. Estimates given.

Some first-class berths on the North Shore of Lake Huron and on the Upper Ottawa now in our hands for sale.

Communications confidential. References given.

36 Rochester St. Ottawa

WHY BAND SAWS BREAK

SIXTEEN REASONS, AND HOW TO AVOID THEM

Being instructions to filers on the care of large band saw blades used in the manufacture of lumber.

A book filled with valuable information on the care of band saws. Giving the reasons for breaking; analyzing each reason; giving instructions to dispense with the causes as laid down in each reason; and full details on filing and brazing. The proper styles of hammers to use are illustrated and described, and views of blades showing the blows of the different styles of hammers form an important part of the illustrations. Improper and unequal tension are then treated, and the manner of properly setting irregular teeth is described. In connection with the treatise is a history of the invention, manufacture and use of the saw from its origin to the present time. The work in whole makes an accumulation of information such as has never before been published.

The book is printed on fine paper, good clear type, and is handsomely and substantially bound in cloth. It will be sent to any address on receipt of the price, **ONE DOLLAR.**

Address— CANADA LUMBERMAN, Toronto, Ont.

FOR PRICES AND SAMPLES OF

REDDAWAY'S CAMEL HAIR BELTING

(CAMEL BRAND)

WRITE TO

W. A. FLEMING

SOLE AGENT FOR REDDAWAY & CO., MANCHESTER, ENG.

The "Camel" Brand Belting stands almost twice the strain of best English oak double Leather Belting.

AGENT ALSO FOR THE FABRIC FIRE HOSE COMPANY, OF NEW YORK, U.S.

SAW MILLS

SUPPLIED

SPECIALLY

WITH

High Grade ...

... Heavy Quality

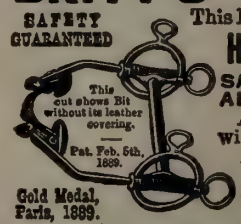
HARD-MOUTHED HORSES

AND PULLERS CONTROLLED WITH ABSOLUTE EASE.

RUNAWAYS IMPOSSIBLE.

This statement is now repeated by thousands who have purchased

BRITT'S AUTOMATIC SAFETY BIT.



This Bit, by an automatic device, closes the horse's nostrils.

HE CANNOT BREATHE, AND MUST STOP.

SAFETY FROM RUNAWAYS ABSOLUTELY GUARANTEED WITH THIS BIT

Any horse is liable to run, and should be driven with it. By its use ladies and children drive horses men could not hold with the old style bits.

Send for illustrated pamphlet containing testimonials from all parts of the world, and earnest and candid expressions about the **BRITT AUTOMATIC SAFETY BIT** and its resistless but harmless and humane power in subduing the most vicious horses and controlling the most **stubborn pullers** and chronic runaways.

The only bit in the world that is endorsed, advocated, used and sold by the Society for the **Prevention of Cruelty to Animals,** ***The Highest Authority.***

DR. L. P. BRITT, 37 COLLEGE PLACE, NEW YORK.

OAK TANNED BELTING

TORONTO
20 FRONT ST EAST
TELEPHONE 475

THE J.C.McLAREN BELTING Co MONTREAL

H. P. ECKARDT & CO.

WHOLESALE GROCERS

Lumbermen's Supplies a specialty.....

..... Correspondence solicited

H. P. ECKARDT & CO. - 3 FRONT ST. EAST, TORONTO

GALT MACHINE KNIFE WORKS

MACHINE KNIVES

OF EVERY DESCRIPTION FOR

Planing, Moulding and Stave Cutting

Send for Price List

PETER HAY, GALT, ONT.

J. J. TURNER & SON

.. Sail, Tent and Awning Maker ..

251 George St. and 154 King St.

PETERBOROUGH

Canoe, Yacht and Boat Sails made to order. Perfect Fits Guaranteed.

Every description of Lumbermen's Supplies and Waterproof Clothing.

WILLIAM FOSTER

Lumber and Commission Merchant

RECEIVER AND FORWARDER OF

LUMBER, LATH AND SHINGLES

... Correspondence Solicited ...

OWEN SOUND, ONT.

CODE: "HEATHER," TORONTO TELEPHONE 1853

WM. C. WILSON

(Late with the Bushnell Co., Ltd.)

Manufacturers' Agent - 24 Front St. E., Toronto

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The Franklin Oil Works, Franklin, Pa.
(Locomotive, Valve Engine, Railway Coach and Car Oils)

The Hamilton Engine Packing Co., Hamilton, Ont.
(Sectional Ring, Rainbow Sheet and Coil Packings, Asbestos Cement)

The Magnolia Metal Co., New York
(Endorsed by the United States and German Governments best Anti-friction Metal in Market)

The Merchants' Refining Co., Buffalo, N.Y.
(Refined Oils in Tank Cars and Barrels, American Paraffine, Wax and Soap Stock)

The Peterboro Carbon Co., Peterboro
(Electric Carbons)

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Detterick & Co., Tanners, St. Catharines, Ont.
(Lace Leather, Rawhide, Russet and Calf)

The Pennsylvania & Delaware Oil Co., New York
(American Lubricating Oils and Grease)

Oils shipped from any port on American side to suit customers.....

Before placing your Spring Order write for my prices.....

BRITISH COLUMBIA RED CEDAR SHINGLES

HAVING made arrangements with H. H. Spicer & Co., of Vancouver, B.C., for the exclusive sale in Ontario of their Celebrated Red Cedar Shingles, I am in a position to supply the trade promptly and in Large Quantities. To the many patrons who purchased from us last year we extend our hearty thanks, and beg a continuance of your patronage this year. To Dealers who have not yet handled these Shingles, we ask you to give them a trial, as we know that this is all that is necessary to insure a continuous trade. Write for further particulars.

F. N. TENNANT - LUMBER MERCHANT

No. 1, Toronto St., Toronto

F. E. DIXON & CO.

MANUFACTURERS OF

Star Rivet Leather Belting

WRITE FOR DISCOUNTS

70 King St. East, Toronto

Every Lumberman wants it — 35 cents buys it

Scribner's Lumber and Log Book

SAVES TIME SAVES MISTAKES SAVES MONEY

BRIMFUL OF EVERY-DAY, PRACTICAL INFORMATION

Address: THE CANADA LUMBERMAN, Toronto

J. W. MAITLAND—H. RIXON J. G. AINSILE—W. STODART

MAITLAND, RIXON & CO.

OWEN SOUND, ONT.

Saw Millers and Lumber Dealers

All kinds of Building Material kept in stock

WE MAKE A ... SPECIALTY OF LONG BILL STUFF IN ROCK ELM, PINE, CEDAR AND HEMLOCK

Quotations furnished on application

... THE ...

FLINT & PERE MARQUETTE RAILROAD

FROM

Port Huron and Detroit

Is the Short Line to

SAGINAW AND BAY CITY

(Centres of the vast lumber interests of Michigan)

MT. PLEASANT, CLARE, REED CITY

BALDWIN, LUDINGTON, MANISTEE

AND

MILWAUKEE, WIS.

The last-named place reached by the Company's line of steamships across Lake Michigan.

The line thus formed is a short and direct route from

MONTREAL TORONTO

and all Canadian Territory

To ST. PAUL, DULUTH and Pacific Coast Points.

This road traverses a section of Michigan with unrivalled advantages to settlers. Cheap lands, thriving villages and towns, well watered with streams in all directions; a market for every product of Forest and Field The policy of the "F. & P. M." is known to all travellers and settlers.

A. PATRIARCHE, Traffic Manager.

GENERAL OFFICES: - SAGINAW, MICH.

NEW & 2ND MACHINERY

ILLUSTRATED CATALOGUE FREE

H.W. PETRIE

TORONTO, CANADA.

FIRE PROOF

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ILLUSTRATED CATALOGUE FREE

METALLIC ROOFING Co

MANUFACTURERS. TORONTO

DO YOU WANT

A Life Policy
An Endowment Policy
An Investment Policy
Or an Annuity Policy ?

THE ONTARIO MUTUAL LIFE

ISSUES THEM ALL

One 20-year Survivorship Distribution Policy embraces all the newest features, and is the best form of Protection and Investment money can buy. It has no equal. Guaranteed values, attractive options and liberal conditions.

A WISE AND GENEROUS PLAN.

Our Annuity Endowment Policy ensures a certain annual income to yourself during 20 years after maturity of the Policy or to your family at earlier death; and the Annuity Life Policy guarantee a sure income to your family during 20 years after your death; first payment immediate. The rates are lower than on ordinary plans.

HEADQUARTERS FOR TRUSSES FOR RUPTURE

INSTRUMENTS FOR CLUB FEET, WHITE SWELLING, SPINAL CURVATURE, & ALL DEFORMITIES

ILLUSTRATED BOOK FREE

CHAS CLUTHE OPPOSITE ROSSIN HOUSE TORONTO, CAN.

134 KING ST. W

ESTABLISHED 1871

Dauntless Shingle and Heading Machine

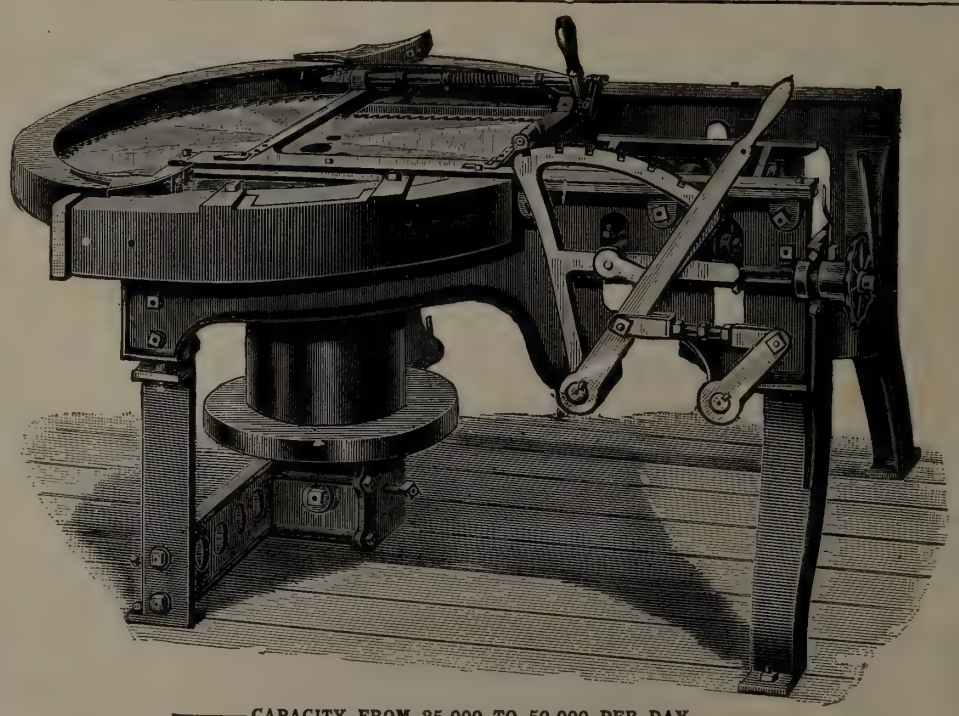
∴ WILL make more Shingles per day than any self-acting machine with vertical saw in existence, and more Shingles from the same quantity of timber.

THE FRAME

... Is of Iron throughout, very heavy and rigid, strongly bolted and braced.

THE CARRIAGE

... Is very light and strong, made of forged Cast Steel Plate, running on steel ways or tracks. Will take in a block 18 inches wide and 19 inches long, adjustable for 16-inch or 18-inch shingles.



CAPACITY FROM 25,000 TO 50,000 PER DAY

[COPY.]

LINDSAY, May 18th, 1893.

MR. F. J. DRAKE, Belleville.

Dear Sir,—The shingle machine we bought of you over a year ago is doing well. Last year we averaged over 32,000 shingles per day all through the season. We did not lose 15 minutes' time from all stoppages, and all repairs so far have not cost 50c. We expect to make a still higher average cut this year.

All our other machinery purchased from you is as good as the shingle machine. Your drag saw, with friction drive, cannot be beaten. We run ours 180 strokes per minute; with 6½ ft. saw it would easily make blocks for two shingle machines. The splitter, with balance wheel 4 feet diameter, weighing 1,000 lbs., is perfect and runs without the least jar. The iron frame shingle jointer with 40-inch saw is the only good jointer we ever saw. In fact, all your machinery, line shaft, pulleys, etc., give us the best satisfaction.

We expect to require another mill in a few days, and, if we do, will send you the order for complete outfit.

Truly yours,

M. DOVEY.

P.S.—If any one wants to see a good working shingle mill send them to me.—M. D.

F. J. DRAKE

PATENTEE AND MANUFACTURER OF ... SAW, SHINGLE AND LATH MACHINERY

BELLEVILLE, ONT.

WM. E. HILL'S

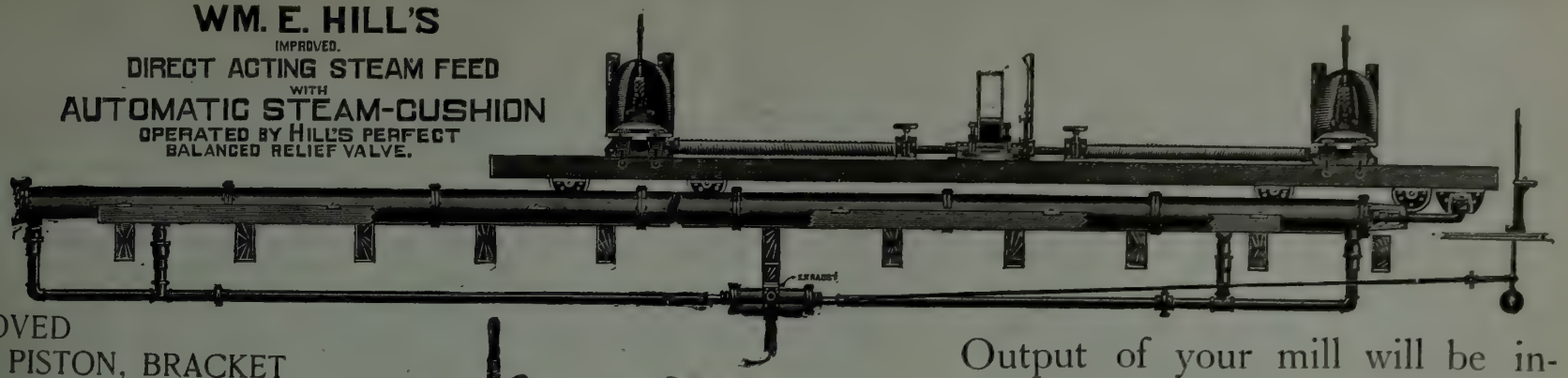
IMPROVED.

DIRECT ACTING STEAM FEED

WITH

AUTOMATIC STEAM-CUSHION

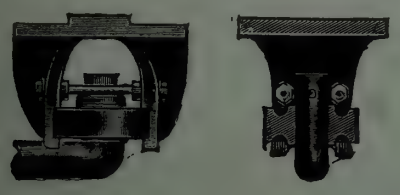
OPERATED BY HILL'S PERFECT BALANCED RELIEF VALVE.

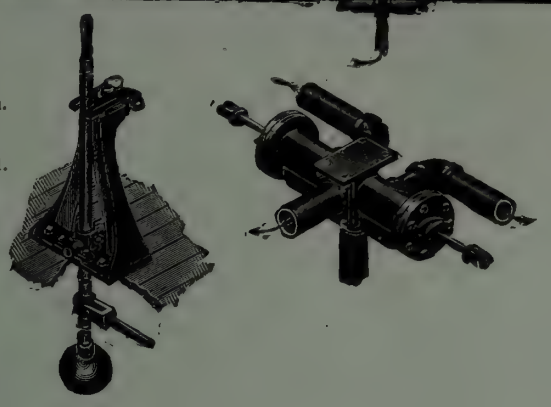


IMPROVED PISTON, BRACKET

Lever, lever stand connection.

STEAM SAFETY CUSHION prevents damage if operator loses control.

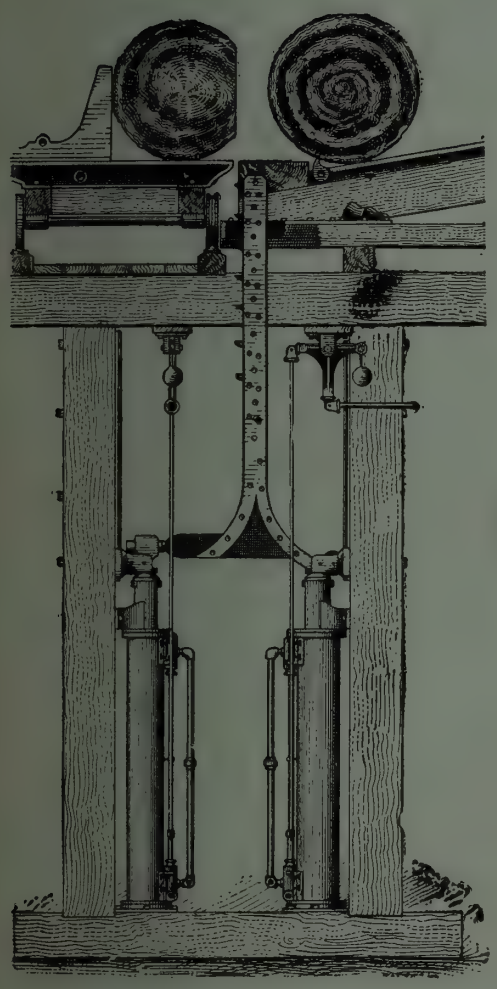




Output of your mill will be increased 10 to 25% by putting in this steam feed.

If your boiler capacity is sufficient now, it will not be necessary to increase it.

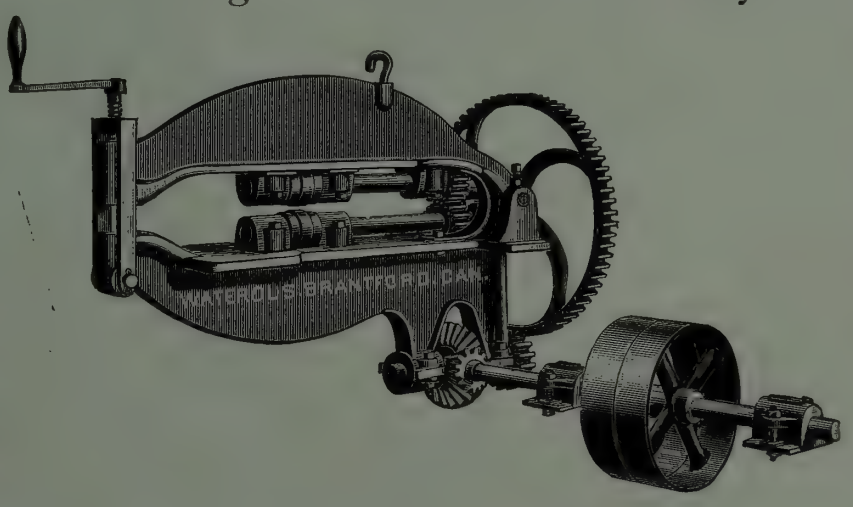
We also build the ordinary Prescott Steam Feed and Allis patent double valve economical Steam Feed



BAND SAWS and Band Saw Tools

These are of equal importance to the Band Mill. Without the best saws and the best means of keeping them in order it is impossible to get the best results from the Band Mill.

IN BAND SAW TOOLS we build the largest and most improved line, having combined the best features of the leading American tools with many valuable improvements.



FOR INSTANCE

These horizontal stretching rolls open the saw, putting in the proper tension and doing away with a great deal of hammering that would be otherwise necessary. The work is done more evenly and quickly, requiring less skill from the operator.

The rolls are hardened steel, ground to proper surface, and adjustable for saws of different thickness.

The countershafts are interchangeable to drive either way.

No filing room is complete without this tool.

Hills Niggers

MAMMOTH AND MEDIUM SIZES

The Stationary latest improved Niggers are the simplest and best. They do away with the leaky universal steam joints, and are more easily set up and connected. Made under Hills patents, with all his latest improvements. Unless properly made, a steam Nigger is a positive disadvantage in loss of time and erratic action.

Always buy the best, it's the cheapest in the end.

IN BAND SAWS

We can supply you Saws made from the celebrated "Sandvik" steel, guaranteed in every particular and in perfect order to put on your wheels, at lowest possible prices. It will pay you to give us a trial order.

If you are thinking of putting in a Band Mill, write us. Our circular contains considerable information on the subject. Remember the "Allis Improved Band" is the best.

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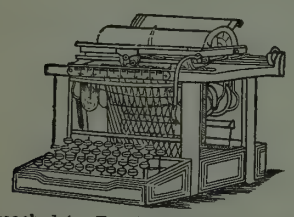

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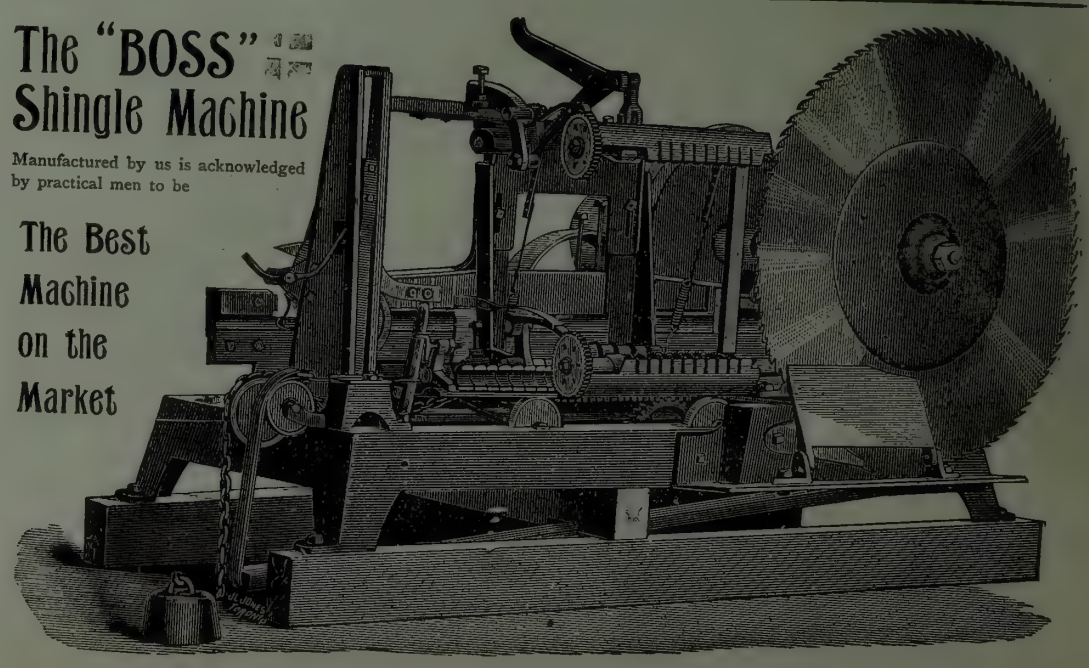

THE CANADA LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XV. NUMBER 5. | TORONTO, ONT., MAY, 1894 | TERMS, 1.00 PER YEAR SINGLE COPIES, 10 CENTS

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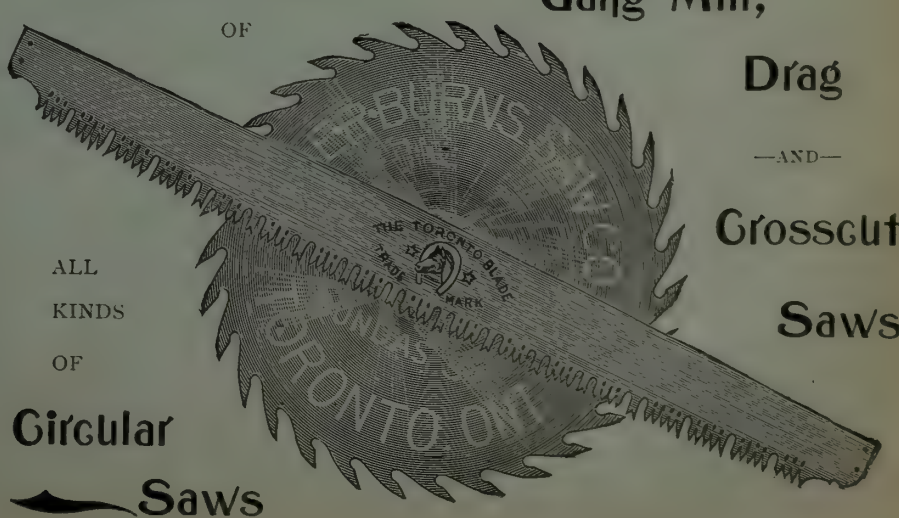

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July 5th, 1892.

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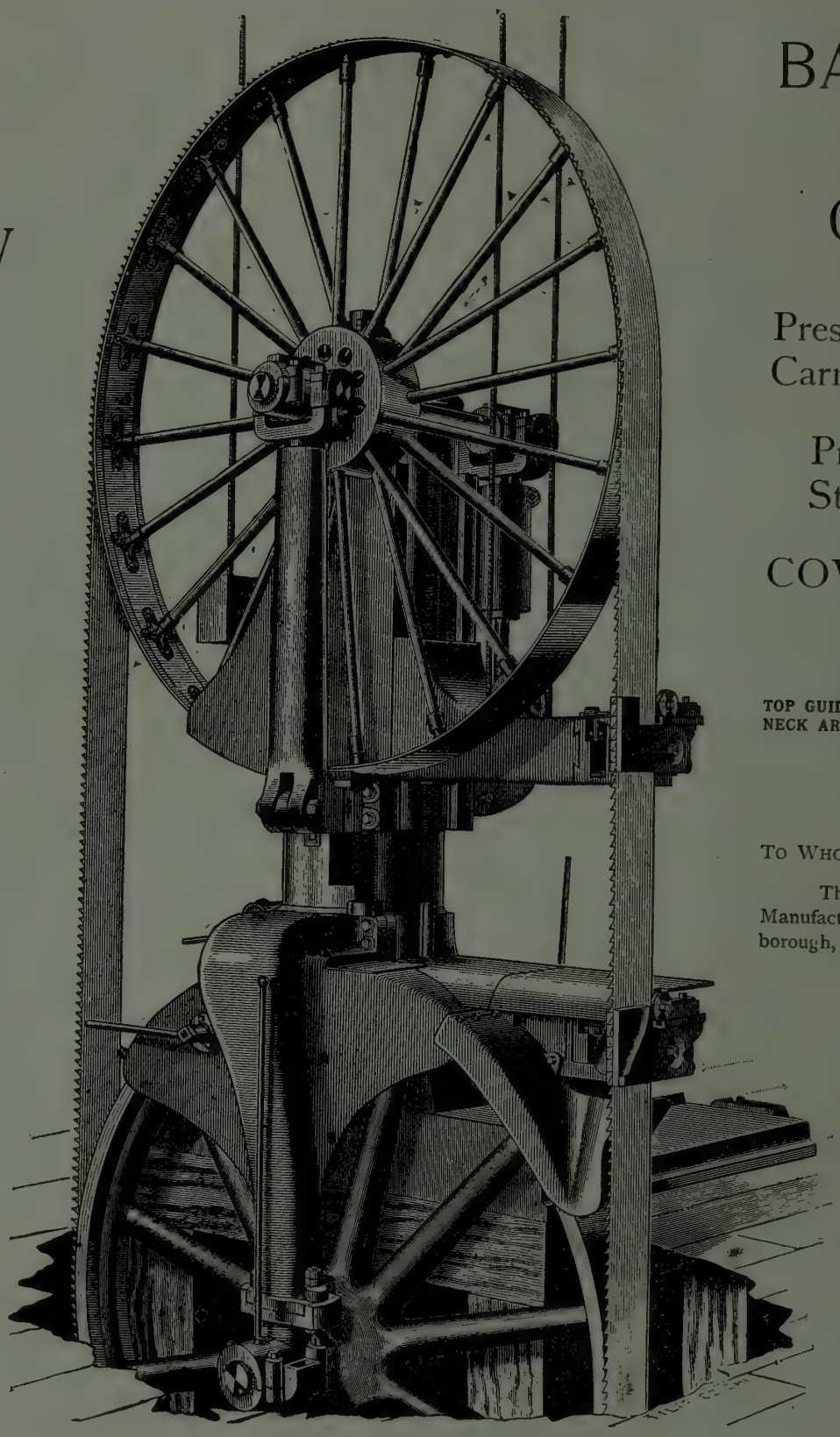
It may interest you to know that on June 30th last, in eleven hours, the Band Mill—driven entirely by water—which we got from you, sawed

4,047	feet	1-inch
85	"	1¼ "
11,723	"	1½ "
5,726	"	2 "
85,038	"	3 "
106,619	feet.	

Yours truly,
PERLEY & PATTEE



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(Signed)

D. CLINT PRESCOTT,

[COPY] Patentee.

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THE CANADA LUMBERMAN

VOLUME XV.
NUMBER 5.

TORONTO, ONT., MAY, 1894

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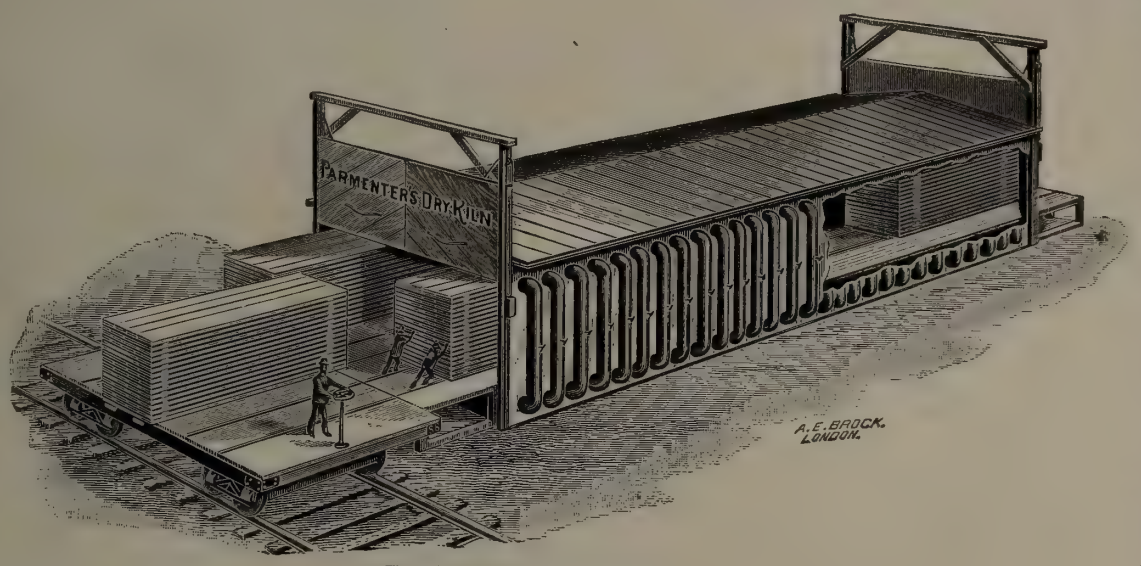
THE PARMENTER PATENT DRY KILN.

WE take pleasure in presenting to our readers a cut and description of what has—after three years' trial—been proven to be a kiln of very great merit, the invention of which is the result of several years of experience in lumber drying.

The object of the inventor was :—1, To produce a kiln that could be easily and cheaply constructed by ordinary mechanics ; 2, One that would be economical, simple and reliable in its operation at any season of the year ; 3, Also one that would dry all kinds of lumber and material, rapidly and in first-class condition.

The reader will observe that this kiln is very simple in construction and operation ; the air in the kiln becomes heated by the steam pipes and at once rises to the top of the kiln where it enters the galvanized iron condensing pipes which are placed outside of the kiln. It then becomes cool and relieved of a portion of its moisture by condensation, passes downwards and re-enters the kiln at the bottom below the steam pipes, the condensed moisture trickling down the inside of the condensing pipes and escaping through a small hole in the bottom elbow. The air again becomes heated by coming in contact with the hot steam pipes and rises up through the lumber, absorbing another supply of moisture, and again enters the condensing pipes and leaves a portion of its moisture on the inside of the pipes, and continues in this manner until the air in the kiln becomes dry. No cold air from the outside is allowed to enter the kiln, and no hot air is allowed to escape, consequently it is very economical in the amount of steam required to reach the desired temperature.



THE PARMENTER PATENT DRY KILN.

The condensing pipes are fitted with ordinary dampers which by opening or closing regulate the circulation and consequently the condensation. This feature is a valuable one, especially in cold weather, and one that is said to be possessed by no other kiln in the market.

The inventor claims it is a well-known fact that a current or hot blast of air coming in contact with undried lumber dries the outside first and causes checking, warping, case hardening and honey combing.

In the Parmenter system it is claimed this cannot occur as the air in the kiln does not become dry until the lumber is dry. The circulation of air is from the centre to the sides and not from end to end, consequently perfectly dry lumber can be taken out of the kiln at one end and green lumber placed in the opposite end at the same time.

There are no fans, blowers or special engines required as circulation is entirely automatic.

Testimonials and all other information can be obtained by addressing the Patentee, Mr. J. S. Parmenter, Box 512, Woodstock, Ontario.

An interesting picture of mechanical engineering of a past generation—the "chalk age" of mechanical engineering, as the author aptly terms it—is drawn by J. F. Holloway in the May number of Cassier's Magazine. To both the young engineer of the present day and to him of more mature years the reminiscences conjured up by the author must have a peculiar fascination, showing by what pluck, energy and untiring industry the achievements of early machine-shop days were accomplished.

THE AGED BOILER.

THE life of a boiler, says the Age of Steel, like that of a horse, has its limit. The number of its birthdays depends, of course, on its original stamina, and the use or abuse of its service. If sound in material and construction, and intelligently handled, its term of life is prolonged into a respectable old age, and to this on these conditions there is necessarily a limit. It is possible, however, that any arbitrary limit is beyond absolute calculation, and is likely to overlap dates that at the best can only be approximate. The biography of a boiler is one of strain and tension, and is subjected to sudden transitions from a high degree of heat to the temperature of cold air or water suddenly admitted. That iron should lose its qualities as a boiler plate in the course of years it is reasonable to assume, and that when age and service have reached a certain point the conditions of safety are weakened, is equally reasonable. The basis of calculation must, however, necessarily vary, as the qualities of the metal used may not be uniform, nor the intelligence of service always at the same standard. From tests made of plates taken from iron boilers, varying from fifteen to thirty years of service, it has been found that there has been not only a loss in tensile strength, but also a marked loss in ductility. A plate that originally stood a test 45,000 pounds tensile strength after about twenty years of service, shows a deterioration of tensile strength to about 38,000 pounds. On this basis alone the conclusion is that the boiler, if weaker, is still good for considerable pressure, with the fact, however, left that the plate under certain conditions would act as a piece of cast iron would act, and also suddenly give way at a certain pressure. It is obvious that a boiler constructed of plate of this character would never tempt the money of a steam user. It might have a higher tensile strength than cast iron, but in the matter of brittleness the advantage would be scarcely apparent. As most, or many, boiler explosions are caused in whole or in part by a sudden shock, a boiler plate of a brittle nature is broken by a blow, which would be as ineffective as a drum tap on a plate of lower tensile strength. Here the quality of ductility asserts itself as indispensible to boiler safety, allowing it to sustain heavy shocks or strains without giving way. The presence or absence of this quality determines the value of old boilers so far as their safety goes, and for this reason it is the opinion of many engineers that boilers of the cylindrical-shell type are in their dotage at about twenty years of service.

J. F. Waldell will start a planing mill at Newdale, Man.

MANITOBA'S OPINION ON LUMBER.

IT has been made a matter of remark in our editorial columns that the placing of lumber on the free list is a question of serious concern to Northwest and British Columbia lumbermen. The Commercial, of Winnipeg, gives this view of the situation : "The lumbermen have been holding meetings and communicating with each other a good deal the last couple of weeks, but no definite announcement has been made yet. One object for which the lumbermen have been working hard, is to secure a reduction in freight rates, as an offset for the tariff changes, but so far no change has been made in freight rates. The dealers say that any reduction in freights will be entirely to the benefit of the consumers, as they (the dealers) will reduce their prices to the full extent of any cut in rates which may be given. No changes in prices have been made yet as an outcome of the new tariff. The disposition is to make no changes until the tariff debate in Parliament is finally disposed of. It is understood that pressure is being brought upon the government to induce them to put dressed as well as rough lumber on the free list, and as further changes may be made in the tariff, no changes will be made in prices until it is known for a certainty how the tariff will finally stand. A city lumberman has been twice to Ottawa, no doubt to represent the views of the manufacturers to the government, though it is denied that he represents any one but himself. There is some uncertainty as to the interpretation of the new tariff. Rough lumber is to come in free, and a duty of 20 per cent. is fixed on dressed lumber, but it is said that the duty will be collected only on the cost of dressing. Thus, for example, rough lumber costing say $14 per thousand would come in free. The same grade dressed costing say $16 per thousand feet would be subject to the duty of 20 per cent., but it is said that the duty will be collected only on the $2, being the difference between the cost of the rough and the dressed commodity, instead of collecting duty on the full cost of the dressed. If the 20 per cent. duty on dressed lumber is interpreted in this way, the duty collected on a thousand feet of lumber, as above, would be only 40 cents, instead of $3.20, if it were collected on the full cost of dressed lumber. If this interpretation of the duty is carried out, the government might just as well make dressed lumber entirely free at once, for a duty collected on merely the difference between the cost of rough and dressed lumber of the same grade, will be such a trifling matter as to be hardly worth bothering with. There is talk of yards being started in the city to handle imported lumber, but nothing definite has been done yet in this direction. As prices are likely to be advanced in Minnesota, there will be less disposition to cut prices in this direction. At the recent meeting of the Mississippi Valley Association, at Minneapolis, it was represented that stocks were not excessive, and that better prices should be obtained. Steps were taken to advance prices. The meeting of the Western Retail Association held in the city this week was to consider applicants who wish to open new yards, of which there are a number. There was also some informal talk in regard to tariff changes."

TALKS WITH WOOD-WORKERS.

THE sensible advice is given that one of the best things a young fellow in the shop can do, or an old one either for that matter, is to learn to make sketches of different tools and devices in use, or of peculiar things that he sees in other shops. I often think of the opportunities for advancement, that are lost by workmen everywhere in not exercising the power of observation and of thought, as might be done. It is a bad lookout for any of us when we simply become machines in our work. As regards these proposed sketches they can be made roughly in a note book and will prove often a fund of knowledge to do good service in some future day. The ideas come to us all as we are at our work and it is a case of following the advice of Captain Cuttle; "When found make a note of it." Draftsmen it has been remarked could save the firm lots of work, by simply making a good neat sketch with correct figures instead of making an elaborate drawing for some small job that really does not want it.

* * * *

Do we realize that a good deal depends on ourselves how much we get out of a lathe, or any other machine for that matter? I have been struck with the difference in workmen. Some people, and they are not of a stingy disposition either, lay their plans so that a dollar goes much further with them than with others. So it is in handling men; if we handle a staff of men in the right way we will get, sometimes, 50% more work out of them, and yet not be nigger drivers. The inanimate machine is susceptible of the same kind of handling. A lathe can be run to an economical limit, or it may give very poor service. Speaking of a lathe a writer has said that a comparatively slow speed of cutting, (a slow running of lathe) and a heavy cut with a moderately quick feed, will give good results in most cases. What applies to the lathe applies to all classes of work, each kind of work being tried separately for best results.

* * * *

Pony planers, we are told by a writer on this subject, should never be belted with the countershaft directly under the machine, as it gives too short a belt. A perpendicular belt will always slip and will never have the same power as a belt at an angle or a horizontal belt, therefore the countershaft should be arranged at an angle of 45 degrees to the cylinder which it is to drive. Then we have an easy running belt. For the ordinary pony planer most mill men prefer to have the countershaft at the out-feeding end of machine. The reason is the belt to the cylinder is easier gotten at, the loose pulley gets better attention, &c.

* * * *

"Considerable has been said about babbitting planer cylinder arbors," says a writer in the Woodworker, "whether it is best to babbitt directly on the arbor or have a dummy to babbitt on. I have contended for the latter way. A few days ago parties from a large dressing mill brought in an arbor for me to true up. They said it rattled badly. Putting it on the centers of the lathe I found it out one-sixty-fourth inch. That is a good deal. We sprung it back true, run the tool over it, and polished it nicely. Before night they came back saying it was not true yet. Putting it on the centers I found it "out" again. "Have you babbitted?" I asked "Yes, we had to; it run too loose a fit." "Well, you have sprung it." I straightened it again, perfectly, and told them to rub red lead and oil on the arbor, put it in the boxes carefully and revolve it a little, then take it out and scrape where the lead showed on the box. This they did and it has been all right since. The bearing was two inches diameter, 10 inches long, made of machinery steel. I think the dummy arbor and scraping is the only correct way, particularly with 4,000-turn arbors on fast-feed planers."

JAS.

LEGAL DECISION.

MUSKOKA MILL AND LUMBER CO. V. MCDERMOTT.—The Court of Appeal holds that the legal right of a license of timber limits under a license issued by the Ontario Crown Lands Department ceases (except as to matters specially excepted by the Act) at the expiration of the license, and there is no equitable right of renewal capable of being enforced against the Crown, or sufficient to uphold a right of action for trespass committed after the expiration of the license and before the issue of a renewal. The insertion in an expired license of a lot omitted by error does not confer upon the licensee such a title as enables him to maintain an action for trespass committed on the omitted lot.

LUMBER DISCUSSION IN THE LEGISLATURE.

AT the meeting of the Local Legislature on 19th April, on motion to go into committeee of supply Mr. Miscampbell, member for East Simcoe, and ex-lumberman of Midland, Ont., moved:—

This House disapproves of the large expenditures which are made annually by the Crown Lands Department for surveys, amounting to upwards of $35,000 per annum, and of the sums paid by that department to unnecessary crown lands agents, and it regrets that the executive and the department persist in the practice of disposing of the crown timber reserves of the province without consulting or obtaining the approval of the representatives of the people in this House, and wholly fail to take any adequate steps for preserving the standing timber, and especially the smaller trees, from unnecessary waste and destruction; and this House deplores the improvidence which characterizes the management and disposal of the timber upon those reserves which has destroyed in many parts of the country the saw milling industries which flourished, and has transferred the business which they formerly carried on, to the state of Michigan, and other states of the neighboring republic, and is fast depriving the province of its most valuable asset, and one, if adequately and intelligently cared for, safe-guarded and managed, would continue to furnish a large revenue to the province for years to come, but which, as now mismanaged, is rapidly disappearing.

Speaking to the resolution Mr. Miscampbell said there was no question but that it would be admitted the timber limits of the province formed one of their most valuable assets. It was believed this timber was rapidly disappearing. In various parts of the province, instead of a flourishing industry, what did they find? That whereas sawmills had existed in the past, these had closed down and their owners had now to devote themselves to other occupations. As to the amount of timber taken away, whether that was large or small, every foot carried out of the country was an injury to the province. The cost of taking out the logs was about $5 or $6, and in order to realize a profit after coming from the mills the lumber must be sold at $11 per thousand feet. There was a clear difference of $5 that would have been expended in this country if the logs were manufactured here. Other industries depended upon the lumber business. There were the railways, for instance, to whom the carrying would prove most profitable. It was said if they prohibited the export of logs the United States would retaliate, but in this resolution they asked for nothing that would interfere with a dollar of vested rights. They asked that the Government should husband the resources of the province, and make it a condition that the timber should be manufactured in this country. If this course was taken they would have Saginaws and Bay Citys on the north shore of lake Huron. It was easy enough to understand the era of prosperity that would then set in. He maintained that for every thousand feet of lumber that was manufactured outside the country employment was lost to one man, or in other words, a family of five individuals, who would otherwise be living here, were settled elsewhere. As an argument to show the timber was becoming rapidly exhausted, he mentioned that some years ago the size of the sawlog cut was 160 feet, whilst to-day it was down to 100 feet to the piece. One reason advanced for selling the timber was that the manufacturers wanted timber. Was it not a peculiar fact, however, that 33 per cent. was lying unused. What other construction could be put upon that than it was being held by speculators until the price went up.

Mr. Conmee, representing west Algoma, an important lumber district, replied that the resolution amounted to an assertion that the timber of the country should be used merely for home consumption. Yet Mr. Miscampbell had enlarged on the benefits of the lmber trade. If the timber had not been cut in the past where would Ottawa and the other lumber towns be? The timber near James' Bay has been the property of the Province for years and has been of no value, because development has not approached it, and so with the timber now standing. Mr. Conmee then referred to the way in which the northern district has been gradually filling up with settlers under the present system. It would be wrong to tie up the timber of the country; it should be used to keep the mills going in the country. A Chinese policy of repressing the industry would drive still more of the people away to the American side in order to seek for work. He was against putting restrictions on the trade of the Province; he would leave the people free to make the most of the natural capabilities of the country. If the present Government had a fault it was in being too chary in disposing of the timber. One might as well ask them for gold as for timber. Mr. Conmee then referred to the ravages which fires commit, and declared that if not cut it would be in danger of being burnt and being a total loss. As for the smaller logs now cut, it could be explained by the fact that the recent improvements in the lumber business, together with the regulations of the Government, have made it profitable to cut and use smaller logs than before.

Hon. Mr. Bronson, a member of the Cabinet, without portfolio, and of the extensive lumber firm of Bronson & Weston, of Ottawa, in rising to discuss the question was obliged to defend himself against a charge made by Mr. Whitney, that as the holder of 28 timber licenses all of which were held by the sanction of the government, he had no right to be a member of that government. Mr. Bronson denied that he or his firm had ever bought a foot of timber limits from the Government. Every foot that they had secured had been bought from third parties. All transactions which his firm had had were in the ordinary way of trade, and he was unaware of any discrimination having been exercised in his favor. Indeed, Mr. Whitney had been very careful to make no actual charges against him. As a matter of fact the timber dues were fixed, not shifting or dependent on the will of the Government. Nay, so far was he from having profited, that, since he had become a member of the Government, the dues on timber sold had been advanced 33 per cent. If he had had any influence, it evidently had been in the interests of the Province, not of the lumbermen. Mr. Bronson then remarked that the lumber interests of the Province are very great, and the Government might easily find the presence of a practical lumberman in its councils of some use, and any influence he may exert would be exerted in the interest of the Province. Speaking directly to Mr. Miscampbell's resolution, Mr. Bronson asked, What would be the result of adopting the policy suggested in regard to the timber of the Province, viz., the building of a Chinese wall around that timber? Such a policy would prostrate the industries of the country and inflict upon them a blow which they would not recover from for years. In timber, as in every other part of the vegetable kingdom, there is a period of growth, of maturity and of decay; there comes a time when it should be marketed, or it would decline in value. The Government's policy has been to market it as soon as the proper time comes. At the last timber sale some of the timber sold was on the point of deterioration, and would have been injured by being kept any longer. Mr. Bronson then questioned the statement that the keeping of the timber in the country would result in cities like Bay City, Saginaw, etc., growing up on the Canadian shores of the great lakes. The trade depends on the American market; only the best can be sent to Europe, and a gread deal of low-grade timber must be cut and must be sold by Canadian lumbermen. But if the timber were kept in the country this market would disappear, and the country would suffer. He reminded the House that once the announcement that an export duty would be charged by the Dominion Government stopped a sale, as the lumbermen would not, under those circumstances, give the Provisional Government a sufficient bonus. He touched on the danger of fire, and said he could show hundreds of miles where timber that should have been cut years ago had been burned. The export duty would cause the mills to be shut down. The assertion that the manufacture of lumber in this country would lead to prosperity depended upon the United States allowing the Canadians to send them lumber free of duty after the export duty had been charged, which Mr. Bronson doubted. The closing down of the mills would inevitably result from the imposing of such a policy as Mr. Miscampbell advocated.

The resolution was defeated by a considerable maiority.

ANTI-FRICTION MATERIALS.

By Killingworth Hedges, M. Inst. C. E.

THE use of oil as a lubricant in machines is to separate the rubbing parts and diminish the friction of metal upon metal by an intervening film of the lubricant. If the oil is supplied in sufficient quantity to cause the entire separation of the metals, the friction may be reduced to a measure of the viscidity of the unguent used ; where oil is furnished in less quantity, the friction of metal upon metal is usually resistance due to interlocking particles of the revolving and stationary parts, the oil used under this condition finding its way from the bearing, loaded with the metal that is gradually torn from either the revolving shaft or the bearing in which it has worked.

In discussing the subject somewhat over a year ago before the British Association for the Advancement of Science, the author remarked it to be a well-known fact that heavy lubricants effect a better separation of the metals than those that are more limpid, although the power required to slide the surfaces one upon the other is much less with the latter than with the former, but at the same time the wear and tear of the metal may be greater. It has been stated by more than one authority, that it makes little difference what metal is used for the bearing of a revolving shaft, provided oil in sufficient quantity can be introduced, so as to separate the shaft from the bearing in which it revolves. This is proved by the success which attends the use of cast iron for the bearings of ordinary shafting, it being no unusual occurrence to find the cast-iron sleeve of an adjustable hanger showing the tool marks after running several years with an excess of lubrication. Such a bearing would, however, quickly seize if the oiling were neglected, and therefore the friction may be said to vary according to the attention paid to the oiling. For very low pressures, amounting to only a few pounds on the square inch on the rubbing surfaces, oil causes a loss of power, so as to make it advisable, wherever possible, to dispense with it altogether. Professor Coleman Sellars even goes further than this and states that even when the pressure on the rubbing surfaces is less than 50 pound per square inch, the viscidity of the unguent acts as a sensible retardent.

Engineers have for a long time been looking for a material capable of being used for bearing surfaces and having a low co-efficient of friction when worked dry and without any oil. The idea is not one of recent date only, but may be said to go back to the time of the Romans, as some of the hand flour-mills found at Pompeii have the lower stone fitted with an iron bearing which evidently worked dry in the stone socket of the upper stone. The celebrated Coulomb experimented with an iron axle moving in a bush of elm, the friction being stated to be "$\frac{1}{20}$th of the force of pressure." He also made numerous experiments with wood axles slightly smeared with tallow, and also recommended the use of blacklead. The material which he found to give the best results was green oak on elm, and I believe the wooden axles of wagons which are used in some parts of England at the present time to transport heavy grindstones from the quarries, are constructed with axles of oak in a similar manner. Throughout Egypt, in the Nubian water-wheels, which are everywhere employed for irrigation, unlubricated wooden bearings are used, which appear to wear very slowly, the surface of the bearing acquiring a fine glaze. Stone bearings have also been employed for shafts. According to Rankine, the natural stones fit for this purpose are those which are wholly free from grittiness and are somewhat inferior in hardness to iron, such as gypsum, pure clay slate, compact limestone, marble and silicate of magnesia. From the latter the substance called "adams" was made by calcining the magnesia, grinding and molding it by hydraulic pressure into blocks, which were then baked.

In addition to these oilless bearings there are others in which, perhaps, a small quantity of grease might have been employed, such as the leather bushes used in spinning wheels, and the leather band on that part of the oar which works in the oarlock may be quoted as an instance of leather working on wood. Glass has also been tried, but the only kind which has survived to the present, and has been the most successful of all, is the plumbago bearing. The author has been told by the old millwrights that this material was often used in the footstep bearing of the upright shafts in water mills, and most of us have seen plumbago employed instead of tallow for lubricating wooden bearings, and there is the familiar example of the carpenter's screw. The first adaptation of plumbago in a more practical form was the invention of Gordon, who inserted a number of molded plumbago plugs in the standard-size axle-box of an ordinary carriage wheel. It is said that the vehicles ran successfully without any lubricating.

Graphite or plumbago is the principal ingredient in numerous inventions for dry bearings, many of which have not got further than the Patent Office. It has been mixed with pulverized iron, asbestos, vegetable fibre, paper pulp, blood and in one curious instance sponge is used. In nearly all these applications the anti-friction omposition is packed into suitable grooves, which are used in the bearing in very much the same way as asbestos is used in cocks. A substance which has been termed "metalline," which, although it contains graphite, appears to be composed of finely divided lead, has been rather extensively employed. The chief disadvantages were the expense due to the way the material was used, in the form of little plugs let into drilled holes, and the necessity for oiling when the plugs were worn sufficiently to cause contact between the metallic surfaces, thereby changing the character of the bearing.

The latest form of dry bearing is of solid material, which can either be molded so as to fit any plummer-block, or can be tooled or worked in the same manner as an ordinary brass. A new material for this kind of bearing, recently tried in the United States, is termed fibre-graphite, and consists of finely ground plumbago, mixed with wood fibre in a moist condition, and pressed into a mold of proper form. It is then saturated with some drying oil and oxidized in hot dry air. This bearing has been favorably reported on by a committee of the Franklin Institute, and a shop has been fitted up complete, so that the whole of the machinery, including the steam engine, runs without any lubrication at all. The report which may be taken to apply to dry bearings generally, states "that an invention of this kind by diminishing the use of lubricants, diminishes the cost of machine construction by doing away with the many devices incident to oil—oil cups, oil-hole covers, the oil-hole themselves which have to be carefully placed, oil tubes to lead the lubricants to the inaccessible parts of machinery, as well as the cost of the personal attention and the cost of the lubricant required to keep the machinery in perfect order."

My own investigations on a suitable material for an oilless bearing began with the use of plumbago, which was molded so as to form a circular bush, but this was soon discovered to be a failure on account of its rapid wear. I then constructed bearings of ordinary carbon, such as is used in batteries, and for producing the electric light by means of the voltaic arc. The first experiment was made with the bearings of a small dynamo, which ran for a considerable time, but the drawback of using carbon was mainly on account of the impurities which it often contained. A small amount of silica in the carbon was found to cut the shaft very badly, while if soft carbon was used the wear was as rapid as with plumbago. In order to lessen the cutting action and the friction, finely powdered steatite was mixed with the carbon, and thenceforth no difficulty was experienced, even when the load was unequally distributed on the bearing. The name of carboid has been given to this mixture, its specific gravity being 1.66, that of carbon as used in arc lamps being about 1.68 ; therefore carboid is about one-fifth the weight of brass. It can be molded with the same ease as carbon, and can be turned, bored or shaped to any desired form. In practice it is found that the cylinders, as they leave the molds, are quite true enough to be put into bearings without any tooling, although it is preferable to run for a short time with half the load and then remove and scrape the bearing, so as to equalize the surface of contact.

Professor Sellers, writing on the Franklin Institute report, states that "the co-efficient of friction is lower with the dry bearings experimented on than that of many oiled bearings in good condition, and that it is undoubtedly lower than with metal bearings, as usually operated with moderate attention and poor qualities of oil. It seems to be constant in its frictional resistance, whether warm or cold, while it does not run lighter when worn by use, as some oiled bearings do. Its uniform action is better than many oiled bearings and very much safer ; the constant amount of frictional resistance being known can be provided for in the power of the machine." The above agrees in the main with Professor Unwin's experimental results with carboid. A bearing 1½ inches in diameter by 2½ inches long, cut in halves, was tested under loads varying from 100 pounds to 1800 pounds, or about 15 pounds to 170 pounds on the square inch, at speeds from 110 to 490 revolutions per minute, the period of test extending over six days, during which the bearing was kept almost constantly running without any lubrication or attention.

Summarizing the experiments, it appears : 1st. That the co-efficient of friction is almost the same and has not diminished as the carbon became worn to a better bearing surface. 2nd. That the co-efficient of friction increased as the temperature increased during the run, but is practically the same for any increase of pressure. and diminished with increase of speed, the maximum number of revolutions per minute being 490. 3rd. That no injury is caused to the shaft even if the bearing gets very hot, as it was found to be impossible to make it seize.

The conclusion arrived at by the author with regard to dry bearings is that the frictional resistance is governed by the conductivity of the shaft and the holder or support of the bearing ; if this be so arranged that any heat generated be dispersed, the co-efficient of friction will not exceed that of a lubricated bearing.

If the bearing works under such conditions that any heat, generated at starting a new bearing, may readily be conducted away, the first cost of a dry bearing will be less than any form of brass, but taking a case of a dynamo bearing where any excess heat might be disadvantageous, it will be necessary to carefully true the bearing by scraping so as to fit the shaft, and under certain conditions where there is a great pull on the belt, it may be necessary to keep the bearing cool by means of a circulating flow of water. The economy of working is very marked. Besides the cost of the lubricants used in large establishments, there is also the attention required to apply the oil and keep the parts clean. In laundries and in those trades where unskilled labor is employed, the danger of oiling machinery in motion is very great; besides this there are instances where the lubricant used is in itself a source of danger, such as the risk of oil waste taking fire by spontaneous combustion, and the dip from bearings certainly renders the floors of the mills highly inflammable.

The principal application of carboid up to the present time has been for the bearings of ordinary shafting, and for bushing loose pulleys. It has also been applied for the bearings of steam heated rolls such as are used in cloth mills and paper works. The result of two years' experience and many experiments with light trucks seem to point out the desirability of extending its use to the axle-boxes of tramcars, and perhaps railways generally, as it involves no change in the axle-boxes ; even the existing brass can remain and be faced with carboid, which can be cemented to either a smooth or rough surface.—Cassier's Magazine.

MIX THE MOVEMENTS.

DOUBTLESS many of our readers, who are not experienced engineers, may have noticed that frequently the oscillations of the main belt in a mill come in unison with the beat of the engine, and a perceptible slapping about of the belt is noticeable. The beat of an engine will often come in sympathy with the sway of the building, and so increase it as to be very perceptible. If this were continually going on in exact time it would become so great in time as to be dangerous, but one or the other gets ahead and mixes the movements so that it gradually ceases until they are again in unison. If the speed of the engine is changed in either case the swaying will be kept mixed all the time instead of occasionally. On long lines of shafting this will appear also, the pull on the belt at the commencement of the stroke being in unison with the spring of the shaft, thus causing a marked oscillation. The remedy is applied here—to mix the movements purposely—and the trouble is partly if not entirely removed.—Machinery.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS AND MILLERS' GAZETTE

PUBLISHED ON THE FIRST OF EACH MONTH

—BY—

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Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

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Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

NOTICE OF REMOVAL.

SUBSCRIBERS, advertisers, and others concerned are particularly requested to note that the offices of THE CANADA LUMBERMAN have been removed from the Canada Life Building to the CONFEDERATION LIFE BUILDING, Richmond and Yonge Streets. All communications should in future be addressed to C. H. MORTIMER, publisher CANADA LUMBERMAN, Confederation Life Building, Toronto.

TWO METHODS OF TIMBER SALES.

A MOTION of Mr. John Charlton, M. P., in the House of Commons a few days ago, asking for a statement, showing particulars of all timber licenses granted since January 1, 1888, raised the question as to the best method of disposing of timber limits. It has been the custom in the provinces, notably in Ontario, to put up timber limits to public auction. The Dominion Government has followed the practice of simply asking for tenders.

Mr. Charlton strongly favored the Ontario system and spoke of the importance of notice of sale extending from four to six months, and in this contention he was supported by Mr. Edwards, member for Russell, and one of the largest lumbermen of Ottawa. Mr. Bryson, also a large Ottawa lumberman, and a member of the House, favored the system of private tenders, which was defended by the Minister of the Interior, who said that this system had been the vogue since February 17, 1885.

The question is not a political one, at least, it ought not to be. It is one of business: which is the fairest business method? Which is likely to produce the best financial results to the country? It needs no evidence to demonstrate that the more open competition is made at any time, in any line of tendering, the less liklihood there is of intrigue or questionable methods being adopted by one tenderer to secure advantage over another. Public auction at any time, gives an openness to business that can hardly be expected in private tenders, where the consideration of results is left in the hands of those who may have friends to favor, and to whom a wink, that may mean much, can sometimes be given. Unfortunately in political life, without regard to party, the temptation to hold in hand the power that comes of awarding public contracts, whatever shape they may take, is strong, and few there be who can resist the temptation. Any system, therefore, that helps to remove this temptation, would seem to have much to recommend it to public favor. It is to be feared that the record of the timber sales of the Dominion by private tender will show that some of the evils, here suggested as possible, have had an actual existence in fact.

Then there is the financial side of the system. Which plan will bring the best results? In a debate in the House about the same time that Mr. Charlton's resolution was on, the subject of Indian reserve timber being under discussion, Sir John Thompson said that it had been proved in auction sales of Dominion timber limits buyers could and did easily combine to keep down the price. For this reason he believed the invitation of private tenders was the better method. It is doubtless true that combinations of men may keep down that degree of competition that is expected at sale by auction, but, we opine, that these cases are more likely to be the exception than the rule. The experience at late sales in Ontario, both in the case of those conducted by the government, and in several extensive sales of private limits, is manifestly in an opposite direction. If we take the prices secured at these sales, and compare them with prices obtained by other methods of sale, only one conclusion can be reached as to the financial results accruing from the sale of timber limits by auction. How by private tender could such a concourse of buyers become interested in the sale of any limits as was shown to be the case at the last sale of the Ontario government, when the Legislative Chamber of the old parliament buildings was crowded with the shrewdest buyers from all parts of Canada and the United States? Relatively equal success, and similar conditions prevailed, at the extensive sale of the Mossom Boyd limits, in this city, more than a year ago, and the recent sale in Ottawa, two months ago, of the Perley and Pattee estate.

The timber resources of this country are to-day precious enough to make it obligatory on any government to employ only the very best methods in disposing of these valuable assets. Lumbermen, we know, will always welcome such a system.

EDITORIAL NOTES.

THE Northern Advance, Barrie, in contending for a re-imposition of an export duty on logs, says: "So valuable were the logs on the other side of the lake that a number of the mill owners here who had timber limits purchased from the Ontario Government for a mere song, sold them at a big price to American buyers instead of cutting them at their own mills." Lumbermen and others, who advocate a re-imposition of the log duty, are not without many and good arguments to support their case, but when our newspaper friend of Barrie gives as one reason for this step that Ontario limits, alleged to have been bought for a mere song, are being sold to American buyers at fancy prices, it is time to ask for facts. Prices paid for Ontario timber, of late years at goverment sales, have not run at trifling figures, and on the other hand, with the depression in the United States lumber markets, buyers from across the border are not paying extravagant prices even for so good an article as Canadian white pine.

A CIRCULAR has recently been sent to all Michigan and Canadian pine owners by the Commissioner of Crown Lands here saying that the department are desirous of obtaining as close an estimate as it is possible to get at this season of the year of the quantity of saw logs and dimension of timber which will be exported from Ontario this summer to be sawed into lumber in the United States. The circular asks those to whom it is sent to furnish the Commissioner with the estimated quantity in feet, board measure, which he expects to export, the berth from which it will be taken, the name or names of men from whom logs may be purchased in Canada, and the points from which they expect to clear their tows. Some of our Michigan lumbermen are interpreting the request for information to mean a raising of crown dues on timber limits. In this connection it is also said that Michigan capitalists have been offered a large quantity of Canadian timber during the past winter, and in some cases crews have looked over limits, but the condition of the money market and trade causes them to hesitate in buying.

RECENT tariff changes at Ottawa, placing lumber, shingles and other wood goods on the free list, is likely to cause considerable loss and unhealthy competition to Canadian lumbermen in certain sections of the Dominion. The Lake of the Woods mills estimate that the stocks held by them will be depreciated 15 per cent. by the change, which in the aggregate will be a severe loss. The Puget Sound shingle men have cut the price of shingles 10 cents a thousand, and with 20 per cent. duty taken off, they expect to be able to bring in their shingles to the North-West territories and out-bid the British Columbia shingle manufacturers. It may be that this competition will not stop with shingles, and with shingle manufacturing in Washington territory as demoralized as it has been for a year past, the temptation may be to bring shingles from this point further east than Manitoba. This is an instance where Mr. Foster's protective tariff does not protect. The Vancouver Board of Trade apprehending trouble ahead have passed a resolution requesting the Dominion Government to retain the duty on shingles until the Wilson bill comes into force. Then there would be free trade in lumber.

AT a time when the provincial government is moving in the direction of establishing a forestry park for the better protection of our lumber interests, it is important to note the results of experiments by our neighbors across the border. The statement comes to us that New York State is already beginning to realize a profit from the purchase of Adirondack forest lands. It has recently sold the timber from 60,000 acres and the sum realized for it was $250,000 or a little more than $4. per acre. No tree under twelve inches in diameter shall be cut down. This provision is to apply to all sales, and it insures a perpetual succession of valuable timber, which can be thinned out every few years. No trees are to be cut within 400 feet of any lake or water front. This is in accordance with the European rule to preserve these water course from drying up. How necessary an effort of this kind is needed can be realised when we refer to the statement made at the foresty congress at Albany a few weeks ago by Secretary of Agriculture Morton, that 25,000 acres of timber land were stripped every twenty-four hours to supply the demands of the people of the United States for wood, for building, fuel and other purposes.

SOMEBODY is going to make a lot of money out of pine lands in northern Minnesota, says the Minneapolis Lumberman, especially on the lands up in the Duluth district before many years have gone by. There is an abundance of good timber up in the vicinity of Rainy lake, and when that region is developed with railroads and water transportation available, it will undoubtedly be a great lumbering district. Michigan men are already awakening to the fact that there is money in Duluth timber. Years ago they bought Michigan timber at the cheap prices it was then selling at, and since then they have become millionaires. They didn't make their money out of lumber so much as out of timber lands, and they are of the opinion that the same condition of affairs will result in northern Minnesota before long, and they are backing their judgment with money. Saginaw men are sacrificing their present interests and are putting all the money they can get hold of into Minnesota pine. Stumpage at $2 a thousand near Duluth as compared with from $5 to $8 a thousand in Michigan is quite a difference, especially when lake rates from Duluth to Tonawanda are only $1.75. Such an advantage is hard to overcome.

D. E. Sprague, of the Winnipeg saw mills, states that this season's cut of logs has amounted to 3,500,000 feet. His camp is on the Rosseau river, near the Lake of the Woods, and there has been in his employ, during the past winter, upwards of one hundred men. The logs will be floated down the river to the mill.

JOHN CHARLTON, M.P., interviewed on lumber matters, said: "In common with all other business interests having relations with the United States for market of production in whole or in part, the Canadian lumber interest would be much benefited by some definite settlement of the tariff policy in that country, as trade in all departments seems likely to continue unsettled, and buyers indisposed to do more than meet requirements for immediate demands until it is known what tariff policy will be finally settled upon. The lumber trade outlook, however, is not a gloomy one; the production of logs last winter will probably fall somewhat short of that of the previous year. Nearly all of the mills in the Ottawa valley made highly favorable contracts several weeks ago, for the sale of the season's cut of deals in the English market at a material advance on last year's prices; and the English market for deals continues strong with fair probability of a further advance. As regards lumber which must find a market in the United States, prices are no lower than 12 months ago. One concern with a capacity of 40,000,000 has contracted 85 per cent. of its season's cut for the American market at prices fully up to the scale of 12 months ago, and the market in this great centre of the lumber industry, I think, is not likely to weaken." Mr. Charlton does not look for a reimposition of the export duty on logs. "If the American government," said he, "puts lumber upon the free list, the Canadian government will not for a moment entertain the idea of returning to the policy of imposing export duties. Even if the Canadian government were desirous of putting on the duty again, the provision of the Wilson bill as reported by the finance committee of the senate would render such a course impossible. Paragraphs 672 to 683, inclusive, place upon the free list logs, timber, boards, clapboards, bolts, ties, posts, lath, pickets, shingles, staves, etc., and all kinds of wood unmanufactured with a proviso contained in the last paragraph as follows: 'Provided, that all the articles mentioned in paragraphs 672 to 683, inclusive, when imported from any country which lays an export duty on any of them, shall be subject to the duties existing prior to the passage of this act.' This proviso makes the consequence of imposing an export duty so serious that the Canadian government would not entertain for a moment the idea of doing it." Along with others it is the opinion of Mr. Charlton that the spruce interest was not fairly dealt with at the time the McKinley bill became law. He said: "In 1890 the Canadian government promised officially to remove the export duty upon logs of pine and spruce if congress reduced the duty on lumber to $1. There was a tacit understanding that this should be done before the promise was made, but congress failed to reduec the spruce duties. The result came near being a failure to secure the repeal of the export duties. It was done reluctantly, and with a feeling that the failure to reduce the spruce lumber duties by congress did not fall very far short of sharp practice. Since that time the spruce interest has stood for the reimposition of the export duty. Had congress made the same reduction upon spruce as upon pine lumber, this feeling would not have existed."

* * * *

"We are keeping reasonably busy," said Mr. George Cormack, of Whitby, whom I ran across in the city a few days ago. "I have been fortunate enough to bag a good big order for white pine shingles that will keep me busy a larger part of the summer. Several of the mills are busy turning out the stock for us. It will all go across the lines." Have you been there recently yourself? I asked. "Yes, not long back," said Mr. Cormack. "There is no rush in lumber trade in the States. I am inclined to think that if the depression continues much longer, prices, which all along have kept very firm, will break. We are doing a very fair trade throughout the province."

Mr. D. Gillies, M.P.P. for Pontiac, Que., has returned from the California Midwinter Fair, and whilst on the Pacific coast took occasion to make some investigations of the lumber trade of British Columbia. He has great hopes of the future of lumber in that province. As a large owner of limits in the Ottawa valley, he expressed the opinion that just as the supplies in that section and in other parts of the Dominion become exhausted we would be obliged to look to British Columbia for lumber. In time, he thought, we would have to look to that province entirely for our supplies. He did not think the Wilson Bill would effect the price of lumber, but it would materially increase trade, and thus be a great benefit to shippers in British Columbia.

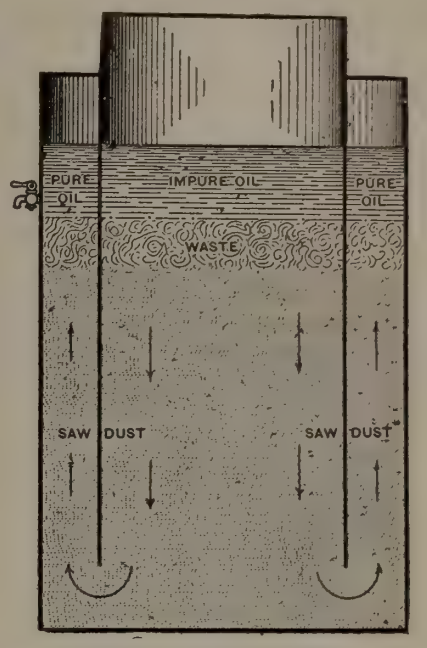
* * * *

The names of John Donogh and Jos. Oliver, constituting the firm of Donogh & Oliver, lumber merchants, have ever stood high in trade and monetary circles, both in the city and out of it. They are two manly fellows. As is my wont, when nearing publication day, I dropped in on these gentlemen, at their comfortable offices in the Board of Trade building, a few days ago. "Not very much to say about lumber trade these times," said Mr. Donogh. "Business is rather slow and we're just moving along hoping for better times after a while. In our own city and country, of course, there is always something going, but there is nothing very big to look forward to this season. We send our largest shipments of lumber to the United States and business there is, undoubtedly, dull. Trade has not really recovered from the depression of last summer, and, if anything, the past few months have been relatively duller than ever." "How about prices?" I remarked. "Well," replied Mr. Donogh, "these continue to hold up splendidly. It is the encouraging feature of the trade, indicating a solid confidence in the future of lumber." At the bottom of the present trouble, I suggested, tariff uncertainty likely rested. "There is the difficulty," said Mr. Donogh. "Mr. Oliver has just returned from a trip through the Eastern States, and he will be able to give you current opinion first hand." "Ask me something easy," was the response from this genial knight of the road, for every one, almost anywhere in Ontario and a large district of the neighboring republic, who touches lumber, knows "Joe" Oliver, and like him. "I was after orders," said Mr. Oliver. "And got some, doubtless," was my response. "Oh, yes!" he said, "we usually get there, even though we may not do as much as we would like. You ask me about the tariff. It is causing the chief trouble in lumber circles. Whether it is to be on or off no one can now tell, and consequently no one will buy stocks beyond immediate requirements, and the capitalists of the lumber trade are not going to make investments in lumber until they know just where they stand. As a result, I can say to you, that lumber business in the States, just now, is mighty dull. It had been supposed that if anything at all went through in the way of tariff changes it would be lumber, but the question is now in the Senate and the struggle has become so prolonged it looks as though nothing would go through. Lumbermen are saying settle the thing. They don't care now which way it goes, but let us know where we stand." "It really looks," continued Mr. Oliver, after an interruption from an office source, "as if these Democrats were going to fool long enough with the question to allow the Republicans to come back into power again, and then we may whistle for free lumber or any other change in that line. What fools these fellows are. They get everything in their hands snug and tight, and are hardly more than comfortably seated in their chairs before they throw away every advantage they have gained. There is no cohesion among them. Every man has his own little hobby to run, and we see the result. I was going to say, they remind me of a certain political party in this country, but I guess I had better stop there, or my friend Donogh and some of the rest of you may get mad," said Mr. Oliver, as he left us to look after some matters of business.

When news went abroad at Ottawa a fortnight ago, that the sawmills would commence work the following Monday, men flocked from all directions to get employment, and when the hour of starting came it was computed that a thousand men were on the ground ready to be employed.

HOME MADE OIL FILTER.

A CORRESPONDENT of Power gives the following description of a home-made oil filter which he has found to work successfully: It is made of an old oil can that will hold about 40 gallons. Inside this is placed a galvanized iron or tin tube, raised from the bottom by a couple of sticks and projecting about six inches



HOME-MADE OIL FILTER.

above the top of the can. The can and tube are then partly filled with clean sawdust, with a layer of waste or cloth on top, as indicated in the sketch. The impure oil is poured into the tube, filters down through the waste and sawdust and up again in the can, whence it may be drawn off through the cock as needed. By pouring in a few buckets of hot water first, you have a water filter for the oil, as it will pass through the filtering material in the same way. I have made two filters in this way, at slight expense, and they work all right.

THE PANAMA CANAL.

A CABLE from Paris says that Edmond Bartissol, a civil engineer, who helped pierce the Isthmus of Seuz, has made public his plan for completing the Panama canal. He proposes to build a stone tunnel about 10 kilometers (or 6 miles) long. Water from the Chagres river would be conducted by shafts to this tunnel, and there be used to carry to the Pacific the soil already excavated from the canal bed and thrown in the way of the current. The canal could be completed by such means in four years, M. Bartissol estimates, at a maximum expense of 500,000,000 francs. This plan was submitted some time ago to the Technical Commission of the Panama Canal Company.

TRADE NOTES.

THE Waterous Co., of Brantford, report recent machinery sales as follows:—

No. 3 Allis Band Mill, to the Huntsville Lumber Co., with band saw tools, wood grinder, to convert their refuse into chips, to be fed with saw-dust to their boiler, with automatic fuel feeder. A similar plant to Graham, Horne & Co., Fort William, and two other band mills to Warren Curtis, Three Rivers. With these latter mills was sent one of their steel saw mill carriages of new design, one of the heaviest and strongest mill carriages built in Canada; also a Prescott direct acting steam feed, 42 feet long, a double Kelly log kicker or double deck unloader, and two Hill's patent stationary steam niggers. By the first of the month they will ship the same firm two 150 horse-power engines. A fifth band mill will be shipped the end of this month to G. & G. Flewelling, Hampton, N.B., together with saw carriage, double edger, live rolls and other machinery. Shipment has just been made of a saw carriage, edger, lath machinery, conveyors, &c., to Humphrey and Trees, Moncton, N.B., a saw frame and carriage to Mr. McKiernon, Eganville, and another to Jesse Cooke, Zephyr.

NEWS AND NOTES.

There is still sleighing in the lumber woods around Kippewa lake. Four of the Shepard-Morse lumber camps in that district are still in full blast.

Navigation has opened earlier this spring near Chats lake than for 20 years. There are 200,000 logs in the Schneauix bovin to be towed.

The annual meeting of the Alberta Lumber Co., was held recently. A satisfactory report of the past year's business was presented, and the following directors were elected for the ensuing year: H. J. Dexter, W. G. Bell, Winnipeg; H.B. Baird, Westby Fallowes; James Robertson, Minneapolis.

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

MUCH has been said and written here at various times about the sawdust nuisance of the Ottawa river. Protests in the House of Commons, and out of it, have been entered, and the law has, at different times been called into requisition to abate this alleged nuisance. But the mills here grind out the sawdust in as large quantities as ever, and it finds a home in the Ottawa river as usual. A fresh effort to remedy the trouble is now being made in the case of Ratte v. Booth, a petition to the Privy Council of Canada having been prepared, asking that the sawdust nuisance in the Ottawa river be ended. It alleges that these deposits of sawdust constitute a serious interference with the public rights of navigation, that they lower the value of property along the banks of the river and are liable to cause increasing damage as time passes. It is suggested in the petition that the refuse of saw mills can be economically utilized or the destruction thereof easily and successfully accomplished. It is asked of the government to place Ottawa river, between the Chaudiere falls and McKay's bay and the Gatineau river, from the mill pond above Gilmour & Co.'s mill at Chelsea, to its mouth, under the provisions of the Fisheries Act and the Act for the Protection of Navigable Waters. The latter of the statutes expressly declares that no owner or tenant of any saw mill or any workman therein or other person shall throw sawdust, edgings, slabs or rubbish into any navigable river or stream. The extent to which the river is being obstructed by the sawdust is not commonly known, but the engineer of the Gatineau Valley railway in making soundings recently between Nepean point and Hull found 68 feet of sawdust in the bottom of the river.

INDIFFERENT LENGTHS.

The fear grows that a good many logs on the smaller streams will be "hung up" owing to a lack of water.

The ice has gone out of the Ottawa but there is no perceptible rise of the water.

Towing in the Ottawa, between Ottawa and the Chats lake, is now in full swing. The tugs have begun taking down the logs of the lake, most of which, however, are of last year's drives.

Both big and little mills of the Bronson & Weston Lumber Company are cutting, giving employment to about 300 hands.

Green lumber is beginning to come up in large quantities from the lower yard of the Canada Atlantic railway at the Chaudiere. The majority of the piling grounds at Rochesterville, Stewartson and Hurdmans are pretty well filled up on account of the slackness of shipping during the past winter.

OTTAWA, Can., April 26, 1894.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE lumber trade, at least the shingle manufacturers, are somewhat agitated over the news that has reached them from Puget Sound, that the shingle association there has decided to cut the prices of shingles 10c. per thousand. Manufacturers here realize, unless they are ready to make a similar cut, that the Puget Sound shingle men will capture a large amount of their trade with Manitoba and the North-West, especially since the change in tariff, removing the duty of shingles. It is calculated that under this arrangement American manufacturers would be able to discount British Columbia men by about 30c. per thousand. Just what the decision of our shingle men will be, it is a little difficult to say, as this unanimity of prices fixed by the British Columbia association was expected to level up the losses that had been made by over production and ruinous competition in shingles in this province for some time past. Duty on shingles under the old tariff was 20% ad valorem, which was sufficient to keep American shingles out of the market.

COST OF LUMBERING.

The lumber trade, altogether, in the province is not in the healthiest condition. We have suffered, as do all new provinces, with over production and a cutting of prices that is usually to be associated with this practice. The volume of business during the past year has been considerable, but for the reason stated it has not been done at much profit. We learn that pine in Ontario is being sold at $7.00 on the stump. Our magnificent timbers do not net perhaps more than that f. o. b. Considerable of our lumber goes to Australia in cargo, but largely on speculation. It is sold by auction, and does not net the mills more than about $7.25 per thousand feet. It is calculated that it costs $4.00 to bring these immense logs from stump to the mill. Government dues are 50c. Sawing costs $2.00, so that the cost of production almost touches $7.00. Time will probably remedy these evils, for if there is any truth in the forestry estimates that are made of the amount of timber in other parts of the Dominion, and particularly in Ontario, it cannot be a great while before the rest of the Dominion will have to look to British Columbia for their supplies. In the meantime, we do, as other youngsters do, as you have done in Ontario, I fancy, act prodigal-like with our riches.

COAST CHIPS.

A number of new charters are reported, including the British ship Astoria, to load lumber at the Hastings mill. The British ship Grace Harwar, now at Yokohama, and the British bark Xanthippe, at Honolulu, these also to load at the Hastings mill. The American schooner Aida, and the Chilian bark India, are loading at Moodyville. Ship "Thermapylae," of Victoria, Capt. Winchester, is loading 800 at B. S. M. Co., for Shanghai, some sticks measuring 22x22x100 and 82x24x100.

Mr. S. M. Wharton is building a sawmill at New Denver.

Messrs. Bailey & Sparks sawmill, Vancouver, was burnt on 7th inst., loss about $2,000.

NEW WESTMINSTER, B.C., April 25, 1894.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN].

THE mills are commencing to resume operations. 2,000,000 feet are being cut by Barnhill for the Australian market. King Bros'. mill, it is said, will be idle this summer.

At the annual meeting of the St. John River Log Driving Company, the following officers were elected. President, C. F. Woodman; secretary-treasurer, J. F. Gregory; directors, C. F. Woodman, David Keswick, George Barnhill, John A. Morrison, Robert Connors. The company expects to handle 100,000,000 feet of logs this season.

A number of export shipments have gone forward during the month including about 100,000 feet of deals for Belfast, Ireland, 185,000,000 feet of long lumber for Buenos Ayres and a cargo for Barbadoes and Bermuda. Some 6,000,000 shingles, 2,500,000 lath and about 2,000,000 feet of deals etc., have gone forward to United States markets. The lumber cut in Cumberland county, N.S., is given as follows: Young Bros. & Co. have 3,000,000 to saw at River Herbert, and 5,000,000 at Half Way lake; Kelly Bros. 3,000,000 on river Herbert; B. B. Barnhill, 3,000,000 at Two Rivers; Prescott, Gillespie & Co., 3,500,000 at Shulee; the Shulee Lumber Company about the same quantity; Chas. T. White between 6,000,000 and 8,000,000 at Apple river; E. I. White, 1,500,000 at Sand river. A lot of piling has also been got out at the head of the bay.

Eighteen inches of snow fell in St. John a week ago. Nothing so severe has been known here since 1847.

Kilburn & McIntosh cut 6,000,000 feet of timber in Quebec, near the New Brunswick border, this season.

Unless a revival takes place in shingles, the mills of the province will cut very light this summer.

ST. JOHN, N.B., April 23, 1894.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

WITH navigation opened we are hoping for a turn in the tide of lumber, for there is no use denying that the closing six months of 1893 and the opening months of the new year were full of dreadful dullness. But how far our hopes are to materialize in actual business is just doubtful. Indications at present do not point to a large lumber trade this spring. Prices, I think, it is safe to say will show a decline. They have been keeping up with remarkable firmness, when we remember how dull trade has been, but these conditions cannot be expected to continue, not at least if trade is to remain slow during spring and summer.

BITS OF LUMBER.

It is anticipated that a good many logs will be towed from Canada to the Saginaw river this season and the towing companies are preparing for this work.

C. A. Merril who is foreman of the Spanish River Lumber Company's mill at Spanish River, Ont., and who has resided in Bay City during the winter, has returned to his post for summer work. It is currently reported that S. C. Fisher has purchased 5,000,000 feet of Canadian logs to be brought to Bay City to be manufactured and that he anticipates securing another lot of 20,000,000.

The lumber firm of Begole, Fox & Co., who have been in business at Flint, Mich., for 27 years, have dissolved partnership. The firm will go out of business.

A Toronto tug is busy in these parts picking up the logs belonging to H. M. Loud & Sons, of Au Sable, which broke loose from Tonawanda and went over Niagara Falls.

The shingle trade is unusually quiet, the depression here being more acute than in lumber.

C. K. Eddy & Son's mill will not commence running until June, and their main stocks will come from Canada.

SAGINAW, Mich., April 25, 1894.

TRENTON LETTER.

[Correspondence of CANADA LUMBERMAN].

THE outlook for a good lumber trade in this vicinity is very encourageing this spring, and already American buyers are negotiating for their season's purchases. Prices continue about the same in all lines, and until the tariff question is finally decided it is not likely there will be any important change.

Navigation is open here, and driving operations on the back rivers and lakes are in full swing Messrs. Gilmour & Company, of this place, have started to drive the logs cut in the old limits last winter, and expect to bring the head of the drive into Belleville about the 30th, inst., where the logs will be sorted, and finally towed to the Trenton mills.

Wages continue about the same as last year, and good hands are plenty on the river.

The ice has all left the lakes around here, and the only drawback to the driving is a scarcity of water, but notwithstanding this obstacle the logs are being rushed through very rapidly.

The mills at Trenton will start about the 28th inst., with new improvements; and a large cut is expected.

Mr. David Gilmour, who has been spending the winter at Menton, France, is expected home in time to see the first logs transformed into good merchantable lumber, and Mr. Allan Gilmour is also making arrangements to leave his Ottawa home for Trenton.

The steamer "D. R. VanAllen" has already moved several cargoes of wintered lumber to Oswego, and local shipments are quite heavy for this season of the year.

Just at present all interest is centred in Gilmour & Co.'s new limits, where the tramway is situated. Ten shanties have been in active operation all winter, and about 20,000,000 feet is the result of the season's work. These logs are now being towed to the tramway, or logway, to be taken over the height of land separating the Muskoka and Trent waters, a distance of about two miles. A test will be made in about two weeks, and the opinion of all the expert engineers who have visited the place is that the result will be highly satisfactory.

It is the desire of the company to have logs in Crow Bay this year from the new limits, and everything points to a successful completion of their plans.

TRENTON, Ont., April 26, 1894.

CANADIAN SHIPMENTS TO THE U. S.

ACCORDING to the United States Treasury statement, the importation of lumber from Canada to the United States for 1893 was as follows:—

LONG LUMBER: Total quantity, both rough and planed, feet, 692,218,010.

Duty collected on white pine, hemlock and basswood, at $1 a thousand	$ 529,262 93
Additional for dressing	7,282 53
Duty collected on spruce, oak, elm, etc., at $2 a thousand	325,910 16
Additional for dressing	7,194 75
Total duty on long lumber	$ 869,650 37

SHORT LUMBER.

Clapboards—Pine, 67,990, at $1.50 a thousand	$ 67 99
Spruce, 6,997,440, at $1.50 a thousand	10,496 19
Hubs for wheels, etc., rough hewed or sawed, valued at $28,227, at 20 per cent.	5,645 46
Lath—327,442,000, at 15 cents a thousand	49,116 34
Paving posts, railroad ties, and telephone and telegraph poles of cedar, valued at $271,235.-91, at 20 per cent	54,247 19
Pickets and palings, valued at $36,699.93, at 10 per cent	3,670 00
Shingles—Pine, 216,781,000, at twenty cents a thousand	43,356 15
All other, 253,221, at 30 cents a thousand	75-966 26
Sugar-box shooks and packing boxes, and packing box shooks, valued at $45,745, at 30 per cent	13,723 66
Staves—Valued at $646,613,40, at 10 per cent.	64,661 34
Total duty on short lumber	$ 320,850 58
Aggregate duty collected on lumber in 1893	$1,190,500 95

A THREE CENT STAMP DOES IT.

ON receipt of a three cent stamp we will mail free to any address a copy of our little hand-book entitled "Rules and Regulations for the inspection of pine and hardwood lumber," as adopted by the lumber section and sanctioned by the Council of the Board of Trade, of Toronto June 16, 1890. Address, CANADA LUMBERMAN, Toronto, Ont.

THE NEWS.

CANADA.

—James Stevenson, lumber, Glencoe, Ont., has assigned.

—G. W. Parish is erecting a new saw mill at Athens, Ont.

—S. M. Wharton is erecting a saw mill at New Denver, B.C.

—Cockburn and Sons will build a saw mill at Cache Bay, Ontario.

—A sash factory has been started at Salmon Arm, B.C., by Mr. Bolton.

—Mr. Mitchell, of Millwood, will build a saw mill at Selkirk, Man.

—D. P. McDougall & Co., Maxville, Ont., have started up their saw mill.

—A saw mill will be built at Fredericton, N.B., by Donald Fraser, of River du Chute.

—D. Ross, Whitemouth, Man, is placing more machinery in his saw and planing mill.

—The Parry Sound Lumber Company will shortly commence the manufacture of shingles.

—Robinson & Co., Winnipeg, Man., have sold out their lumber business to Hugh Law.

—C. Mills, of Wheatley, Ont., has purchased the saw mill at Windfall, Ont., formerly run by Mr. Shaw.

—Mr. Minnis, the purchaser of the Burhead mill, near Markdale, Ont., has secured a large stock of logs and is busy cutting.

—Toner and Gregory, of Collingwood, have purchased the saw mill in that town belonging to the Georgian Bay Lumber Company.

—Charles Brewer's saw mill at Armstrong, B.C., has been purchased by E. C. Gargett & Co., who will add some new machinery.

—The portable sawmill owned by Samuel Maquire, at Little Rapids, Ont., was destroyed by fire a week ago. Loss $600, no insurance.

—The lumber outlook at Norman, Ont., is not over bright. Of the three mills located here it is thought only one will be running this summer.

—John Carew, Lindsay, Ont., has just erected a lath mill, which cuts 40,000 to 50,000 lath per day. The machinery was supplied by F. J. Drake, of Belleville.

—Edwin Fisher, an old-time lumber merchant, of St. John, N. B., has assigned. The liabilities are $10,000, and it is said the estate will show a nominal surplus. At one time Mr. Fisher was considered wealthy,

—Mr. J. Krupp, of Metcalfe, Ont., has recently purchased J. L. Rolston's saw and shingle mill at that place, and will add in the near future, lath and planing machines and a run of stones for feed grinding.

—The McClymont sawmill in New Edinburgh, which was purchased last fall by Messrs. W. C. Edwards & Co., of Ottawa, has been entirely rebuilt during the past winter, and considerably enlarged. It will be used as a planing mill, and sash, door and blind factory.

—The Imperial Lumber Company are about through hauling logs on the C. P. R. at Warren, Ont., and are making perparations to rest their drive at Deer Creek. They have been successful in getting out nearly all their logs of this season's cut, and some left over from last season.

—At a meeting of the Western Retail Lumbermen's Association, of Manitoba, held during the past month, considerable attention was given the matter of securing a reduction in freight rates. It was resolved that whatever concessions are made will be given the consumers in reduced prices.

—Wm. W. Gibson, lumber merchant, of Port Neuf, Que., has instituted an action in the Superior court, against Mr. Alex. Fraser, the well-known lumberman, of Westmeath, for $20,000 damages for breach of contract. The provincial police have been called in to prevent rioting in the Gibson lumber shanties.

—In the case of Hale vs. Saginaw Lumber Co., tried without a jury at Pembroke, Ont., judgment has since been given by Justice MacMahon. The judgment declares that the Vermillion River was, during the spring, summer and autumn freshets, before certain alleged constructions and improvements were made by the defendant company, and is navigable or floatable for saw logs and other timber, and does not come within the class or kind of river to which R. S. O., ch. 20, applies, and in respect to which tolls may be imposed and collected ; and that the defendant company have no right to charge or collect tolls from the plaintiffs for the logs which the plaintiffs have passed or may hereafter pass over or through such alleged constructions or improvements. The defendant company to pay the plaintiff's costs.

—Judgment in the case of McNab vs. Dysart, brought by D. B. McNabb, of Lindsay, Ont., against the township of Dysart, for $5,000 damages, has been given against the defendant, though the amount of damages has not been fixed. It was claimed that plaintiff, with the permission of the township council, erected a sawmill on a road allowance on the shore of Head Lake. The mill was never completed, only the sides being put up. Some months afterwards the mill was pulled down by Mr. Prust, township clerk, acting upon the instructions of the council and the solicitor. Another mill was erected upon the same site by Mr. Prust, and the action was brought to recover the value of McNabb's mill, and for damages sustained. The evidence showed that a portion of the mill was in the lake, over which the municipality had no control, and that in pulling down the mill the township authorities were not justified.

—At a recent meeting of the Canadian Institute, in Toronto, a paper on the "Rainfall and Fluctuations of our Lake Regions," was read by Mr. Andrew Elvins. He reviewed specially the theory that attributes the decrease in the annual fall to the denudation of the forests. A chart was exhibited showing the observed results from 1840 to 1893. This showed that the rainfall of each decade is less than the one preceding. The conclusion arrived at by Mr. Elvins was that these fluctuations do not admit of explanation by the theory that the denudation of the forests has caused a decrease in the rainfall, pointing out that while the cutting down has been gradual, the rainfall has varied, and specially noting that since 1870 there has been an average increase, not a decrease, as might be supposed from the present state of the forests. Observations made at other points strengthen the correctness of the result reached, that the cutting down of the forests is not connected with the rainfall.

GENERAL.

—A general meeting of the friends of trees, is to be held in Paris, France, in May, for the purpose of protesting against deforestation.

—Mr. S. O. Fisher, lumberman, of Bay City, Mich., recently purchased twelve million feet of choice pine in the vicinity of Ottawa, Ont. The logs will all come from the Spanish River district.

FIRES AND CASUALTIES.

FIRES.

—A saw mill at Vancouver, B.C., owned by Sparks & Bailey, was burned a fortnight ago. Loss, $2,000.

—A fire broke out in the lumber town of Huntsville, Ont., on 18th ult., devastating almost the entire business section of the town.

—Moore & Macdowell's extensive saw mills, situated about seventy miles north of Edmonton, N.W.T., were completely destroyed by fire on the 26th ultimo. The loss is $9,000, there being no insurance.

—Richardson & Sons, lumber mills at Bedford, N.S., including all the machinery, were entirely destroyed by fire on the 21st ultimo. The loss will be between $8,000 and $10,000 and the insurance only $2,000.

CASUALTIES.

—John Scott, of Birch Lake, near Webbwood, Ont., while chopping in the woods, was killed with a falling tree.

—John Bradley, of Bradley & Cameron, lumber dealers, London, Ont., narrowly escaped being killed by a trolley car. He was knocked down and badly bruised while passing at the rear of one car.

—Two weeks ago the eight year old son of Robert Hawke, of Lang's sawmill, near Atwood, Ont., while playing in the mill, stepped into a pool of boiling water at steam heat, and was terribly scalded.

—The young daughter of Mr. Peterson, who runs a sawmill at Northbrook, Ont., caught her clothes in the revolving shaft of the mill a few days ago, and suffered considerable injuries. Her father who went to her assistance had his knee cut.

—A press dispatch of a few days since, from Marquette, Mich., says: The body of Alexander Stewart, a lumberman, was brought in for burial from Yellow Dog river to-day. He was thrown into the river by a pile of logs breaking loose, and drowned. He was supposed to have been from Toronto, Ont., and was unmarried.

PERSONAL.

Mr. Kennedy F. Burns, the big lumber king of New Brunswick, and who was represented in the Commons of Gloucester, has been appointed a senator.

One of the oldest settlers in Buckingham, Que., Wm. C. Kendall, died on 14th April. Deceased was 78 years of age. He was millwright for McLaren & Co., of Buckingham, for some years, and also manager of the Bangs, Kirby, Kendall & Co., sawmill at Basin du Lievre, Que., for a long time.

SPONTANEOUS COMBUSTION.

THE following is a condensed report of an address delivered by Professor Vivian Lewes to workingmen, at the meeting of the British Association recently held in Nottingham, England :

The learned professor began by showing how the labors of Priestly and Lavoisier had led to a true knowledge of the actions taking place during combustion, and showed by experiment that in all the ordinary cases of combustion a chemical union was taking place between the constituents of the burning body and the oxygen of the air. The idea of combustion, however, must not be limited to processes of oxidation, although they were the most important ; and in order to a true conception of the action, combustion must be defined as "the evolution of heat during chemical combustion." It was then shown that the rate at which chemical action took place was, to a great extent, influenced by various factors, and that there were many cases in which the action was so slow that the heat escaped as fast as it was generated, and no perceptible rise of temperature took place, and such actions were generally looked upon as cases of "slow combustion." Slow combustion was one of the most important natural actions, and by its means the waste matter in the world was slowly got rid of, and converted once more into simple gaseous compounds, all cases of decay being slow oxidation or combustion. All inflammable substances had a fixed temperature at which they burned actively with flame or incandescence, and this was called the "point of ignition." In some cases an inflammable substance undergoing slow combustion was surrounded with a non-conducting material, and the heat due to the actions going on gradually rose until the point of ignition was reached, and it was this change from the little noticeable slow combustion to ordinary combustion, with its manifestation of flame or incandescence, to which the term "spontaneous combustion" had been given. The lecturer then proceeded to consider special cases of spontaneous combustion, and showed that freshly burned charcoal, especially when powdered, absorbed oxygen from the air with considerable rapidity and with a rise of temperature, which with a large mass was in some cases sufficient to set it on fire. The important bearing of this was that beams, skirting boards, etc., in contact with flues and heating pipes, were liable to become charred at a comparatively low temperature, and this form of charcoal was very liable to spontaneous ignition when air came in contact with it. In the same way coal had the power of absorbing oxygen from the air, and when in masses of a thousand ton or more, especially when much broken and moist, would undergo heating, and even ignition. This was due to the absorbed oxygen setting up chemical action with the hydrocarbons of the coal, and not, as was generally supposed, from the oxidation of the coal. Nearly all vegetable and animal oils had the power of absorbing and combining with oxygen, and this gave them the power of drying : and one of the most usual causes of spontaneous ignition in workshops and factories was to be found in oily waste or rags, as the oil being spread on the surface of the material, offered a large surface for oxidation, while the rags or waste, being excellent non-conductors of heat, allowed the temperature to rise until ignition took place. Well authenticated cases were known in which sparrows building their nests of oily waste in the eaves of houses had cuased serious fires. Hayracks which had been built from grass improperly dried before stacking were also very liable to spontaneous ignition ; this being due to the sap of the grass taking up oxygen during a process of fermentation, which evolved heat, and the heat kept in by the surrounding hay, rose until the ignition point was reached. If grass once well dried then became wet by a shower, it became mouldy in the stack, but did not heat. The lecturer then concluded by emphasizing the fact that the so-called spontaneous combustion was merely an increase in the rate of chemical combustion from the slow stage, which was hardly noticeable, to active combustion, and showed the fallacy of supposing that the living body could undergo any such action.

—The Coleman Plaining Mill and Lumber Co., of Burlington, Ont., is being incorporated to operate a saw mill at that place. The capital stock of the company is $50,000.

TRADE REVIEW.

Office of CANADA LUMBERMAN,
May 1, 1894.

THE GENERAL SURVEY.

IT may be said that the lumber trade of the season has now fairly started. Mills in the Ottawa and likewise in the Northern section of the province, and generally throughout the country, have commenced cutting. How large the plans are for the season's work, it is a little difficult to say as yet. The business has been entered upon cautiously and it is doubtful if the cut will be as large as a year ago. In the Ottawa a large part of the cut has already been disposed of, and pretty steady work there may be expected. A considerable quantity of lumber will go to the United Kingdom, sales having been made there. We hear of good sized shipments for South America. Business is not sufficiently healthy on the American side, to anticipate that there will be anything approaching the same numbers of orders for Canadian lumber taken there this spring, as was the case a year ago. As our remarks a little further on, touching the United States market, will show the lumber trade in that country is by no means in a satisfactory condition. The financial and commercial conditions of the country continue unsettled. From whatever point of view we look there are disturbing elements, not even excepting the movements of Coxey's men. Trade, quiet as it is with our neighbors, might be made still worse should there be an outbreak among the laboring classes, and matters there do not look any too promising just now. Tariff conditions also are causing trouble, and so far as lumber is concerned the possibilities in this direction have a sufficient bearing on the purchase of Canadian timbers to cause Americans to move carefully.

Work on the drives generally in all parts of the country is well started, but as stated a month ago, there is danger of considerable of the winter's cut being "hung up." The cut in any case will doubtless be smaller.

Local lumbermen report a fair business among dealers throughout the various towns of the province. One thing is favorable to the local consumption of lumber, viz., that stocks have been allowed to become very low during the winter, and wherever building operations in any community are at all large, lumber must be purchased. Shingle trade so far as we can learn will be quite active throughout the province this summer. A number of permits for building have been granted in Toronto, causing some little brightening up in this respect.

Our regular letter from British Columbia does not portend the best state of affairs in that province. We had referred before to the combination of shingle men as a means of strengthening trade in that important line of manufacture. No word has reached us of any break in this combination, so far as British Columbia manufacturers are concerned, but our correspondent tells us of a decision by the Puget Sound people to drop prices 10c. a thousand on shingles. The changes in the tariff at Ottawa have placed shingles on the free list, and there is now grave danger of British Columbia finding the Puget Sound manufacturers entering into competition with them in their Manitoba and North-West trade. Of lumber in British Columbia nothing special is to be noted. Not a few cargoes are going out for export, but it does not look as though the trade of the season would be especially heavy.

Down by the sea in New Brunswick lumbermen are anticipating an improved season's trade. They are already sending a good deal of stuff to the United Kingdom and Senator Burns, New Brunswick's lumber king, is authority for the statement that the South American lumber market is more promising than for some time, and that a fairly good business can be done in that direction.

UNITED STATES.

Taking a calm view of the lumber situation in the United States, as indicated by conditions at all the leading centres, it must be admitted that the outlook, whilst not discouraging, is by no means large. A variety of conditions are combining to give unsettledness to the lumber trade. Members yet feel the severity of the winter's depression, and would appear to have entered on the spring business halt and lame. The strong ones can endure this, but should the depression continue, it must necessarily be tough upon those who have been looking to a revival on the opening of spring, to relieve them of the severe pressure of the winter. This revival has not come. Legislators are still playing and fooling with tariff reform. And so far as lumber is concerned, the effect is that no one is disposed to buy largely, so long as they do not know what is to be the future of stocks. A doubt also exists as just how stocks stand. A good deal has been carried over from last year, but it is thought that the position of supplies on hand will be made stronger, in the first place, by a smaller cut in the woods the past winter, and that still additional strength will come from the expectation, that out of what has been cut, a good many logs will be "hung up." Should these conditions be found to prevail, a break in prices, that is feared because of the continued dullness of trade, would not be so likely to take place.

FOREIGN.

It appears likely that sufficient improvement will be shown in the lumber market in the United Kingdom this summer to give more life to trade there than has been the case for a year past. At Liverpool, Alfred Dobell & Co., report increased activity. Farnworth & Jardine, of the same place, whilst they are not sanguine of any great improvement in trade, yet think that conditions generally are better. The arrivals from British North America, they say, during the past month have been two vessels, 2,864 tons, against one vessel, 1,299 tons, during the corresponding month last year. In waney and square timbers the deliveries of the month have been light, but sufficient it is thought for the probable demands until arrival of the new import. Denny, Mott & Dickson, of London, Eng., say there is a distinct improvement in many branches of trade, especially hardwood, and there is an increased demand for consumption as the year progresses. It seems difficult to say what may be expected from South America. An impression has existed that trade there was improving, but we hear rumors again of internal war in this much unsettled country. However, at present the outlook for lumber is rather encouraging. Nothing bright can be told of Australian conditions. It has been a long siege of depression with the people of the Antipodees and there is not yet much "let up."

HARDWOODS.

In the English market the consumption of hardwoods shows an improvement. Slightly improved conditions are to be remarked of mahogany of fair quality. The United States markets are by no means lively. What distribution has taken place has not been at all general. Boston dealers, our contemporary Hardwood says, are talking hopefully that prices for hardwoods are better than for pine and spruce, but the amount going into consumption has not perceptibly increased. Stocks at no points are by any means large. The trade in Canada is steady but not especially brisk.

TORONTO, ONT.

TORONTO, May 1, 1894.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00 36 00
1x10 and 12 dressing and better	20 00 22 00
1x10 and 12 mill run	16 00 17 00
1x10 and 12 common	13 00 14 00
1x10 and 12 spruce culls	10 00 11 00
1x10 and 12 mill culls	10 00 11 00
1 inch clear and picks	28 00 32 00
1 inch dressing and better	20 00 22 00
1 inch siding mill run	14 00 15 00
1 inch siding common	12 00 13 00
1 inch siding ship culls	11 00 12 00
1 inch siding mill culls	9 00 10 00
Cull scantling	8 00 9 00
1 1-2 and thicker cutting up plank	24 00 26 00
1 inch strips 4 in. to 8 in. mill run	14 00 15 00
1 inch strips, common	12 00 13 00
1 1-4 inch flooring	16 00
1 1-2 inch flooring	16 00
XXX shingles, 16 inch	2 50 2 60
XX shingles 16 inch	1 50 1 60
Lath, No. 1	2 15
Lath, No. 2	1 80 1 85

YARD QUOTATIONS.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	13 00
" " stocks	16 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	16 00
" " " 22 ft	17 00
" " " 24 ft	19 00
" " " 26 ft	20 00
" " " 28 ft	22 00
" " " 30 ft	24 00
" " " 32 ft	27 00
" " " 34 ft	29 50
	23 50
" " " 36 ft	31 00
" " " 38 ft	33 00
" " 40 to 44 ft	37 00
Cutting up planks, 1 and thicker, dry	25 00 28 00
" board	18 00 24 00
Dressing blocks	16 00 20 00
Picks Am. inspection	30 00

F. M.	
1 1-2 in. flooring, dres'd	26 00 30 00
" " rough	18 00 22 00
" " dres'd	25 00 28 00
1 1-4 in. flooring, undressed, B.M.	16 00 18 00
1 1-4 in. flooring, dres'd	18 00 20 00
" " undres'd	12 00 15 00
Beaded sheeting, dressed	20 00 35 00
Clapboarding, dres'd.	12 00
XXX sawn shingles per M.	2 60 2 70
Sawn lath	2 60
Red Oak	30 00 40 00
White "	37 00 45 00
Basswood, No. 1 and 2	28 00 30 00
Cherry, No. 1 and 2	70 00 90 00
White ash, 1 and 2	24 00 35 00
Black ask, 1 and 2	20 00 30 00

HARDWOODS—PER M. FEET CAR LOTS.

Ash, white,	1	to 2 in.	$18 00	$20 00	Elm, soft	1	" 1½ $11 00 $12 00
" "	2½	to 4..	20 00	24 00	" "	2	" 3.. 12 00 13 00
" black,	1	" 1½	16 00	18 00	" rock	1	" 1¾ 14 00 16 00
Birch, sq.,	1	" 4..	17 00	20 00	" "	1½	" 3.. 15 00 18 00
" "	4x4	" 8x8	20 00	22 00	Hickory	1½	" 2.. 28 00 30 00
" red	x	" ½	20 00	22 00	Maple	1	" 1½ 16 00 17 00
" "	2	" 4..	22 00	25 00	"	2	" 4.. 17 00 18 00
" yellow	1	" 4..	14 00	15 00	Oak, red, p'n	1	" 1½ 28 00 30 00
Basswood	1	" 1¼	15 00	16 00	" "	2	" 4.. 30 00 32 00
"	1½	" 2..	16 00	18 00	" white "	1	" 1½ 28 00 30 00
Butternut	1	" 1½	23 00	25 00	" " "	2	" 4.. 30 00 35 00
"	2	" 3..	25 00	28 00	" quart'd	1	" 2.. 48 00 52 00
Chestnut	1	" 2..	2 00	25 00	Walnut	1	" 3.. 85 00 100 00
Cherry	1	" 1½	50 00	60 00	Whitewood	1	" 2.. 32 00 36 00
"	2	" 4..	60 00	65 00			

OTTAWA, ONT.

OTTAWA, May 1, 1894.

Pine, good sidings, per M feet, b.m.	$32 00 40 00
Pine, good strips, " " "	27 00 35 00
Pine, good shorts, " " "	20 00 27 00
Pine, 2nd quality sidings, per M feet, b.m.	20 00 25 00
Pine, 2nd quality strips, " " "	18 00 22 00
Pine, 2nd quality shorts, " " "	15 00 18 00
Pine, shipping cull stock, " " "	14 00 16 00
Pine, box cull stock, " " "	11 00 13 00
Pine, s.c. strips and sidings " " "	11 00 14 00
Pine, mill cull	8 00 10 00
Lath, per M	1 60 1 90

QUEBEC, QUE.

QUEBEC, May 1, 1894.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	14 @	18
For fair average quality, according to average, etc., measured off	16	20
For good and good fair average, " " " "	23	27
For superior " " " " "	28	30
In shipping order " " " " "	29	35
Waney board, 18 to 19 inch " " " " "	30	36
Waney board, 19 to 21 inch " " " " "	37	40

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	45	51

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	30	34

BIRCH.

16 inch average, according to average and quality	20	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $37 to $42 for 3rd quality.

Bright spruce, according to mill specification, $40 to $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality.

SAGINAW, MICH.

SAGINAW, Mich., May 1.—Continued stagnation in the lumber trade is noticeable here. True, we are entering upon the busy season, but commercial conditions seem so unsettled, that the lumber business takes on no particular life; certainly nothing approaching what would be expected at this season of the year. Wood-working concerns, generally, are running on short time and many are closed down. Saw mills, in not a few cases, are unable to get moving with any vigor for the reason that stocks of logs have not yet come forward. Those depending on Canadian logs do not anticipate any large supplies before the first of June. Prices remain somewhat firm when we consider all these conditions.

FINISHING LUMBER—ROUGH.

Uppers, 1, 1¼ and 1½	45 00	Fine common, 1 in	35 00
2 in	46 00	1¼ and 1½ in	36 00
Selects, 1 in	40 00	2 in	37 00
1¼ and 1½	41 00	C, 7, 8 and 9 in	30 00
2 in	42 00		

SIDING.

Clear, ½ in	24 00	C, ½ in	19 00
⅞ in	48 00	⅞ in	34 00
Select, ½ in	21 00	No. 1, ½ in	13 00
⅞ in	40 00	⅞ in	23 00

TIMBER, JOIST AND SCANTLING.

2x4 to 10x10, 12, 14 and 16 ft.	$11 00	20 ft	14 00
18 ft	13 00	22 and 24 ft	15 00

For each additional 2 ft. add $1; 12 in. plank and timber $1 extra; extra for sizes above 12 in.

SHINGLES.

XXX 18 in. Climax	3 65	18 in. X (cull)	1 00
XXX Saginaw	3 40	XXX shorts	2 25
XX Climax	2 25	XX	1 50
18 in. 4 in. c. b	1 25		

LATH.

Lath, No 1, white pine 2 25 | Lath, No. 2, W. pine, Norway 1 65

NEW YORK CITY.

NEW YORK, May 1.—Trade is a long way short of giving evidence of even a fairly good spring and summer business in lumber. There is a little sorting up, as building operations commence to open out, but it is quite noticeable that everyone is moving very cautiously in their buying. It is a little difficult to say just how prices will shape this season. Queried on this point lumbermen are apt to point to the tariff and say that

they will know better what to do when they know the fate of the Wilson bill.

WHITE PINE—WESTERN GRADES.

Uppers, 1 in	$44 00	@45 00	Coffin boards	20 00	22 00
1¼, 1½ and 2 in	46 00	47 00	Box, in	$17 00	@17 50
3 and 4 in	55 00	58 00	Thicker	17 50	18 50
Selects, 1 in	40 00	41 00	Ccil'g, base, fig. No. 1	40 00	42 00
1 in., all wide	41 00	43 00	No. 2	35 00	37 00
1¼, 1½ and 2 in	43 00	44 00	No. 3	24 00	26 00
3 and 4 in	52 00	53 00	Shelving, No. 1	30 00	32 00
Fine common, 1 in	36 00	37 00	No. 2	25 00	27 00
1¼, 1½ and 2 in	38 00	40 00	Molding, No. 1	36 00	37 00
3 and 4 in	46 00	48 00	No. 2	34 00	36 00
Cutting up, 1 in. No. 1	28 00	30 00	Bevel sid'g, clear	22 50	23 00
No. 2	21 00	23 00	No. 1	22 00	22 50
Thick, No, 1	29 00	32 00	No. 2	20 00	20 50
No. 2	24 00	26 00	No. 3	16 00	17 00
Common, No. 1, 10 and 12 in	22 00	23 00	Norway, c'l, and No. 1	23 00	25 00
No. 2	20 00	21 00	No. 2	20 00	22 00
No. 3	17 00	18 00	Common	18 00	19 00

ALBANY, N.Y.

ALBANY, N.Y., May 1.—At so important a shipping point as this with navigation completely opened business certainly looks more lively than it has done for many months. It is a matter of doubt, however, whether the lumber business of the season will run into very large figures.

PINE.

2½ in. and up, good	$56	$60	10-in. common	$15	$16
Fourths		58	12-in. dressing and better	28	34
Selects		50	Common	15	17
Pickings		45	1¼-in. siding, selected, 13 ft.	40	45
1¼ to 2-in. good	52	55	Common	15	17
Fourths	47	50	1-in. siding, selected	38	42
Selects	42	45	Common	15	17
Pickings	37	40	Norway, clear	22	25
1-in. good	52	55	Dressing	16	18
Fourths	47	50	Common	11	15
Selects	42	45	10-in. plank, 13 ft., dressing	c.	c.
Pickings	37	40	and better, each	42	55
Cutting-up	22	27	10-in. plank, 13-ft. culls, each	23	25
Bracket plank	30	35	10-in. boards, 13 ft., dressing		
Shelving boards, 12-in. up	30	32	and better, each	28	32
Dressing boards, narrow	19	21	10-in. boards, 13-ft. culls	17	21

LATH.

Pine	$2 40		Spruce	$2 30	$2 40

SHINGLES.

Sawed Pine, ex. XXXX	$4 40	$4 50	Bound butts, 6 x 18	$5 90	$6 00
Clear butts	3 15	3 25	Hemlock	2 15	2 30
Smooth, 6 x 18	5 50	5 60	Spruce	2 20	2 30

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N.Y., May 1.—One authority here sums up the lumber busines in these words, that trade is thoroughly demoralized and the oldest inhabitant would need to be called in to compare these times with any other. Orders for lumber reach here slowly. Seldom, perhaps, has there been so much uncertainty in commerce generally, and whilst the hope was that the opening of spring would see a return of confidence, it cannot be said that this is the case yet. Our lumbermen, however, are by no means hopeless, and they believe that taking the season throughout a fair summer trade will be done. A considerable stock of shingles are reported on hand. Cedar shingles are handled here by a number of dealers. The hand-to-mouth manner in which everyone is buying is one of the remarkable features of the business this spring; prices are unsettled.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in	$47 00	50 00	Shelving, No. 1, 13 in and up, 1 in	31 00	@33 00
2½ and 3 in	55 00	57 00	Dressing, 1¼ in	26 00	28 00
4 in	58 00	60 00	1¼x10 and 12		28 00
Selects, 1 in	38 00	40 00	1½ in	24 00	25 00
1¼ to 2 in	40 00	42 00	2 in	26 50	28 00
2½ and 3 in	50 00	52 00	Mold st'ps, 1 to 2 in	33 00	35 00
4 in		54 00	Barn, No. 1, 10 and 12 in	23 00	24 00
Fine common, 1 in	35 00	38 00	6 and 8 in	22 00	23 00
1¼ and 1½ in	37 00	38 00	No. 2, 10 and 12 in.	18 00	19 00
2 in	39 00	40 00	6 and 8 in	18 00	19 00
3 in		45 00	No. 3, 10 and 12 in.	14 00	16 00
4 in		45 00	6 and 8 in	14 50	15 50
Cut'g up, No. 1, 1 in.	28 00	30 00	Common, 1 in	16 00	18 00
1¼ to 2 in	34 00	36 00	1¼ and 1½ in	18 00	20 00
No. 2, 1 in	18 00	20 00	2 in	20 00	22 00
No. 2, 1¼ to 2 in	24 00	26 00			
No. 3, 1¼ to 2 in	18 00	19 00			

BOX.

1x10 and 12 in. (No 3 out)	14 00		Narrow	13 00	@14 00
1x6 and 8 in (No. 3 out)	13 50		1¼ in	15 00	18 00
1x13 and wider	15 00	17 00	1½ in	15 00	18 00
			2 in	15 00	18 00

SHINGLES.

18 in. XXX, clear	3 85	4 00	16 in., *A extra	2 60	2 70
18 in. XX, 6 in. clear		2 85	16 in. clear butts		2 10

LATH.

No. 1, 4 ft.	2 50	2 60	No. 1, 3 ft.		1 10
No. 2, 4 ft.		1 95			

OSWEGO, N.Y.

OSWEGO, N.Y., May 1.—It is useless at this time to predict what the season's trade is likely to amount to. We are getting into activity but slowly, and how much is going to be done is something we cannot say anything of until later.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$47 00	@48 00			
Pickings, " "	39 00	40 00			
No. 1, cutting up, " "	34 00	35 00			
No. 2, cutting up, " "	24 00	25 00			
In strips, 4 to 8 wide, selected for moulding strips, 14 to 16 ft.	32 00	34 00			

SIDING.

1 in siding, cutting up picks and uppers	32 00	@39 00	1¼ in selected	38 00	@43 00
1 in dressing	19 00	21 00	1¼ in dressing	20 00	22 00
1 in No. 1 culls	14 00	15 00	1¼ in No. 1 culls	15 00	17 00
1 in No. 2 culls	13 00	14 00	1¼ in No. 2 culls	14 00	15 00
			1 in. No 3 culls	11 00	12 00

1X12 INCH.

12 and 16 feet, mill run	21 00	24 00
12 and 16 feet, No. 1 and 2, barn boards	19 00	20 00
12 and 16 feet, dressing and better	27 00	31 00
12 and 16 feet, No. 2 culls	15 00	16 00

1X10 INCH.

12 and 13 feet, mill run, mill culls out	21 00	23 00
12 and 13 feet, dressing and better	26 00	28 00
1x10, 14 to 16 barn boards	18 00	19 00
12 and 13 feet, No. 1 culls	16 00	17 00
12 and 13 feet, No. 2 culls	15 00	16 00
14 to 16 feet, mill run mill culls out	21 00	23 00
14 to 16 feet, dressing and better	26 00	28 00
14 to 16 feet, No. 1 culls	17 00	18 00
14 to 16 feet, No. 2 culls	15 00	16 00
10 to 13 feet, No. 3 culls	11 00	12 00

1¼X10 INCHES.

Mill run, mill culls out.	$22 00	@25 00	No. 1 culls	17 00	18 00
Dressing and better	27 00	35 00	No. 2 culls	15 00	16 00

1X4 INCHES.

Mill run, mill culls out	17 00	21 00	No. 1 culls	14 00	15 00
Dressing and better	24 00	30 00	No. 2 culls	13 00	14 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20 00	25 00	6, 7 or 8, No. 1 culls	16 00	17 00
6, 7 or 8, drsg and better	25 00	30 00	6, 7 or 8, No. 2 culls	14 00	15 00

SHINGLES.

XXX, 18 in pine	3 70	3 90	XXX, 18 in. cedar	3 50	3 70
Clear butts, pine, 18 in.	2 70	2 90	Clear butt, 18 in. cedar	2 50	2 70
XXX, 16 in. pine	3 00	3 20	XX, 18 in. cedar	1 90	2 00
Stock cedars, 5 or 6 in.	4 50	5 00			

LATH.

No. 1, 1¼	2 30		No. 2, 1¼	2 25	
No. 1, 1 in.	1 80				

BOSTON, MASS.

BOSTON, Mass., May 1.—Rather than saw lumber on speculation some of the mills in the East are shut down and will remain so until there is stronger evidence of a revival in trade. Spruce is holding its own pretty steadily, though no large arrivals are yet to be noted. A fair demand exists for spruce boards. Shingles are firm, ranging at $3.00 and $3.25 for extra cedar and $2.50 and $2.75 for clears. Generally, it is to be remarked that the trade is quiet.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards		$12 00	¾ inch	$ 9 25	9 75
Coarse No. 5		16 00	11-16 inch		9 00
Refuse	11 00	12 00	⅝ inch		8 50
Outs	9 00	10 00	Clapboards, sap ext.	52 50	55 00
Boxboards, 1 inch	10 75	11 00	Sap clear	47 00	50 00
⅞ inch	9 75	10 00	Sap, 2nd clear	38 00	40 00
			No. 1		25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in	$52 00	@54 00	Fine com., 3 and 4 in	42 00	46 00
1¼, 1½ and 2 in	52 00	55 00	No. 2, 1 in. Fine com.	28 00	30 00
3 and 4 in		60 00	1¼, 1½ and 2 in	29 00	31 00
Selects, 1 in	45 00	46 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in	48 00	50 00	No. 2	36 00	37 00
3 and 4 in		51 00	No. 3	28 00	30 00
Moulding boards, 7 to 11 in. clear	36 00	38 00	Cut ups, 1 to 2 in	24 00	32 00
60 per cent. clear	34 00	36 00	Coffin boards	21 00	23 00
Fine common, 1 in	40 00	41 00	Common all widths	22 00	26 00
1¼, 1½ and 2 in	41 00	43 00	Shipping culls, 1 in	15 00	15 50
			do 1¼ in.	15 50	16 50

SPRUCE—BY CARGO.

Scantling and plank, random cargoes	14 00	@15 00	Coarse, rough	12 00	@14 00
Yard orders, ordinary sizes	15 00	16 00	Hemlock bds., rough	12 00	13 00
Yard orders, extra sizes	16 00	18 00	" " dressed	12 00	14 00
Clear floor boards	19 00	20 00	Clapbds., extra, 4 ft.	29 00	30 00
No. 2	16 00	17 00	Clear, 4 ft.	30 00	31 00
			Second clear	23 00	24 00
			No. 1	12 00	16 00

LATH.

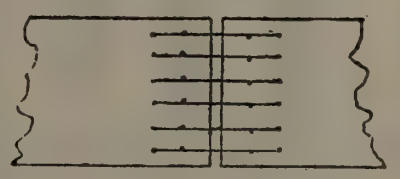
Spruce by cargo	2 50	@2 75

SHINGLES.

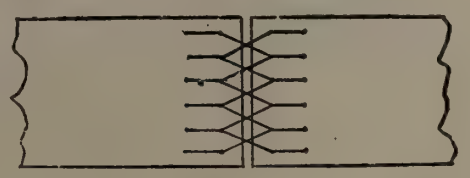
Eastern sawed cedar, extra	$3 00	$3 25	Eastern shaved sawed cedar, 1st quality	5 00	
clear	2 30	2 75	2nd quality	4 75	
2nd's	2 00	2 35	3rd "	3 85	4 00
extra No. 1	1 50	1 75	4th "	3 00	3 25
			Spruce No. 1	1 50	

BELT LACINGS.

EXPERIENCE teaches us the best methods and the most desirable course to pursue in the various details of the mill. After twelve years experience in the milling trade and a trial of all the different styles of lacing belts that I have seen, I have settled on the two following methods as the best suited for all purposes:



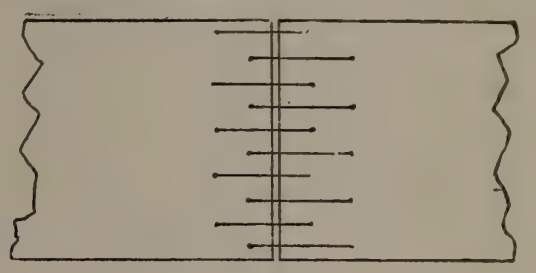
No. 1.



No. 2.

Cut No. 1 represents the right side of a belt, or the side running next the pulley, while cut No. 2 represents the reverse side of the same belt. On the right side the lacings are double between the two inside rows of holes, while a single lace runs from the inside to the outside holes. I use this style of lacing on roller belts and have found it the only style that will wear where the work is heavy. Owing to the vicious manner of belting many of the roller mills the strain on belts is very severe, and there is no style of lacing that will wear for any great length of time. I have found, however, that this style of lace will outwear any other that I have ever tried, and runs over the pulley with very little noise. In putting in this lace, begin in the middle of the belt and lace to the edge and back with each end. This will bring you back to the starting point, where the ends can be securely fastened.

The second style of lacing is one that I use on all large belts for heavy transmission.



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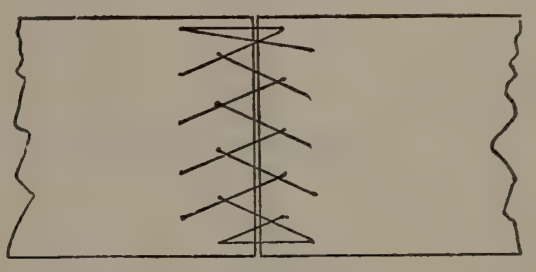

No. 4.

Cut No. 3 represents the side running next the pulley, and No. 4 the outside of the belt. This is a single lace, there being no place where the lacings double. I can not recommend this for roller belts, but for a large drive belt it is the best thing I ever saw. The strain is distributed over so much surface of the belt that the holes will never tear out and the lap will "crack" but very little as it goes over the pulley. One important item in lacing a belt is to cut the holes clean and true, and not have them jagged and torn. Be sure, too, that you have a punch the right size, so that when the lacings are drawn through they will lie flat and even, instead of being drawn up in a tight roll.

In this connection it is proper to add a few items in regard to qualities of belting. Leather belts are considered by many as the best means of transmitting power, but few ever know or stop to think that there are different grades of leather belting. In the manufacture of leather belts the select parts of the hide are used for belts of the first quality, while the refuse parts are worked into belts of inferior quality. Usually in first-class belts the pieces are of good length, and the laps are from six to eight inches with three or four rows of rivets, while the second-class belts have shorter pieces with laps 18 to 24 inches and six or eight rows of rivets. Mill men should see to it that they get nothing but first-class belts, as cheap belts will soon give out under the severe use to which roller belts are subjected.

PREPARATION OF HYDROGEN.

J. BALL, of the Royal College of Science, notes that he has recently observed that by the addition of a few drops of cobalt nitrate solution to the acid and zinc in a hydrogen apparatus, the rate of evolution of the gas is enormously accelerated, especially at the beginning of the reaction. The cobalt nitrate appears to be almost unaltered. A very thin film of cobalt was deposited on the zinc, but the amount deposited was too small to weigh. A similar action is exerted by a solution of nickel salt. Another correspondent confirms the statement of Ball, remarking that he has been accustomed to make use of this property of the cobalt salt for some time.—Chemical News.

McDonald & Holland, planing mill proprietors, Elora, Ont., have dissolved partnership. Mr. Holland will continue the business.

ABOUT PACKING.

IF the rod is in first-class condition almost any kind of packing will answer the purpose, but where it is scored or worn tapering, or is out of line, we must use a packing that will follow up the inequalities in its travel, and to do this without excessive friction the packing must be very elastic. The following plan is a very good one, says the American Machinist.

Suppose that the stuffing box is 4 inches in diameter and the rod is 2.5 inches, leaving a space three-quarters of an inch wide to be filled with packing, and assume that the stuffing box is 3¾ inches deep. Take a piece of pure gum rubber sheet packing, without cloth insertion, which is one-quarter of an inch thick, and cut a piece from it 3 inches wide, and of such a length that when it is rolled up into the form of a circle, it will form a bushing for the stuffing box, reducing the space around the rod to ½ inch in width. Care must be taken to cut this so that the ends will meet squarely, leaving no space between them, for this bushing of rubber must be a perfect fit in order to be effective. Next take a piece of firmly made packing, which is ½ inch square, and cut rings enough to pack the rod out flush with the rubber bushing, which we made 3 inches deep, thus taking six rings. These rings should be of such a length that when they are in place there will be at least ⅛ inch between the ends. They must never be cut so as to make a tight fit, although it makes a neater looking job in that way, for, unless there is room for the rings to expand, the heat will cause excessive friction, sometimes to the extent of burning out the packing and scoring the rod.

We have left a space ¾ inch deep, which is sufficient for the gland to enter, but the nuts which hold it in place should not be screwed up with a wrench, but with the fingers only. If there is a leak of steam when the engine is started, it will do no harm for an hour or two, but if the expansion does not take it up then, the nuts may be screwed up until the joint is tight, but no further, for obvious reasons. If packing put in according to these directions does not abolish the disagreeable hiss of steam at each revolution of the engine, I do not believe that any other kind of fibrous packing will do it, and the rod should be turned true and put into line.

So far as flange joints are concerned, it is a very good plan to have them ground so that no packing will be required, but as many of them are not built that way, it remains to select the packing which will render the best service. If the steam is not saturated with oil, we may select any elastic grade that is most convenient, but the flanges of the throttle valve, and any other that may be beyond the lubricator, must be packed with something that will not be dissolved by the oil. A corrugated copper gasket for each of such joints will answer a very good purpose, unless the faces are very rough. If we are to use soft packing, it is well to take a small piece of it, and put it in a cup of oil, and let it remain for about a week. There are several kinds in the market that will not stand this test, for when taken out there will be but little left of them, as they will be either partially or wholly dissolved, but others will be just as good as new after the test, and these should be used exclusively.

Flange joints, when newly packed, should not be suddenly subjected to a heavy pressure, but should be warmed up gradually, and while still under a very light pressure, the nuts should be carefully screwed up until all of the lost motion caused by the relaxation of the packing is taken up. Under no circumstances is it proper to screw up these nuts under a heavy pressure, for if one of them should fail, the additional strain thrown on the others might cause them to break, and a serious accident would be the result.

In making up these joints do not begin on one side and screw up the nuts in rotation, as that will cause the flanges to be brought together on one side, and thrown open on the other, and then when this side is tightened up also, if it does not break the flange, it will cause a very heavy strain to be brought to bear on the bolts, much of which is entirely unnecessary.

In using old bolts for this purpose, they should be put in a vise, well oiled, and the nuts run down on them, until it is known that they are an easy fit a little farther down than they will ever be needed when in place. If this precaution is not taken, it is quite possible for the bolts to be twisted off before the flange is together properly.

In packing a cylinder head it is not necessary to have a large rubber gasket, as some asbestos wicking will answer every purpose at a very low cost. In packing a large valve stem, which is worn down, or has been turned down until it no longer fills the hole in the bonnet, a washer or gasket cut from thick pieces of cloth-insertion sheet rubber packing will answer a very good purpose, if put in first, or if the gland is a loose fit it may be put in last, to prevent the wicking from working into the space around the stem.

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WHY PULLEYS RUN STEADY.

CENTRIFUGAL force has less to do with making a pulley run unsteady than the mere tendency it has of trying to get where it can rotate about its own center of gravity. A wheel is generally looked upon as so much weight and, if held off its center, must go switching about like a heavy stone in a short arm sling, tending to pull the machinery to pieces. This may be well enough at the start, while the wheel is getting up to speed, but the time soon comes when the wheel will try to turn on its own center and let the shaft sling for a while. Just notice how the juggler can seize a dish of any kind, as a dinner plate, for instance, and throw it up in a whirling motion and, while in the air, catch it on the end of a stick and cause it to rotate with ease. At first the plate is switched about by holding it off to one side of the center, but as the speed increases, it gradually brings the point of support near the center, till at last it is allowed to spin on its own center of gravity. In this case all the driving power, supporting force and the resistance of the load were brought to one single point, with nothing to react upon the inertia of the plate. A wheel has recently been fitted up to revolve in a frame with no other force applied to it than what is derived from the vibrations of the frame itself. The wheel, of course, is out of balance, as far as its center of gravity goes.

HORSE POWERS OF SINGLE LEATHER BELTS.

NO one can tell at sight what a leather belt will drive; almost anyone knowing the width, thickness and speed, can figure it out in a minute. This table is to save figuring; and is correct for belts 7/32 inch thick, in good condition, wrapping half way round cast iron pulleys, and joined by single leather lacings.

The rule by which it is got says "the horse power is equal to the width in inches multiplied by the speed in feet per minute and divided by 650." Thus a ten inch belt at 2,000 feet a minute should be good for (10 × 2,000) divided by 650, equals 30.77 horse power; a 20 inch belt at 2,500 feet, for (10 × 2,500) divided by 650 equals 76.92 horse power; and so on.

This table is for leather belts in good condition, wrappings 180° on cast iron pulleys, and joined with single leather lacings:

WIDTH INCHES.	BELT SPEED, FEET PER MINUTE.								
	1000	1250	1500	1750	2000	2250	2500	2750	3000
1	1.54	1.92	2.31	2.69	3.08	3.46	3.85	4.23	4.62
2	3.08	3.85	4.62	5.38	6.15	6.92	7.69	8.46	9.23
3	4.62	5.77	6.92	8.08	9.23	10.4	11.15	12.7	13.
4	6.20	7.70	9.20	10.8	12.3	13.8	15.4	16.9	18.4
5	7.69	9.62	11.5	13.5	15.4	17.3	19.2	21.	2
6	9.23	11.5	13.8	16.2	18.5	21.	23.	25.	27.
8	12.3	15.4	18.5	22.	25.	28.	31.	34.	37.
10	15.4	19.2	23.	27.	31.	35.	38.	42.	4
12	18.5	23.	28.	32.	37.	42.	46.	51.	55.
14	22.	27.	32.	38.	43.	48.	54.	59.	65.
16	25.	31.	37.	43.	49.	55.	62.	68.	74.
18	28.	34.	42.	48.	55.	62.	69.	76.	
20	31.	38.	46.	54.	62.	69.	77.	85.	
24	37.	46.	55.	65.	74.	83.	92.	101.	11
30	46.	58.	69.	81.	92.	103.	115.	127.	1
36	55.	69.	83.	97.	114.	125.	138.	152.	1
48	73.	92.	111.	129.	148.	166.	185.	231.	2
60	92.	115.	138.	161.	185.	208.	231.	254.	277.
72	113.	138.	166.	194.	227.	249.	277.	3	

4

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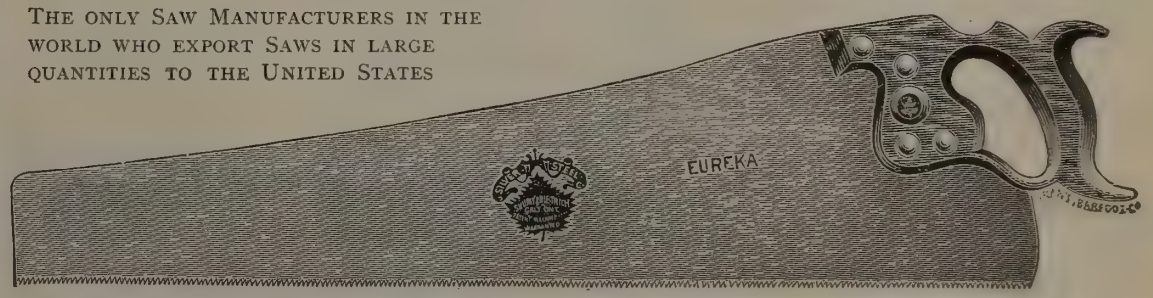

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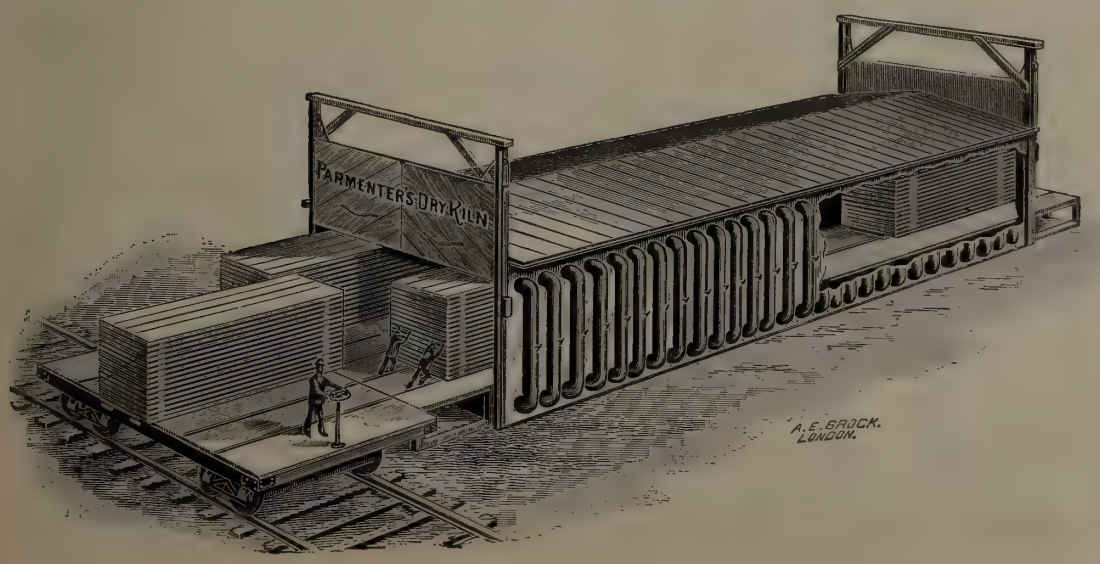

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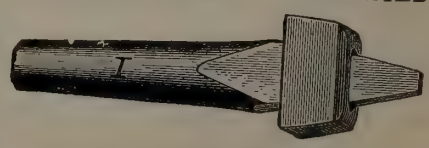

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Ottawa, Ont	Ottawa	**Bronson & Weston Lumber Co.**	2 Sawmills, White and Red Pine, Wholesale	Water, Gang and Band, 450m
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Parry Sound, Ont	Parry Sound	**Parry Sound Lumber Co.**	Saw, Shingle and Lath Mills, Pine, Wholesale	Water, Gang, Circular, Saw 90m, Shingles 70m, Lath 30m
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Canterbury, N.B	Canterbury Stn.	**James Morrison & Son**	Sawmill. Pine, Hardwoods	Steam, Circular, 38m
Bridgewater, N.S	Bridgewater	**DAVIDSON, E. D. & SONS**	5 Saw, Shgle. and Lath Mills, Pine, Spr., Hwds.	Water, Circular and Gang, 200m
South River, Ont	South River, G.T.R.	**South River Lumber Co., Ltd.**	Pine, Spruce, Birch, Hemlock, Shingles	Stm., Cir., 40m, Shingles, 35m, Lath, 15m

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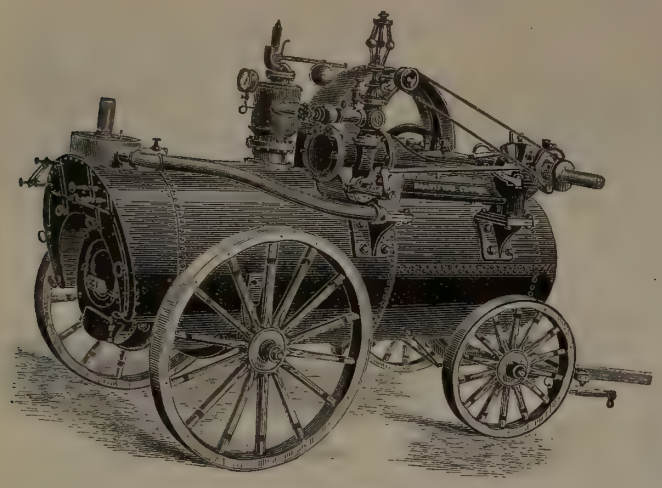

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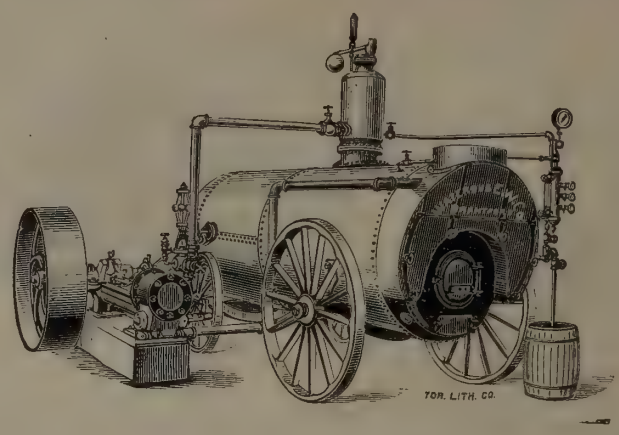
Or Difficult and Expensive to bring to your large : : Mill : :



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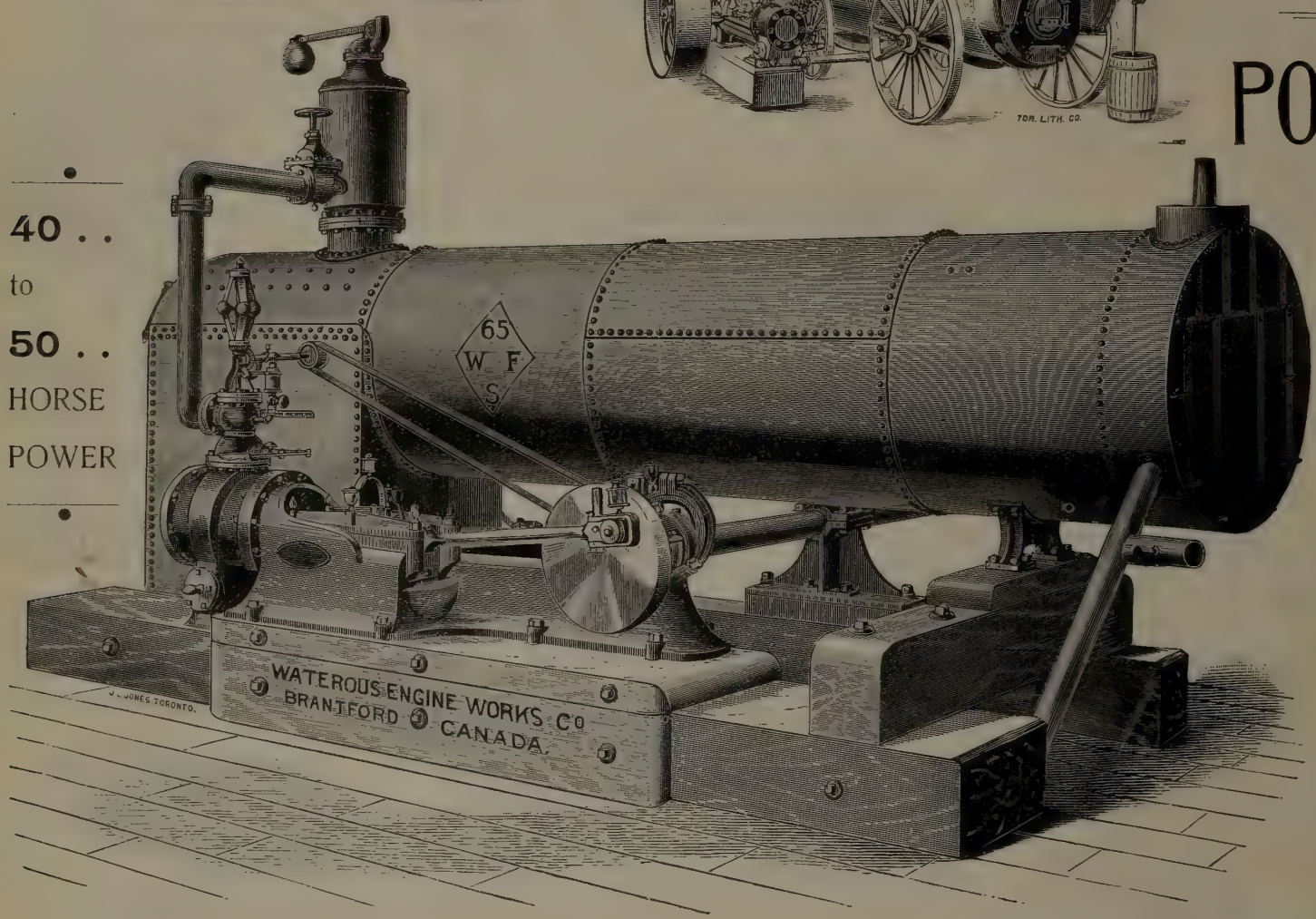

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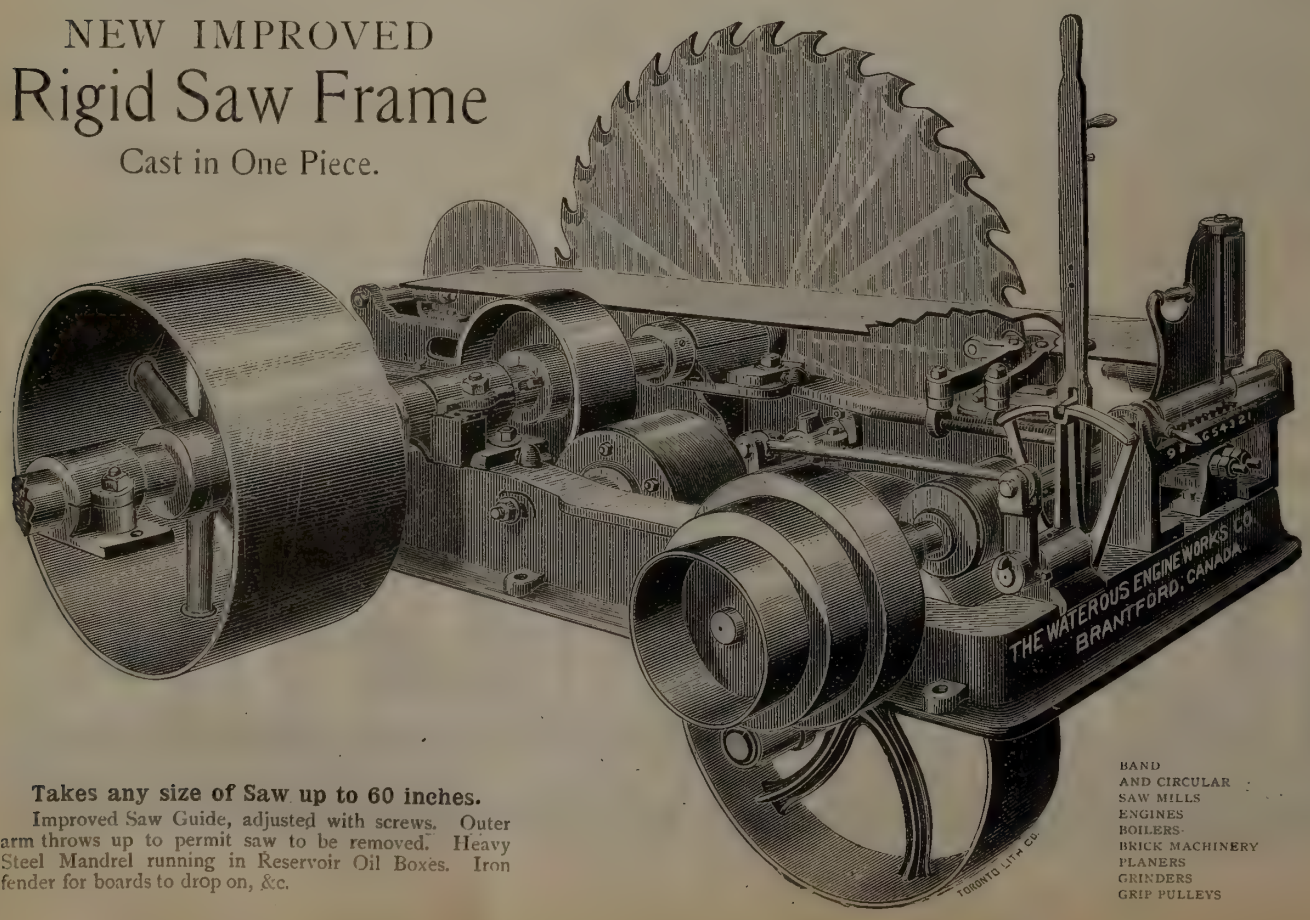

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This Bit, by an automatic device, closes the horse's nostrils.

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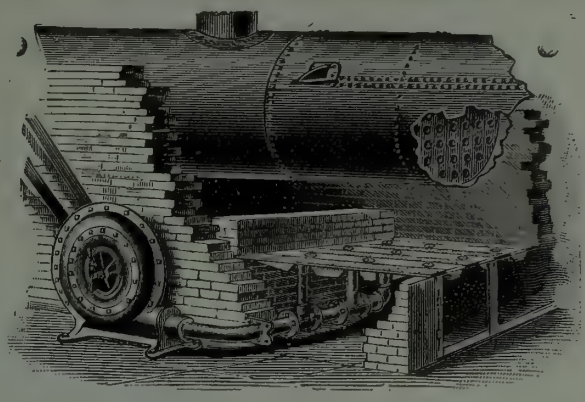

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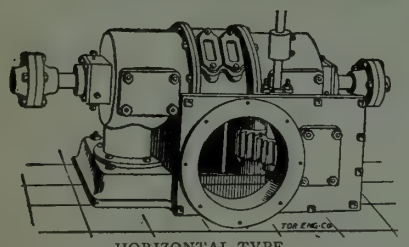

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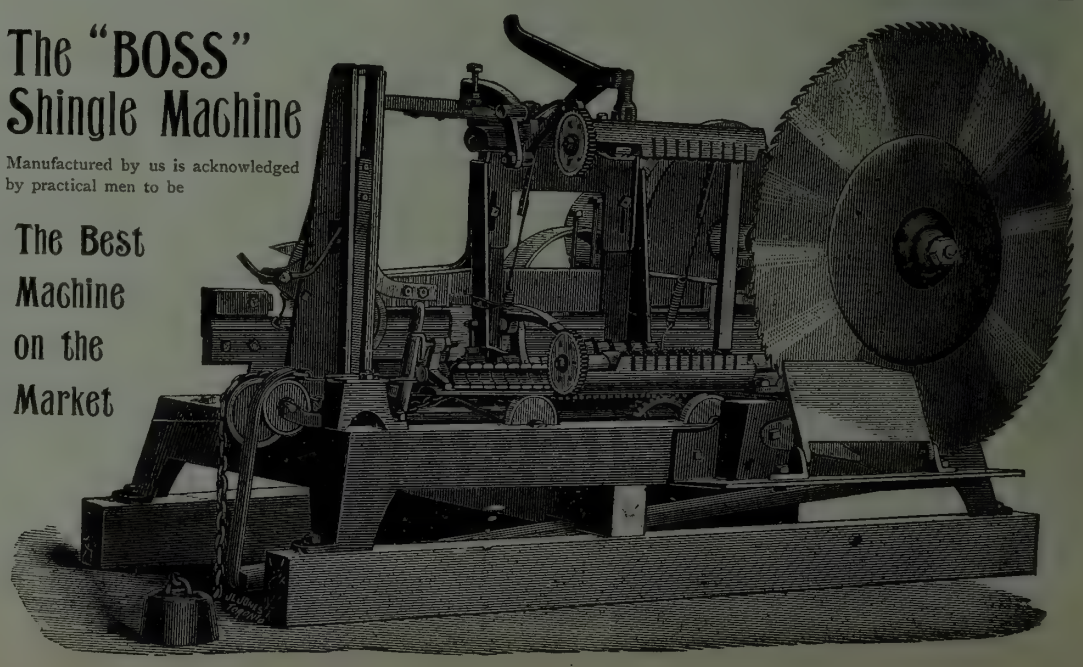

THE CANADA LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

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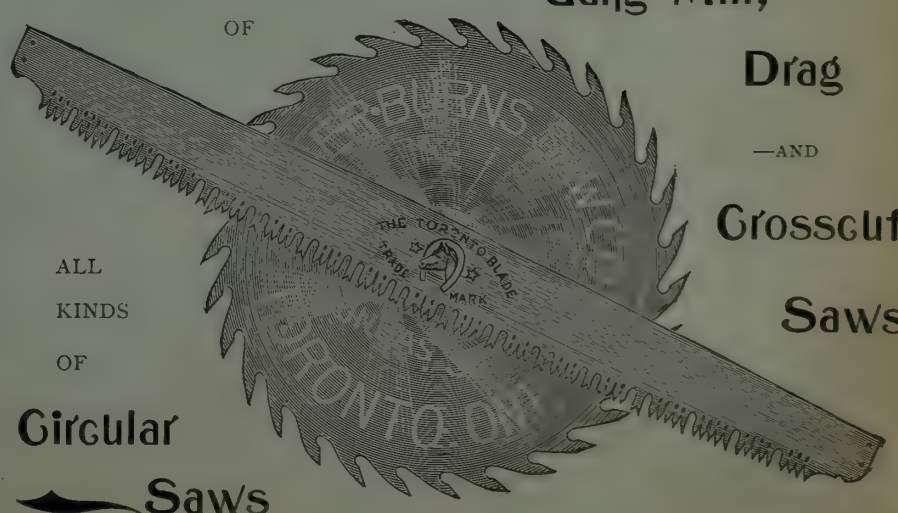

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THE PRESCOTT

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Dear Sirs:

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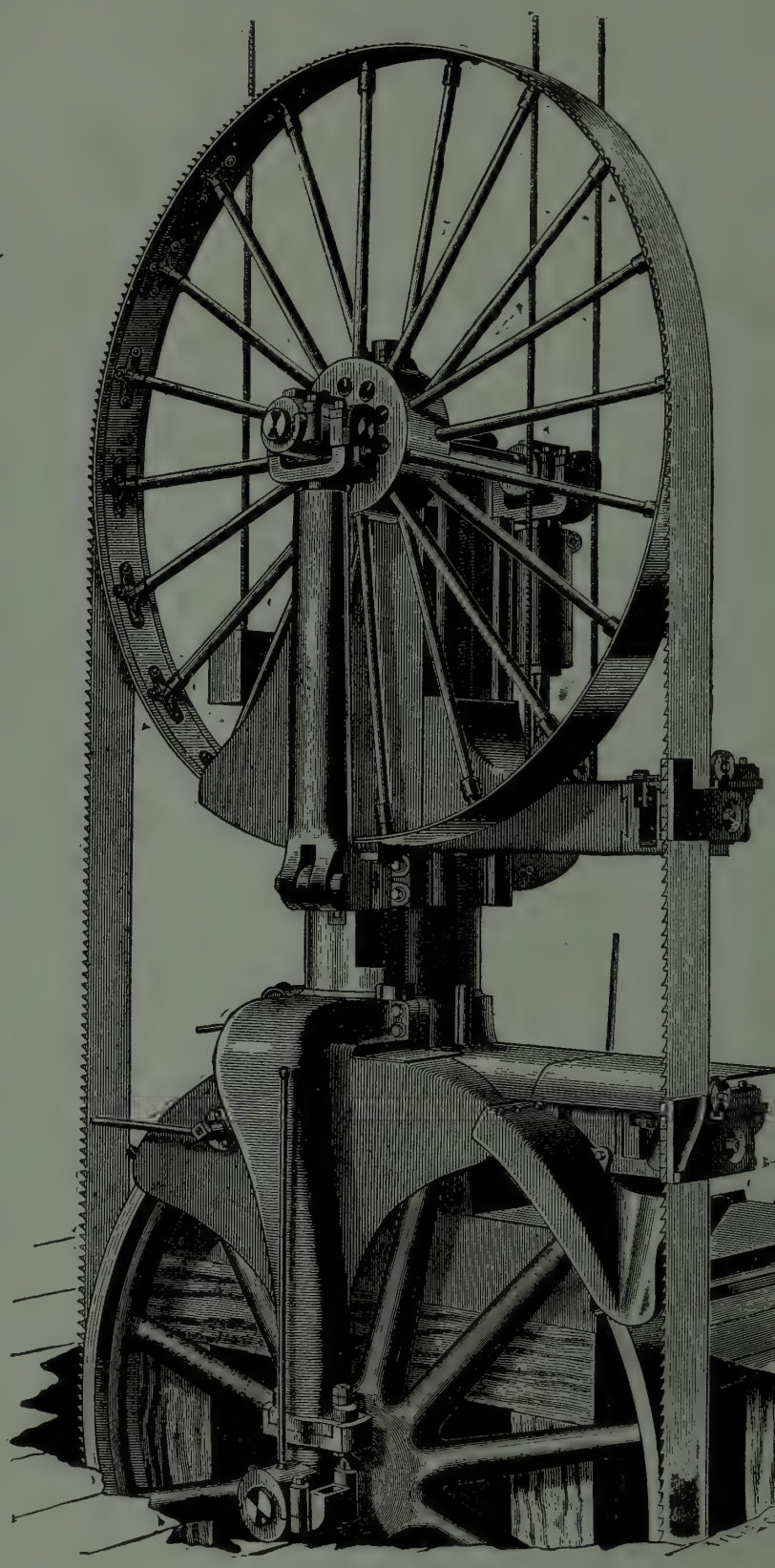
4,047	feet	1-inch
85	"	1¼ "
11,723	"	1½ "
5,726	"	2 "
85,038	"	3 "
106,619	feet.	

Yours truly,
PERLEY & PATTEE



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TOP GUIDE NOW MADE WITH GOOSE NECK ARM

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This is to certify that the Wm. Hamilton Manufacturing Company, Limited, of Peterborough, Ontario, have been licensed to manufacture and sell throughout the Dominion of Canada, the Band Saw Mill known and called the "Prescott Patent Band Mill," also the device for Saw Mill Carriage known as the "Prescott Patent Offsetting Mechanism," and by virtue of said license the said Wm. Hamilton Manufacturing Company possess the exclusive right to build and sell said machines for Canada, the plans for said machines being furnished or approved by the undersigned.

(Signed)

D. CLINT PRESCOTT,

[COPY] Patentee.

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THE CANADA LUMBERMAN

VOLUME XV.
NUMBER 6

TORONTO, ONT., JUNE, 1894

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CHARACTER SKETCH.

HON. PETER WHITE.

LUMBERMAN AND STATESMAN.

"The truest wisdom is a resolute determination."—A Napoleon Maxim.

IT is a wide gulf between the view held in the present day of men of commerce and that proclaimed by Cicero in the early centuries, that all artisans are engaged in a degrading profession, or still stronger expressed by Plato and Aristotle before Cicero's time, when they were wont to declaim in a pitiful way against the noble rights of labor. People delight in the present day to do honor to the men who labor in the ranks of commerce and manufacture, though the time is not long gone by when some one spoke in gibing tones of Scotland as a nation of shopkeepers. Out of scores of instances that might be named, it may be remarked that Gladstone, England's G. O. M., was the son of a merchant; Samuel Morley, who, as a British legislator, fought valiantly the cause of the masses, was a great merchant; Joseph Chamberlain, Birmingham's proud son, is a king of commerce. Going further back, it may be noted that Sir Robt. Peel, following in the footsteps of his father, was a printer of calico. Our own country produces numbers of examples on similar lines.

Captains of Industry are not alone leaders in the commercial world, but, the particular training that comes from activity in business, has shown to the people how well fitted are men of business for that other business arena, where are made the laws by which our country is governed. Complaint is sometimes made that parliament and the legislatures are controlled by men of the professions, especially of the legal profession. An analysis, however, of the composition of our governing bodies, will show that a very considerable sprinkling of them are business men, and that not a few of these take a foremost position in the councils of the country.

The lumbering industry has good reason to be proud of the many within its ranks, who have in the past, and to-day, occupy a first position in legislative halls. In the local legislature we have one of the best representatives of the lumber trade, in the person of the Hon. E. H. Bronson, of Ottawa, one of the largest lumbermen in Canada, and a member of the Cabinet of Sir Oliver Mowat. To go outside of Canada for the moment, it is well known that in the state legislatures, as well as in Congress, lumbermen occupy a conspicuous place among the public men of the country to the south of us. One of the most noted of these is the Hon. R. A. Alger, the Michigan millionaire lumberman, who has been more than once spoken of as a likely candidate for the White House.

In the same legislature with Mr. Bronson, which has just now been dissolved, were Mr. W. C. Caldwell, B.A., of North Lanark; E. C. Carpenter, of North Norfolk; James Clancey, of West Kent; Robt. Ferguson, of East Kent; William McCleary, of Welland; Robert Paton, of Centre Simcoe; David Porter, of North Bruce; James Reid, of Addington; E. W. B. Snider, of North Waterloo; A. F. Wood, of North Hastings; and A. Miscampbell, of East Simcoe, all lumbermen.

Among the new men who are seeking parliamentary honors in the forthcoming election for the local legislature are, Mr. R. A. Stark for North Grey, a saw mill operator; Mr. J. I. Flatt, a large lumberman of Hamilton, who is a candidate in North Wentworth, and the list is by no means exhausted here.

Were we to catalogue for the legislatures of Quebec, New Brunswick, Nova Scotia and British Columbia, we would find a similar condition of affairs. At Ottawa, taking in the Commons and the Senate, a number of the most prominent men in either House are lumbermen. One of the most conspicuous lumbermen of Canada, the Hon. J. B. Snowball, occupies a seat as senator for New Brunswick, and a recent addition to that body is the Hon. Kennedy F. Burns, another lumber king of the Maritime provinces. In the Lower House the Hon. W. B. Ives has a seat in the Cabinet, as president of the council, a character sketch of this gentleman appearing in the LUMBERMAN of February, 1893. Who does not remember Mr. Alonza Wright, the King of the Gatineau, whose death occurred within the past year, and who was for years a popular member of the Commons? To-day the lumber interests are ably represented by such men as Mr. W. C. Edwards, of Ottawa; Mr. John Charlton; Mr. John Bryson, and others whose names will be easily suggested to our readers.

But of all the names given none are better known in lumber circles, as also in public life, than the Hon. Peter White, Speaker of the House of Commons, and whose portrait we publish on this page. Mr. White does the fullest credit to the large commercial industry,

HON. PETER WHITE.

with which for years he has been actively and extensively identified. His career in the House is equally flattering to the commercial interests generally of the country, showing the high position that may be attained in legislative halls by business men.

Peter White is a son of the late Lieut.-Colonel P. White, a Scottish pioneer, who early in the century located in the eastern section of the province, and 65 years ago founded what is now known as the town of Pembroke. In 1838 the subject of the present sketch was there born, as the fourth son to his parents.

Peter White, Senr., had followed the business of lumbering, and to the manner born, the younger Peter at an early age engaged in the business with his father. Always a careful student of his country's affairs, in 1872 the present Speaker of the House entered the field in North Renfrew as a candidate for parliamentry honors, Sir Francis Hincks having formerly occupied the position. This time he was unsuccessful, but two years later a vacancy occurring, he was elected for North Renfrew. At the general elections in 1876 he was re-elected and he has continuously occupied the position up to the present time. On April 29, 1891, he was the unanimous choice of the Conservative members of the House for Speaker, and aside from party considerations, he was equally acceptable to the Opposition.

The position is one of the most honorable in the gift of the House, and carries with it a salary of $4,000 a year. More frequently than not it has been held by a member of the legal profession, Mr. White's predecessors in the office being Hon. James Cockburn, Q. C.; Hon. T. W. Anglin; Hon. J. G. Blanchet, M. D.; Hon. G. B. Kirkpatrick, Q. C.; Hon. J. A. Oumet, Q. C. Only two out of these were laymen. The position is one that calls for great endurance, continuous toil, and familiarity with parliamentary rules. That a man whose life had been devoted largely to business affairs, should, with such marked ability, fill the position of First Commoner, is a tribute not alone to the high talents possessed by Mr. White personally, but also to the commercial interests of the country. The reply of the Spartan father, who said to his son when complaining that his sword was too short, "Add a step to it," would seem to have been the motto that has guided Mr. White in his whole conduct of life. Because a layman, and a business man at that, rather than of the academic class, was no reason in Mr. White's mind why he might not fill with all the proficiency necessary, a position that eminent Q. C.'s had occupied before him.

As a member of the House of Commons, for now 20 years, Mr. Speaker has always taken an active, though at no time a very frequent part, in the debates. He has not deemed it necessary to be given to much talking in order to wield a large influence among his associates. Whenever he has spoken, however, he has always caught the ear of the house. In none of his speeches is there any attempt at high flights of eloquence, but he is exceedingly frank, open, clear and concise, without affectation, forcible and argumentative, and as a result is a very persuasive speaker.

Personally, the Hon. Peter White is one of the most popular members of the House of Commons. In his official position, despite the acerbity and bitterness that too often enters into parliamentry life, he is recognized by political friend and foe, if the latter term can really be used in his case, as a model chairman, and just and equitable in all his rulings. In manner he is genial and sociable, making friends wherever he is known. To some extent, doubtless, this fact counts for his popularity in and outside the House, for there can be no doubt that the man of strong social instincts attracts and makes friends where another, even though his abilities may be of the highest order, only repels when lacking in these essentials of human nature.

A CHAIN is no stronger than its weakest link, and a steam boiler may have some one spot weaker than other parts, and in estimating the safe pressure, the strength of this weaker part should be taken into account.

Factors of safety, as they are called by mathematicians, are used as a means of making allowance for unseen or suspected or possible weaknesses. For example, a boiler shell is made of plates the strength of which is known, but the riveted joint is weaker than the plate, and the fit of the rivets in the holes may not be perfect, hence some allowance must be made for unknown imperfections.

TRADE NOTE.

Mr. T. W. Walker, formerly the representative in Toronto of the Rathbun Co., has formed a partnership with Mr. J. Watson, under the firm name of Walker & Watson. Their office is at room 51, Confederation Life Building, Toronto. They will do a wholesale and commission business in lumber, shingles, &c., making a specialty of Canada pine and hardwoods. They have already received a contract from a starch company in Oswego for 2,000,000 feet of basswood.

TALKS WITH WOOD-WORKERS.

CARE is a necessary element to perfect work in handling any machine. Some machines, however, more than others, call for greater delicacy in operation. This is the case with the moulding machine. If we are to have nice work, a point most essential, says Mr. N. A. Curtis in the Wood Worker, is first to see that the knives are evenly balanced ; second, have the chip-breaker and front pressure solid and placed as close to head as possible ; third, do not lace the belt so as to have a big lump underneath to strike the pulley so hard that it can be heard all over the shop every time it makes a revolution ; fourth, feed the material in the machine so the knives will cut and not against the grain. Above all things this writer tells us : "See that everything about the machine is adjusted and ready to perform its part of the work before the machine is started, so there will be no stopping it to try a piece, for if one gets in the habit of setting a machine by guess and then stopping and trying, there will not be much work done ; the operator is always in doubt as to whether the work is right or not. Start right ; set the machine up right, then start the machine and let it run, keeping a watch on it all the time so if anything gets out of order you will not be long in finding it. The instant you find there is something wrong, shut off the feed, go around the machine and find what it is. After finding it, stop the machine and fix it in short order, unless it is a clean break down ; then you want to do your thinking in double-quick order, stopping the machine instanter."

* * * *

Frequently this journal has drawn attention to the number of deaths that occur in wood-working establishments, as a result of carelessness or foolish bravado on the part of workmen. These accidents are powerful object lessons of the old adage, that familiarity breeds contempt. It certainly breeds rankest carelessness. The very fact that a man has become expert in the handling of sharp tools is one of the best reasons why he should be the more careful in holding this premier position as a workman. Just going outside of the immediate province of the wood-worker a daily paper told us the other day of an expert electrician about to deliver a lecture on electricity, who was killed when making his apparatus ready. Friends of the bench and the machine-room don't grow too smart, as the slang of the day runs, in handling your tools.

* * * *

The proverbial den of the newspaper editor has gone into tradition as a place where the most manifest disorder and lack of cleanliness reigns supreme. Fortunately for the members of the fourth estate the proverbial den exists now only in tradition. There is no need for untidiness anywhere. Such elements hinder and never help work. The rule applies just as stringently to a wood-working establisment. A writer has nicely said : "A clean, neat wood-working plant is always attractive to customers, insurance men and others. Usually it shows that the manager is a good business man, one to be depended upon to fill an order properly, and who takes unusual precaution against loss by fire."

* * * *

The workman who simply works, as does a machine by his side, as a sort of automaton, may find it difficult to secure employment at times like the present, when business is depressed. But the man of ideas in the dullest times will find his services in request. This is so in the field of mechanics as much as anywhere. In the lumber industry there is a present demand for anything that will reduce cost of production or improve products. A lumber journal has pertinently said on this point : "There are thousands of men connected with the saw mill interests or wood-working plants, that have as much natural inventive genius as those who invented the machines they are using, and have plenty of time to think over their methods of operation and plan improvements. It is a game in which, if you fail, you lose little or nothing, and, if you succeed in making a valuable improvement, you are a winner by long odds."

* * * *

A month or two ago I made reference to the importance that is to be attached to the mortising machine of a wood-working establishment. Our contemporary, the Tradesman, emphasizes this thought in these words : "Among the most interesting and important of wood-working machines (always excepting the saw, than which no more valuable tool was ever devised by man), are mortising machines. Only a few years ago, as history counts time, nearly all mortising was done by hand tools ; now a hand-made mortise or tenon is rarely seen. Very skillful were those old hand-workers. It is doubtful if machines can do better work than they did ; but it is ceriain that the speed secured by machines as compared with the excellent but slow hand work of by-gone years, will hereafter and forever preclude the extended use of the old mortising chisel and tenon saw."

JAS.

LUMBER DEBATE IN PARLIAMENT.

WHEN in committee of Ways and Means a week ago the question of the export duty on sawlogs going into the United States was brought under notice of the House of Commons.

Dr. Sproule said timber was being taken out of the Georgian bay district so fast that in a few years the forests would be destroyed. He was informed that over 50 townships were denuded of timber in this district every year. A result of the wholesale export of logs was that lumber for building in this district was very scarce and expensive. Formerly culls and refuse lumber were largely used for finishing doors, window sashes and shutters, but now this refuse could scarcely be had. He regretted the Government had not put an export duty on logs of $3 or $4 a thousand, which would compel a large quantity of timber to be sawed up in this country, and provide employment for 8,000 men the year round. It would create an additional market for the products of the farmer and merchant, where now there was almost stagnation. It was a very short-sighted policy that allowed such raw material to be taken out of the country free. He hoped the Government would reconsider its policy, and reimpose the export duty, otherwise the forests would be depleted in a few years. The result might be accomplished by a provincial enactment compelling lumber sold to be cut and manufactured in the province. This had not been done, and would not be done, and the only other way was for the Dominion Government to put an export duty on logs.

Mr. Charlton said an export duty was essentially a robbery. The hon. gentleman was altogether mistaken in his remarks. The result of the abolition of the export duty had been to increase the wages expended, and the number of men employed in the industry, and to confer greater prosperity on all towns engaged in lumbering operations in the Georgian Bay region. At present southern pine was forcing Canadian pine out of the market of the Northern states, and not a foot of the latter was sold on the Atlantic seaboard. Canada should be careful of this market, and try and retain it. By reimposing an export duty, Canada invited stringent import regulations by the United States.

Mr. Macdonell (Algoma) said he was credibly informed that tugs usually towed three times as many feet of lumber as was stated in their clearance papers. He urged the reimposition of an export duty which would save to the country many thousand dollars a year. At present the exportation of logs destroyed fishermen's nets completely, but if the logs were sawed in the country they would not destroy the nets.

Mr. O'Brien was desirous that the logs should be cut in this country, but an export duty could not now be reimposed under existing conditions. He thought the statement made by hon. gentlemen that large quantities of saw logs were exported to the United States without being reported to the Customs Department, a serious charge against the department. But he believed hon. gentlemen were guilty of great exaggeration in their desire to have an export duty reimposed. With regard to the number of men employed in Parry Sound district, there never had been so many, nor labor so steady and constant, neither had wages ever been so good. If Americans were employed, it was simply because enough Canadians could not be got. So far from being an injury to the country, the extra quantity of logs taken out since the export commenced had given a great impetus to trade in the country. To reimpose the duty at present would paralyze trade from one end of the country to the other.

Mr. Macdonell (Algoma) said the Americans must have Canadian white pine lumber whatever it costs. They were going to buy it whether the duty was $1, $2 or $4 a thousand feet, and the consumer paid the duty.

Mr. O'Brien thought the Americans were not so dependent upon Canadian white pine. In regard to the condition of the industry in the Parry Sound district or on the Georgian Bay, he said the principal mills were all running, and where any mills were closed, it was owing to the lumber trade having departed anyway. If an export duty was reimposed, it would put such a barrier in the way of the Canadian trade that only the very best quality of lumber would be exported. He believed the statements were exaggerated, both as to the quantity of logs exported and as to the quantity of American labor employed in the lumber districts. While there was a chance of the import duty being taken off, the Canadian Government should not reimpose an export duty.

Mr. Peter White, the Speaker, who has had an extensive lumber experience, said that he had a great deal of sympathy with those gentlemen who asked for the reimposition of the duty upon logs, but they should remember that the evil effects which they depicted were, to a great extent, local in their character. They were confined almost exclusively to the north shore of the Georgian Bay. They should remember that the interests of British Columbia, New Brunswick, Nova Scotia, Quebec, and a large part of Ontario, were in the direction of obtaining free entry of lumber into the United States. If the views of those gentlemen who advocated the imposition of a prohibitive export duty were to prevail, Canada might be prevented from obtaining that which every member of the House would admit would be a great advantage to the different portions of the Dominion to which he had referred. It seemed to him that it would not be proper for the Government to impose an export duty on logs until they ascertained whether the Senate of the United States would continue lumber free. If lumber was continued on the free list it would be detrimental to the lumber industry in Canada if the export duty were reimposed.

Mr. Edwards, one of the largest lumbermen of the Ottawa, said that no one who understood the question would stand up and contend that an export duty would be of any benefit. Nor would anyone who understood the situation and the interests involved have introduced this discussion at such an inopportune time as the present when the Wilson bill and free lumber were before Congress. The other night the member for East Simcoe (Mr. Bennett) had said the lumbermen of the Ottawa valley had 75 per cent. of their product sold before it was cut. To this he would say that he had not $5,000 worth of his this year's product sold in the United States., and did not expect to until the Wilson bill was settled, and he would tell the House that no more serious blow could be aimed at the lumber interests than to bring on this discussion at this time. If they desired to promote the lumber interests of the country they would advocate the protection of the forests from the ravages of fire. After some experience he believed that 20 times as much timber had been burned as had been cut. Looking at the question from a broader standpoint than one section of the country, he believed there could be no question that the interests of Canada required that no export duty be imposed.

Mr. Bryson (Pontiac) said that the lumbermen should know what was in their own interest. The platform for the Government to accept was that the Americans should be given free logs provided they would admit lumber free. His earnest desire was that the Government should adhere to the ground it had taken.

The item passed without any change being made in the tariff at this point.

A new material for paving is being introduced into London. It is composed of granulated cork and bitumen pressed into blocks, which are laid like bricks or wood paving. The special advantage of the material lies in its elasticity. In roadways it furnishes a splendid foothold for horses, and at the same time almost abolishes the noise which is such an unpleasant feature of the city traffic. It is used in Austria with good results.

VIEWS AND INTERVIEWS.

A Stone In a Tree.

The LUMBERMAN adds to its many stories of curious "finds" in trees the following: Two men were at work with a big circular saw in Reading, Penn., recently, sawing up a white oak log, which came from a farm in the vicinity, when suddenly the saw struck something hard, and before they knew it every tooth was gone. They held an examination, and found a granite pebble some six inches in diameter, embedded in the solid wood. It is a question how the stone got into the tree. There are no such pebbles in the neighborhood where the tree grew, nor was there any sign of a hollow, by which it got inside the tree. The wood was perfectly sound all around it, and the rings of the wood would indicate that it had been there not less than two hundred years.

Smoke Nuisance.

Washing air of its impurities by passing it through water screens or through chambers into which water is profusely sprayed is a well-known and much used process in heating and ventilating practice. A somewhat analogous method is being applied by an English factory owner to the much discussed smoke nuisance. According to the published description, somewhat indefinite, perhaps, in a few respects, the apparatus used by him consists of a large cast-iron tank, in which is a slotted barrel, which is fitted with perforated beaters, and the tank is partly filled with water. The smoke is drawn into the barrel from the machinery by a powerful fan, and undergoes a scrubbing process. The barrel rotates very rapidly, churning up the smoke with the water. On the top of the barrel are several semi-circular trays or seives, which are perforated, and effect the purpose of further washing the smoke. The smoke which escapes from the beaters, is caught again by these seives, and dashed down again by a very fine spray of water from the beaters. The black sludge of solid matter is forced to the top of the chamber, and thrown over into a chute, which conveys it to a wooden tank. The smoke which finally escapes from the machine is said to be comparatively inoffensive, and there is certainly good reason to believe that this should be so. It is interesting to note, however, adds a writer in Cassier's Magazine, that the use of the apparatus does not end with the cleansing of the smoke. The black deposit gathered by it is taken off in barrels to be used in the making of paint and printing ink, yielding an acceptable revenue instead of polluting the atmosphere, and the remaining liquid is said to have proved itself a most valuable disinfectant. Thus a two-fold purpose is accomplished, either one of which would seem to be quite sufficient to commend the process to manufacturing communities in which smoke suppression is a live topic.

Forest Moth Pests.

Recently a most remarkable fact in the history of a forest plague has been reported. During 1880 a plague known as the "nonne" moth, wrought great havoc in the magnificent pine woods of South Germany, especially in the neighbourhood of Munich. The abnormal increase in number of the "nonne" moths was first observed in the summer of 1888, when the electric light in the industrial-arts exhibition in Munich attracted them in great swarms. But it was not till the spring of 1890 the alarming discovery was made of the ravages wrought in the forest of Ebersberg by enormous numbers of the caterpillar of this moth. The mischief spread with rapidity, and in a very short time the trees on large tracts were stripped of their needles and had to be removed with expedition. Every effort was made to stop the mischief. The population of the infected district took a hand in collecting and destroying the enemy at every stage of its existence, egg, caterpillar, chrysalis and moth. The electric light was used to lure the moths to their destruction, and millions were destroyed. The moths were drawn by the dazzling rays of the electric light into a huge funnel, whence they passed to a crushing machine, which speedily converted them into a paste that made excellent food for poultry. The undergrowth of the infected trees was burned off, the top growth syringed with strong antiseptics and poisonous washes, and incisions were made in the bark of the tree and filled in with pitch. Every possible remedy known to the science of forestry, which has reached such perfection in Germany, was tried. The effect of these remedies in 1891 proved to be absolutely nil. The plague continued to make havoc in the pine forests all through that and the following year. Now comes the extraordinary fact in the story of the scourge. In 1893, which had been looked to with great anxiety, the plague suddenly and unaccountably ceased after a course of five years from its beginning. The cause of the cessation is still a mystery.

NEW TREE FELLING MACHINE.

TWO months ago we gave an account of tree felling by electricity, a successful experiment in this line having been made in Sweden. The following account of an English effort to fell trees by other than manual labor is given in the current issue of Cassier's Magazine. The new machine of which we furnish an illustration is the invention of Mr. Allen Ransome, of Chelsea, and reminds one very much, in appearance, of the now so familiar rock drill, the drill proper, of course, being supplanted by a reciprocating saw blade, substantially in the manner shown in the accompanying sketch. The piston to which the saw blade is attached works in a cylinder of small diameter but rather long stroke, pivotally supported on a pair of wheels, so that the whole arrangement is readily portable. Steam is intended to be supplied to the machine from a portable boiler through a long steam hose, so that the boiler can remain in one place until the machine has felled all the trees within a considerable circle around it, the place cleared, of course, depending upon the length of the hose. Cutting down a tree, however, is not the only function to which the machine is limited. By partially rotating on its axis the saw can be set to cut in a vertical direction, or at any angle between the horizontal amd vertical positions, so that, having been felled, a tree may be quickly cut up into desired lengths. It generally happens that when a large tree falls it does not lie flat, as its branches hold the upper part of the trunk from the ground, and in order to squarely cross-cut trees lying in such a position it is necessary to incline the saw somewhat from a direct vertical line. This is readily done by the adjusting capacity just mentioned. Suitable adjustments also are provided to enable elevation or depression of the saw to accommodate high or low-lying trunks, as the case may be. It is not uninteresting to note that Mr. Gladstone, whose prowess as a woodman, in addition to his better known talents, was so widely exploited two or three years ago, has honored the machine with a very favorable comment, being reported to have said, after seeing it in operation, that it would do as much work in a minute as a woodsman could do in an hour.

NEW TREE FELLING MACHINE

A THREE CENT STAMP DOES IT.

ON receipt of a three cent stamp we will mail free to any address a copy of our little hand-book entitled "Rules and Regulations for the inspection of pine and hardwood lumber," as adopted by the lumber section and sanctioned by the Council of the Board of Trade, of Toronto June 16, 1890. Address, CANADA LUMBERMAN, Toronto, Ont.

THE BRITISH BOILER EXPLOSIONS ACT.

IN Britain there are acts of Parliament relating to the use of steam boilers known as The Boiler Explosions Acts, 1882 and 1890. Under these Acts the owners of steam boilers must report every accident of the nature of an explosion within 24 hours of its occurrence. From the last report to the Secretary of the Board of Trade by the Solicitor having charge of the workings of these Acts, we learn that the year ending June 30th, 1893, there were 72 investigations held. Some of these were merely preliminary inquiries, but 26 were formal investigations. Of the 72 accidents, 32 were from deterioration, or corrosion or some part of the apparatus having become defective. 23 were from ignorance or carelessness on the part of the attendant, 8 were from defects in design or workmanship, and in 9 cases the causes could not be definitely placed under any of these divisions.

It is interesting to note that the English law does not compel a boiler owner to place his boiler under the charge of a man holding any kind of a certificate, but the law holds the owner responsible, and in event of an accident he must prove that he employed a "competent" man. It goes further, and if at any of these formal investigations, it is proved that the accident was due to negligence on the part of anyone, whether attendant or owner, maker or seller of the boiler or its attachments, the law is strong enough to reach him, and inflict some form of punishment.

Here are samples from the report before us. No. 582—Manufacturing engineers blamed for reckless conduct, and to pay £20 costs; No. 590.—Managing director blamed for neglect and ordered to pay £40, costs; No. 608.—Owner blamed for not employing a competent person and ordered to pay £85, costs; No. 623.—Owner blamed for want of proper supervision, and attendant blamed for neglect. Owner to pay £20, and attendant £5, costs; No. 651.—Owner held responsible for negligence of his engineer, and a blacksmith who ignorantly advised owner as to the working pressure was blamed. Owner to pay 20 shillings and the blacksmith £20, costs.

We commend this to all parties interested in steam boilers. The acts have been in force a number of years, and have given good satisfaction. A similar act in Canada would do much to improve the steam appliances, and would make owners careful as to what kind of a man they employed.

The investigations refer not merely to what are usually called boiler explosions, but cover accidents to any connection of the boiler which is under steam pressure. The breaking of a steam pipe, the rupture of a tube or the bursting of a blow-off pipe must be reported, hence owners are much more careful.

Some of the accidents investigated were of boilers which were insured. The report says: "As regards the Boiler Insurance Companies, no cause has arisen in connection with the working of the Acts which shows any serious neglect on the part of their inspectors, nor has any blame been attached to them by the Court in any formal inspection which has been held during the year."

A NEW INVENTION.

A NEW crank, which does away with the dead point, is the asserted invention of a French engineer. The crank-pin works in a slot cut in a steel disc fastened to the end of the shaft, and is pressed upon by a spring, which is so adjusted that at the ordinary working steam pressure it is held firmly in place. If, however, the crank be at a dead point, when the full pressure of steam is admitted into the cylinder, the spring is compressed, the crank-pin slides in the groove so as to assume an angular position to the shaft, and the latter begins to revolve. As the pressure of the steam in the cylinder, while the engine is in motion is less than in the boiler itself, as soon as the shaft begins to turn the pressure against the spring is relieved, and the crank-pin flies back to its usual position. The tension of the spring is adjusted as necessary.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

LOG EXPORT DUTY.

AT the sessions of the Dominion Parliament each year that section of the lumber trade, who feel that the free export of logs to the United States, is an injury to the saw mill business in Canada, have not failed to make their protest heard. This season, however, these claims have been urged with much greater energy and force than ever before. All along the northern lumber section of the province, an effort in one direction and another to influence parliament to reimpose the log duty has been made. The question was brought before a recent meeting of the Orillia town council and a resolution on the line of preventing a continuous export of logs to the States was vigorously discussed by the municipal fathers of that burg. Early in the month a strong deputation, representing a considerable percentage of the lumber interests in the Georgian Bay district, waited on Sir John Thompson and pressed upon him the importance of placing an export duty on logs exported from Canada to the States. It was alleged by the deputation, in consequence of the large growth in this method of lumbering, that many mills in that district were closed down.

According to the despatch that appeared in the daily and weekly press, both in Canada and the United States, the statement was made to the Premier that over 500,000,000 ft. had been sent from the United States to Canada during the past year. Obviously this was an egregious error on the part of the gentleman, who acted as spokesman for the Georgian Bay interests. or else it was a very unwise statement to make. In dealing with matters, as exact as those of commerce, exaggerated statements must always react upon those who make them. So able and enthusiastic an advocate for the protection of our forests as Mr. William Little does not place the export much beyond one half of 500,000,000 ft. It is probable that the total export during the past year was about 300,000,000 feet, and owing to a smaller cut, a result of the depression in the lumber trade, the export of logs for 1894 will hardly exceed this figure.

In a more public way the question of an export duty came before the House a few days ago, Dr. Sproule introducing the matter. He argued that the export of logs from Canada was steadily increasing. These were the figures given as taken from the trade and navigation returns: In 1889, $440,805; in 1890, $615,194; in 1891, $615,320; in 1892, $1,044,134; and in 1893, $1,517,000 worth of logs. It is to be remembered, of course, that at the time the smaller figures prevailed an export duty of $3.00 per thousand ft. on logs existed, and further that after the removal of the export duty American lumbermen became extensive purchasers of Canadian limits. Dr. Sproule made the statement that 50 big mills on the Georgian Bay had been closed down, as a result of this change in the tariff, and thousands of dollars worth of machinery were lying idle and rusting away because of this policy.

Mr. Charlton in reply to Dr. Sproule, noted the point that the source of supply for the Collingwood, Parry Sound, Midland and other idle mills on the Georgian Bay was just as far distant as to the mills on Saginaw and other American points where Canadian lumber was being sawn. So far as any practical purpose was concerned Dr. Sproule's suggestion did not meet with favor by the House and the tariff on this point remains undisturbed. A summary of the debate is published in these columns.

The CANADA LUMBERMAN has, during recent years, presented this duty question in its many different bearings. There has been no interest that has not been fully represented. By Mr. Little, "Canadensis" and others the argument in favor of holding to Canadians our Canadian lumber has been very exhaustively presented, whilst other writers, with as great fullness, have given the opposite view of the question.

The contention of some that the closing down of our mills is a great sacrifice of Canadian labor and machinery is met with the statement that the larger cost goes on the logs before they reach the mill and any circumstance that gives an impetus to extensive logging, means an enlargement of the labor market. Then there is this to be remembered that, with the removal of the export duty on logs, came the concession from the United States Government of a reduction on the duty of manufactured lumber from Canada to the States, and it is a matter of commercial record that the result of this has been to very largely augment the trade in the United States for Canadian lumber. Not without its force is the statement that the change in the tariff has also been the means of introducing into Canada large amounts of foreign capital, that would not, probably, have been placed here under other conditions.

That the people generally of the towns and villages in our northern district should feel warm on the question is natural, and Canadians everywhere must sympathize with them in their efforts to prevent, what, they believe, means the destruction of those commercial interests that have proven the main stay of their different communities. To men and women, who live in a community, who probably own their little properties there, whose social and family ties are centered around and about these places, it is no trifling affair to find, as it were, the cord that has held all these interests together being broken at one point and then another, and they forced to make sacrifices and seek other fields to make their bread and butter. This, we believe, is the strongest force at work in an agitation for a reimposition of the export duty on logs and it is one that calls for much consideration. When this phase is presented to lumbermen, who believe that the best interests of the trade are served by leaving tariff conditions, as they exist at present, the reply is that the local view of the question, as affecting certain districts of the country, must give way for the wider view, touching the country as a whole.

It is to be remarked, so far as parliament is concerned, while it is said that the cabinet is divided on the question and the Minister of Finance has shown a strong disposition favorable to protection of our forests, that the Hon. W. B. Ives, president of the council, himself a saw mill owner, is not an ultra-protectionist, so far as lumber is concerned, and nearly all the prominent lumbermen in parliament, including speaker White, are opposed to a change.

There is a Canadian or national phase of the question, that is not often discussed, and yet it is one of much moment to our people as a people, independent of any commercial interest in the article of lumber. We refer to the statement frequently made, that in Ontario, at least, our forests are becoming rapidly depleted; and it is worth considering how far we should sacrifice a present advantage only to meet with ultimate and almost irrecoverable loss.

TARIFF CHANGES.

CERTAIN tariff regulations, as affecting the lumber interests of the country, announced by the Minister of Finance in his budget speech, have, within the past ten days, undergone material change. It will be remembered that wood pulp was placed on the free list by Mr. Foster. We pointed out in the April LUMBERMAN that this was placing Canadian wood pulp manufacturers at very unfair advantage in competition with Americans. The wood pulp industry at the time of the changes effected by the McKinley tariff, was unfairly dealt with, and the step taken at the opening of parliament was only an aggravation of the evil. We are glad to see that the Minister of Finance has struck out wood pulp from the free list, a duty having been placed on this article of 25%.

The consideration, as frankly stated by Mr. Foster in his budget speech, in placing lumber and shingles on the free list was to conciliate the Northwest farmers. It was clear from the outset, so far as shingles were concerned, that this change would, if not immediately, certainly at no late date, work serious injury to the red cedar shingle industry of British Columbia. Washington territory shingle interests have been sufficiently disorganized for some time to make the manufacturers of those territories anxious to place their shingles wherever it was possible to secure a market, even though this should be done at a considerable cut in price. Pressure was promptly brought by British Columbia commercial interests on the government, and a result has been that shingles have been taken off the free list and placed at a duty of 20% as before the change.

In the case of the lumber interests of Manitoba, the situation, if anything, has been aggravated by Mr. Foster adding to the item of undressed lumber on the free list, the words, "or dressed on one side only." He said that the original concession was not found to be as useful to Manitoba and the Northwest as it was intended to be. The government intended to give the people of these territories their lumber in the best available form, without entirely making lumber free and entrenching too much on the large interests involved in dressing and preparing lumber for completion in its various forms. Mr. Martin, the Liberal member for Winnipeg, said that in this the government was making a valuable concession, but he would like it to go still further, and moved an amendment to add the words, "and including matched lumber." The amendment, however, was defeated, and the item as amended by the Finance Minister was carried. A rejoinder by Mr. Haslam to Mr. Martin that the farmers of Manitoba wanted the whole earth and the fence around it, very pertinently expressed the situation as it affects the lumber interests of Manitoba. In the framing of our tariff, at all times, it is unfortunate that politics more often than business is the preponderating influence in fixing rates. If certain changes will secure votes in some particular direction, the change is usually made. Nothing has been plainer than this in noting the many and continued changes that have been made in the tariff since it was first presented to the House at the opening of Parliament. It was felt that something would need to be done to conciliate the discontent that had taken possession of a considerable section of the farming population of the Northwest, and even though a large and important industry, like that of lumbering, was to be sacrificed at the altar of politics, it mattered not. Just how Mr. Mather, of the Keewatin Lumber Company, and other lumbermen of that section of the province feel, is told in their own words on another page. They have had the serious drawback of excessive freight rates, and other difficulties to contend with, in competition with the lumbermen of Minnesota. From a business point of view the Minister of Finance would find, on investigation, many stronger reasons for considering the claims

of the lumbermen of the Northwest, than can be presented for concessions granted to many other lines of manufacture.

The question of lumber still further received the consideration of the House by Mr. Foster moving that elm logs be included among the logs, upon which the government will have power to put an export duty, not exceeding $3.00 per thousand ft. The logs coming within this schedule are pine, Douglas fir, balsam, cedar and hemlock.

EDITORIAL NOTES.

TO his other schemes, Gen. Booth, of the Salvation Army, will, it is said, in his efforts for the relief of the unemployed, enter the lumber business. The intention is to purchase a timber limit in Muskoka, upon which will be erected a comfortable shanty. The proposition is to send men from the city, who are out of employment, to work there, and a wood yard, which is to be established in Toronto, will furnish a market for the product.

THE Manitoba Government are wrestling with the question of granting aid to the South-Eastern railway. The extension of this road would be a boon to the lumbermen of the Lake of the Woods district. In the face of recent tariff regulations, making lumber free, of which we have something to say elsewhere, these lumbermen are going to have hard times unless relief is secured in improved shipping and freight conditions. The promoters of the road promise the logs will be brought from Lake of the Woods for manufacture in Winnipeg. Competition in freight rates will also be secured by the extension, and viewing the matter in this light, a late report from Winnipeg says that Ministers are disposed to grant a favorable bonus. The Prairie Province will strengthen its position generally every time that new railway competition can be secured.

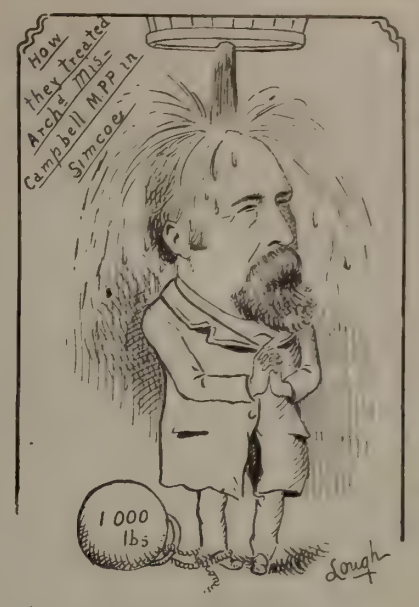
AS an evidence of the dullness of the lumber market in Canada and in the United States for the past year, it is pointed out that seldom have investors been more slow to make any move in the purchase of lumber or timber limits. One writer draws attention to the fact that, while timber in the Saginaw district is practically out of the market, and speculators must look to the neighboring states of Wisconsin and Minnesota, or to Canada, in all of which places they have already made large investments, yet, just at the present time there is almost no trading going on. One of the largest speculators has said that he could not remember any time when so many tracks were offered or such opportunities presented for bargains as now. Concessions could be obtained to-day that, 18 months ago, would have been laughed at.

IT has been known to business men for some time that the system of gathering export statistics of various products going from Canada through the United States has not shown our export trade in the fairest light. The writer remembers some time ago speaking to a Canadian oatmeal exporter, who sent his product to the West Indies through a New York commission house. "All this stuff," he said, "reached the Indies as United States meal." The Canadian Manufacturer has drawn attention generally to this question and states that collectors have been instructed to use every effort toascertain correctly the country of destination of all goods entered for export at their port to the end that the export statistics of the department shall be as correct as possible as to such foreign destination. "It is this lack of accurateness in ascertaining the destination of merchandise exported from Canada," says our contemporary, "that has heretofore told so unfavorably against our trade with countries other than the United States. We have occasion to know that much of our exports of agricultural implements to Australia has been credited to the United States trade with that country because the shipments were made to a United States shipping port without the statement at our export port of the precise destination; and in the same manner much of our Canadian lumber, intended for the West Indies and other foreign markets, sent in bond through the United States, has been credited to this latter country through the lack of accurateness alluded to, and which the Government is now seeking to remedy.

EDWARD Jack, of St. John, N. B., who has for years given considerable attention to lumber matters, has expressed himself on the question of the log export duty. United States lumbermen having paid large sums into the Ontario treasury for certain timber limits, subject to no restrictions as to where the logs might be cut, he considers the government would have been guilty of a breach of trust should they have inserted afterwards, that these logs be cut within the province. "Suppose," says he, "that after a man had bought a thousand barrels of flour in Toronto, deliverable in one year from date, the Dominion government imposed an export duty of $1 per barrel on this flour, who would justify such an act? Placing to one side questions of justice, as well the implied rights of purchasers, how much money is lost when logs are taken to the United States to be manufactured? The cost of sawing, about $1 per M feet B. M.; the log hauler wants no export duty imposed, for he usually receives a higher price for hauling from Americans than he can get from the Canadians. Why, then, close his best market merely to please the mill owner, in aiding him to shut out all competition in the matter of log purchasing. In New Brunswick we want no export duty, in fact a duty could not be collected here unless at a most enormous expense, as the rivers St. John and St. Croix are for a considerable distance the boundary between Canada and the United States, and when a log floats across the centre line of these rivers into the United States, it can be sawn there without the payment of duty. Further, it is not to be supposed that our friend Jonathan will look calmly on and see his sons wronged, and there cannot be any doubt but that if the Dominion government imposes such an export duty, he will act and will place, much to our detriment, a duty on sawn lumber additional to present charges sufficient to counterbalance an export duty which the Dominion government may place on sawn logs."

* * * *

JOS. OLIVER, of the firm of Donogh & Oliver, Toronto, is one of the best known lumbermen that takes the road. Whether at home or abroad he has a large clientele of friends. Like all great men he has a hobby on which he works off his surplus energy, and fills in the spare hours from business and domestic duties. Oddfellowship is his hobby, Mr. Oliver at the present time occupying the position of chief executive officer of the order in Ontario. I am glad to be able to present here a picture of Mr. Oliver and his favorite goat, with which he has about as familiar acquaintance as with 1 x 10 dressing, or xxx shingles.



UP in Simcoe they have always treated Mr. A. Miscampbell, Simcoe's lumberman-representative in the Local Legislature, with a decent majority of votes, when the hour of counting the ballots has arrived, and he expects that on the 26th June they will be equally kindly with him. But with the best of them, the road of the politician is beset with trials and tribulations, and our artist has depicted Mr. Miscampbell as he experienced some of these pleasantries when being initiated the other evening into the mysteries of one of our secret orders, membership in which is supposed to count for something when the day of election arrives.

* * * *

He is not exactly a lumberman, but the well-known registrar for Toronto, Mr. Peter Ryan, has rubbed against prominent lumbermen of the Dominion often enough to become fairly well posted in lumber affairs. Moreover, it is said, he owns a timber limit or two, not excepting the Quebec deal that has been bringing him some newspaper notoriety recently. I dropped in on Mr. Ryan in his office a few days ago to see if he knew of anything special going on in the trade. Of course he was modest enough, as is the wont of an auctioneer, to tell me that the newest and best thing was the big timber trade sale he had announced for the Board of Trade rotunda in August next. I had seen the printed list of properties and must say he is going to make it worth while for lumbermen from anywhere to visit Toronto at that time. Peter Ryan has a notion that he can hold at least one big timber limit sale here once a year, and I don't know but what the scheme is a good one. But enough of shop, said I to my friend of the hammer. I asked: "What is the outlook for lumber so far as your somewhat frequent meetings with lumbermen would indicate?" "Well, just at present," replied Mr. Ryan, "things seem in the dumps, and yet I find that everybody has confidence in the future of lumber. What is wanted for this country is free lumber; and it is free lumber, that is going to give renewed vigor, also, to the lumber trade of the United States. Knowing this much, at least, of the views of lumbermen, it makes me mad." And who wouldn't give a quarter, thought I, to see Peter Ryan mad, if he could ever be got there. "Yes, it makes me mad," said he, "to think that as lumber matter stands to-day there should be some folks, calling themselves statesmen, at Ottawa, who would want to raise a disturbance over the log export duty just at this particular time. What are they thinking about?" "You know Ontario forests pretty well," I remarked. "Do you think they are as nearly denuded of their timber as we are sometimes told?" "There is more timber yet in Ontario," said Mr. Ryan, "than many people suppose, and yet the real fine white pine, those old stalwarts of the forest primeval, that have been made memorable in song and story—there are few of them to-day in Ontario. The best of our pine has gone." "By the way," said Mr. Ryan, as I was about to take my departure, "Did you see my letter in the World *re* that attack of L'Electeur, of Quebec, made on me concerning that same Quebec timber steal, as they call it. I rather think I laid out Brother Pacaud. Read it and see."

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

A DECLINE of the square timber trade, which I have noted in these columns on other occasions, is becoming more and more marked. Even in this wooden country, where we were supposed to have a plethora of timber, it is now getting too scarce to ship in this way. A leading shipper here has said that in a year or so square timber will be a thing of the past. This year not over 1,000,000 feet will go down the Ottawa to Quebec, where a few years ago from 5,000,000 to 8,000,000 feet was the usual cut.

Some little uncertainty prevails here in regard to the lumber tariff. Agitation from the Georgian Bay territory has, in some respects, become quite pressing, and it is being remarked that the government organs, more particularly, perhaps, the Empire, has been quite strong in its deliverances of late for a reimposition of the log duty. It is thought that the Minister of Finance has strong leanings in that direction, and yet it is known that the stronger influence, in the past, in moulding lumber legislation, has been centred in this district; and Ottawa lumbermen are not favorable to a reimposition of the duty.

A question of much interest to Ottawa and indirectly to leading lumber firms here was raised in the House the other day by Mr. Casey, who had the following questions on the order paper: Who are the lessees or users of the water power privileges at and around the Chaudiere Falls? What are the respective rentals or dues which they are charged? How much, if any, is each of them in arrears up to the end of last fiscal year? How are their respective rights defined? Have they right to encroach by permanent building on the fall itself? Are all the practical workable privileges taken up, or controlled by private parties? The minister of public works replied: The agreement of lease of 19th Nov., '89, gives as the lessees Messrs. Perley & Pattee, J. R. Booth, R. Blackburn, J. & T. M. McRae, M. Petrie, A. H. Baldwin, Bank of Montreal, Milton Merrill, Bronson & Weston Lumber Co. An annual rent of $100 for each lot is paid for 15 lots on Chaudiere Island and 10 lots on Victoria Island. Only one lessee was in arrears at the end of the last fiscal year and he made the required payment on Oct. 5, 1893. The other lessees had previously paid up. The opinion is expressed that the workable privileges are at present controlled under the leases above referred to.

INDIFFERENT LENGTHS.

A fair amount, only, of activity is observable around the mills.

Some of the New Edinburgh folks were recently alarmed by a large explosion in the Ottawa River, an examination of which, showed that it was a sawdust explosion. The roar was like a crash of thunder.

J. R. Booth's large mill has at last commenced operations. Many men have been anxiously looking forward to this event. It is probable that the mill will keep running straight along, as there are plenty of logs on hand.

The cut at McLachlin's mills at Arnprior, will, it is thought, be curtailed to some extent this season, as a number of logs are "hung up" because of low water in the upper streams and lakes.

OTTAWA, Can., May 22, 1894.

TRENTON LETTER.

[Regular correspondence CANADA LUMBERMAN].

SINCE the starting up of the Gilmour mills on the 1st inst. about 150,000 feet board measure has been the average daily cut. The new Allis band mill placed in the works this spring is in active operation, with highly satisfactory results. Over four and a half million feet of lumber have already been moved by the company this spring, shipments being principally to Ottawa and Oswego. The steam barge "Iona" is still engaged in carrying to the latter point.

Trade is rather quiet in this locality, although local sales are beginning to pick up, and a very large trade is being done in egg cases and fillers.

The Rathbun Co.'s tug "Rescue" has been chartered by Gilmour & Co. to tow their logs from Belleville gap to Trenton. The first tow arrived this morning, over five thousand pieces being taken to the mills.

Mr. Peter Pomery, one of the best known salesmen in the Gilmour employ, was engaged in showing a customer some lumber on a high pile a few days ago, and making a mis-step fell a distance of some fifteen feet, alighting on his back and shoulders. He was picked up unconscious and conveyed to his home, where, upon examination it was found that he had sustained a fracture of the shoulder. Several ribs were also broken, and he was generally shaken up. At present, however, he is on a fair way to recovery.

Mr. A. W. Hepburn, of Picton, has just completed the construction of a new steam barge to ply on the waters here. It is built principally for the grain and lumber trade, and will ply between Picton, Fairhaven and Montreal.

Taken on the whole the lake trade is rather quiet, and there are few new boats engaged in the transportation of freight.

Telegrams are being daily received by Gilmour & Co., giving accounts of the success of the log-way at Dorset. The logs are now being rapidly passed over the slide, and with the exception of a slight trouble with defective chains everything works satisfactorily. All the winter's cut of logs will be tailed in Lake of Bays in two weeks, and it is expected that the log-haul will handle these logs at the rate of from eight to ten thousand pieces per day. Mr. David Gilmour and Chief Engineer D. Clark are at present in the new limits noting the success of the scheme.

TRENTON, Ont., May 21, 1894.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN].

THE fact that the shingle industry of this province is not in the most hopeful shape, has not prevented the employees of the Miller & Woodman shingle mill here from going out on strike. They are asking for $2.00 per day where $1.75 had been the wages.

Considerable shipments of deals are being sent from Sussex to St. John this spring by Joseph Campbell.

The larger mills in the province are now pretty generally running. This, of course, includes the large mills of Hutchinson, Snowball, and Flat, on the Miramichi, and Gibson's mills at Marysville.

Activity is prevalent in driving along all the streams on the St. John, Miramichi, Restigouche and other rivers of the province. A lot of logs that were "hung up" at Seven Islands, above Grand Falls, last season, have already reached the booms at Fredericton.

ST. JOHN, N. B., May 21, 1894.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

LUMBERMEN here retain a lively interest in the building of the Nicaragua Canal. They know that that route will so shorten the distance between this province and the United Kingdom, that it must mean very great things to the lumber trade. It is calculated that in place of taking several months to reach England from Vancouver, as now, that when the Nicaragua Canal is completed, the time will be reduced to about sixty days, whilst steamers will be able to make the canal in 8 days and from the canal to England in 16 days. It is not unlikely that when this time arrives the Canadian Pacific Railway will arrange for a line of fast steamers between British Columbia and England. The larger part of wood pulp has hitherto been mainly supplied the European markets from Austria, but with the Nicaragua Canal, as a matter of fact, the supplies can be profitably drawn from this province. It is said that the gumless spruce grown here is superior to any pulp in the market and that it is next to impossible to find any wood that will compete with our cottonwood for the manufacture of fine quality paper. This wood is also used in European cities for block paving.

COAST CHIPS.

H. H. Spicer, of Vancouver, is shipping large quantities of shingles to Toronto. It is said that his Toronto agent has already placed about 23,000,000 of these shingles in Ontario this season.

NEW WESTMINSTER, B. C., May 18, 1894.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

PERHAPS, one would not need to enquire of the oldest inhabitant, but he would need to go back a long time in the history of the lumber trade in this district to find dullness continue so successfully to drag its slow length along. I have never found lumbermen so discouraged before at the opening of a new season's trade. Manufacturers, dealers and timber owners—everybody, in fact, who touches lumber—are filled with a spirit of discontent. Congress continues in session, though it would be a good thing if they would close up, and lumbermen then might have some idea of what would be best to do. The tariff uncertainty is doubtless at the bottom of present troubles.

BITS OF LUMBER.

John J. Rupp, who has an interest in the Vermillion Lumber Company, owning a tract of timber on the St. Lawrence River, in Canada, the product from which is cut at a mill at Three Rivers, Que., says the deep snow last winter has operated against a large log cut. In place of putting in about 12,000,000 ft., the cut will not run beyond 7,000,000.

The Tittabawasee River Boom Company are now into the season's log rafting.

150 sticks of oak timber are to go from Petersburg, Mich., to Quebec. The timber runs from 25 to 60 ft. long.

Col. A. T. Bliss will erect a stave and shingle mill at Sandford.

J. S. H. Clark, of Newark, N. J., has opened a lumber yard at South Bay City. He had formerly operated yards at New York and at Tonawanda, but will, it is said, close out the latter.

There has been some showing of discontent among mill workers along the river, but it is thought wise counsels will prevail, and that there will not be any trouble this season. There has, however, been some trouble with the Longshoreman's Union, who asked for 40c. an hour for loading boats. An effort to compromise at 35c. has proven unsuccessful. With much justice the mill men say that they are already heavy losers over the depression of last year and the tied-up capital at the present time. If the contest continues a good many logs that would otherwise come here will be driven to other points.

The Thompson shingle mill at Alpena is cutting 20,000 a day and has been running steadily all spring.

Bill stuff is reported in good demand at Manistee. A report is current that Wiley Bros., of Saginaw, have sold a track of white pine near Grand Marais, Lake Superior, to Ross & Co., of Ottawa, for about $75,000 cash.

SAGINAW, Mich., May 19, 1894.

WHY STEAM-BOILERS EXPLODE.

WHY do steam boilers explode? They do explode, and lives are lost and property destroyed, and there is a cause for the trouble in every case. In a large number of such instances it is safe to say the trouble would not have occurred if those in charge had given heed promptly to some trifling defect at the proper time. It is the old story of the stich in time and when the stich is not made the rent enlarges, and in a steam boiler a rent is a serious affair. Some statistics have come to us from the Hartford Steam Boiler Inspection Company, which give much needed emphases to the moral we have here drawn. We are told that since the company began business they made 796,725 visits of inspection, inspected 1,580,060 steam boilers, made 608,786 complete internal inspections, tested 102,195 boilers by hydrostatic pressuse, found 1,206,309 defects, of which 154,749 were dangerous, and condemned 8,406 boilers. Concerning their work in November, 1893, they say: "During this month our inspectors made 6,745 inspection trips, visited 14,706 boilers, inspected 5,241 both internally and externally, and subjected 537 to hydrostatic pressure. The whole number of defects reported reached 10,471, of which 1,058 were considered dangerous; 27 boilers were regarded unsafe for further use." Of their work in December, 1893, they say: "During this month our inspectors made 7,642 inspection trips, visited 15,971 boilers, inspected 6,647 both internally and externally, and subjected 574 to hydrostatic pressure. The whole number of defects reported reached 12,335, of which 1,385 were considered dangerous; 83 boilers were regarded unsafe for further use." The summary for those two months is as follows:

Nature of Defects.	November. Whole Number.	November. Dangerous.	December. Whole Number.	December. Dangerous.
Cases of deposit of sediment	810	39	1,127	71
Cases of incrustation and scale	1,591	65	2,266	125
Cases of internal grooving	87	7	179	18
Cases of internal corrosion	523	30	776	40
Cases of external corrosion	654	44	887	45
Broken and loose braces and stays	161	39	276	89
Settings defective	229	25	291	46
Furnaces out of shape	361	17	410	17
Fractured plates	345	67	430	71
Burned plates	227	26	320	33
Blistered plates	276	12	338	25
Cases of defective riveting	1,282	113	1,149	80
Defective heads	93	20	165	53
Serious leakage around tube ends	2,365	322	1,845	346
Serious leakage at seams	359	29	550	62
Defective water-gages	331	80	315	76
Defective blow-offs	115	42	164	44
Cases of deficiency of water	11	6	15	11
Safety-valves overloaded	52	11	97	45
Safety-valves defective in construction	80	23	96	26
Pressure-gages defective	471	38	601	57
Boilers without pressure-gages	3	3	3	3
Unclassified defects	45	0	35	2
Total	10,471	1,058	12,335	1,385

A Port Townsend, Wash., dispatch says: The Hawaiian ship John Eva, cleared from this port yesterday for Port Pirae, Australia, with the largest lumber cargo ever shipped in a single vessel. The ship carried 2,625,747 feet of lumber.

THE NEWS.

CANADA.

—D. S. Clemens is erecting a new heading and stave factory in Guelph.

—Chas Wickens, lumber dealer, Sombre, Ont,, has assigned to C. B. Jackson.

—John H. Shantz has started up another saw mill at Bloomingdale, Ont.

—Cyr & Cossitt, saw mill, Stone Valley, B. C., has been succeeded by Cyr Bros.

—S. McIlvaine and W. G. Ellis have purchased the Bissette saw mill at Vernon, B. C.

—Ewen Morrison, lumber, Victoria, B. C., is successor to the Rock Bay Lumber Yard.

—Peter Genelle, saw mill, Naksup, B. C., has admitted J. E. Poupore into partnership.

—About 50 men are employed in the planing mill of J. & T. Charlton, at Tonawanda, N. Y.

—The St. John River Log Driving Co. will handle one-hundred million of logs this season.

—The Minnesota and Ontario Lumber Co. write us that they are closing their office at Norman, Ont.

—T. Paradis, saw mill and lumber merchant, Levis, Que., has assigned, with liabilities of about $65,000.

—The capital stock of the Brunette Saw Mill Co., of New Westminster, B. C., is to be increased to $300,000.

—Lumbermen in the vicinity of St. Andrews, N. B., are jubilent over the prospects for getting out lumber this summer.

—G. V. Clark, of Lost Channel, Ont., has built a new shingle mill with a capacity of twenty-five thousand feet per day.

—A successful test was recently made by Gilmour & Co. of a tramway and sleuceway for carrying logs from Lake of Bays to the Trent River.

—The saw mill of Messrs. R. Grant and L. Mounce, at Wellington, B. C., has passed into the control of the Shawingan Lake Lumber Co.

—Three lumber yards situated at Hartney, Souris and Winnipeg have been united under the business management of the Hughes, Atkinson Co.

—Messrs Rouke, of St. Martins, N. B., have their steam saw mill in operation. It is 60x100 feet and well equipped with first-class machinery.

—The Hastings mills, Vancouver, B. C., have purchased 5,000,000 feet of logs on Puget Sound. The price paid is said to have been $5.00 per M.

—Messrs. E. F. Keene & Co., of Sherbrooke, Que., intend erecting extensive saw mills in Spaulding, Beauce county, adjoining Lake Megantic.

—The Nicaraguan barque, Don Carlos, is chartered to load lumber at Hastings Mill, Vancouver, B. C., her usual destination being Moumea, New Caledonia.

—Winnipeg is asking for sealed tenders for the supply of from four hundred thousand to one million feet B. M. pine lumber. The date limit is June 7.

—E. Davison & Sons, Limited, Bridgewater, N. S., are applying for incorporation to build and operate saw mills, pulp mills, etc. The capital stock is $25,000.

—Hon. Mr. Flynn, commissioner of Crown lands, for Quebec, has issued a circular giving specific instructions to Crown lands agents as to their duty in disposing of agricultural lands to settlers.

—What is said to be the largest leather belt ever sold in the province of New Brunswick is 27 feet long and 48 inches wide and was purchased by Dunn Bros. for their mill at Grand Bay.

—The Burrard Inlet Red Cedar Co. are erecting a new mill at Port Moody, B. C. The mill is to have all the latest improved machinery. Its capacity will be 75,000 feet daily.

—A Quebec despatch of the first of May, announced the atrival of the first new timber raft from Ontario, comprising oak, elm, hickory, etc., manufactured this winter, and belonging to the Calvin Company.

—The coal strike among the miners of the United States, causing a scarcity of coal, is likely to effect freight traffic on the Grand Trunk and C. P. R. Lumber merchants fear that a refusal on the part of the railroads to transport lumber at this time of the year will seriously inconvenience them.

—A syndicate consisting of Edward Aylford, of London, Eng., E. Nash, of Toronto, and F. W. Balsmyder, of Chicago, has purchased a considerable track of land in the new town of Cedarburg, Mich. Messrs. Aylford and Nash own large quantities of spruce timber in Canada, and propose erecting a pulp mill at Cedarburg, to manufacture chemical pulp. The two saw mills now in existence will be run full capacity.

—W. G. Nutson's mill and lumber yard, at Windsor, Ont., has been purchased by Piggot & Sons, of Chatham. Mr. Nutson is in the happy position for a lumberman, in these days, of being able to retire on a competency.

—Thos. Wilson has been arrested on the charge of having set fire to Fawcett's large planing mills at Strathroy, Ont. Wilson is a carpenter, and is said to have done the deed with the object of providing himself with employment. The mills were entirely consumed and the owners unfortunately were uninsured.

—The Wm. Cane & Sons Mfg. Co., of Newmarket, has completed the purchase of what is known as the Baxter Timber Limit, from the Georgian Bay Lumber Co. It is 22 miles square and comprises a whole township in Muskoka District on the North Shore. The company hope to get material for their pail department from this reserve for many years to come.

—The cut on the Tobique River, N. B., during the past winter is reported to have been about one-third larger than last year, and the 2,000,000 feet of lumber that was hung up last spring will be got out this year. The driving is getting along nicely, the water being at the right height for the operations. Mr. Frank Whitehead estimates the amount of lumber to be handled as follows: Mr. Fred. Hale, operating on the left-hand branch of the Tobique river, 3,500,000. James McNair, on the right-hand branch, 2,500,000. Mr. R. Estey, on Two Brooks and Sisson branch, 2,500,000. Mr. Donald Fraser, on the Odell river, 3,000,000. Crawford Bros., on Trout Brook, 700,000. The following lumbermen are operating in several locations: Mr. A. J. Beverly, 2,500,000; Mr. George T. Baird, 2,000,000.

GENERAL.

—High water again threatens the saw mill interests at Minneapolis.

—Serious damage has been caused by floods at the Cloquet lumber yards, near Duluth. Many million feet of lumber have been lost.

—The shipments of doors from California and Oregon to Melbourne, Australia, last year amounted to 637 doors. In 1886 Australia took 15,394 doors from the two states mentioned. A duty on foreign doors has cut down the imports.

—It is seldom that wood which has grown more than 4,000 years before the Christian era is used in the construction of a present day residence, and yet this really happened recently in Edinburgh, where a mantlepiece was fashioned from wood said to be 6,000 years old.

FIRES AND CASUALTIES.

FIRES.

—F. W. Sentel, shingle mill, Vancouver, B. C., burned out.

—E. B. Doliff's sash and door factory at Fitch Bay, Que., destroyed by fire.

—Fawcett's sash and planing mill at Strathroy, Ont., was burned recently. Loss, $3,000; cause, incendiary.

—R. Inchis planing mill at Sudbury, Ont., was destroyed by fire a few days ago. Loss, $3,500; insurance small.

—A sawmill at Smith Lyon, Mich., owned by G. P. McGann, Toronto, was destroyed by fire the early part of May.

—The steam saw mill of J. M. Ruiter, at Brome Corner, Que., was consumed by fire recently. Loss, $6,000; insurance, $3,000.

—The Ontario and Western Lumber Company suffered a loss of $125,000 by fire at their Rat Portage lumber yards. Insurance $80,000.

—Price Bros. & Company's steam saw mill, at St. Thomas, Que., was destroyed by fire on the 6th of May. The loss is stated to be $20,000.

—A shingle mill belonging to James Brenan, at Vespra swith, between Collingwood and Minesing station, was burned recently. No insurance.

The branch establishment of the Waterous Engine Works at St Paul, Minn., was destroyed by fire a fortnight ago. The loss will be $20,000, covered by insurance.

—The planing and saw miil of Burns, Rankin & Mills, corner of Dundas and Sheridan avenue, city, was completely destroyed by fire a fortnight ago. Loss, $20,000; insured for $6,000.

—One hundred cords of shingle bolts, the property of D. A. Macdonald, of Sundridge, Ont., together with a iarge quantity of standing timber, were destroyed by fire the early part of the month.

—The saw-mill of W. R. Thompson, Teeswater, Ont., was destroyed by fire on 7th May. A large quantity of shingles, maple blocks, and broom handles were burnt. Loss about $5,000; insured for $1,500.

CASUALTIES.

—Moise Joanisse, a mill-wright employed in Gilmour and Hughson's saw mill at Chelsea, was killed while reparing a turbine which had been set in motion by men who were unaware of Joanisse position. A verdict of accidental death was returned at the inquest.

—Wm. Smith and James Anderson were hauling a car of lumber from H. T. Eaton & Son's saw mill at Milltown, N. B., when the bridge over which they were crossing gave way and they were precipitated into the rushing water. Smith had one of his legs broken, and Anderson, it is thought, is hurt inwardly.

PERSONAL.

At a convention held at Dundas, on the 2nd of May, Mr. John Ira Flatt, lumber merchant, was nominated to contest North Wentworth in the Reform interest at the approaching provincial elections.

Our British exchanges announce that J. W. Todd, and Mr. Mackarell, of Watson & Todd, lumber merchants, and Mr. W. H. Wilson, of Fairey, Crockfort & Co., have sailed for Canada in the interests of their respective firms.

Mr. Peter Thompson, of Winnipeg, Man., has been appointed superintendent of Alonquin Park, and Mr. John Simpson, of Mount Forest, Ont., civil engineer. Mr. Thompson has been acting superintendent since the park was dedicated.

Mr. John Donogh, of the lumber firm of Donogh & Oliver, accompanied by Mrs. Oliver, sailed for a trip to Europe a week ago. A large number of friends bid them adieu at the train on the day of leaving. Bon voyage will be the sincere wish of Mr. Donogh's many friends in and out of the lumber trade.

The rumor is current that Mr. E. B. Eddy, of Hull, Que., the extensive pulp manufacturer, and ex-lumberman, will be asked to fill the vacancy in the Senate caused by the death of Sir. John Abbott. If the Senate wants the services of one of the brightest and shrewdest business men in Canada, Mr. Eddy is the man for the place.

PUBLICATIONS.

With the current May (number), the Canadian Magazine begins its third volume, and begins it well. The illustrations are numerous and good, and the articles well written and of rich variety.

QUALIFICATIONS AND TESTS OF ENGINEERS.

EVERY engineer and fireman ought to know perfectly well, without the necessity of any elaborate calculating or theorizing, what results will ensue should he over load his steam engine, his boiler, or any of the machinery under his charge, and he would not be compelled to call in the services of most expert engineer to tell him clearly and concisely what would occur under such conditions. He would know that in the vast majority of cases he would be subjecting himself to the possibility—in fact, high probability—of a speedy breakdown, and before that event actually transpired, to endless trouble of every description, all the results of poor judgment, or unfortunate necessity, which led him to work his boiler, engine, or machinery up to double, or perhaps treble what it was intended for.

Every applicant of an engineer's license should be prepared to answer all questions that will show that he is mentally well equipped to provide against possible disaster. He should be well skilled in the construction, care, and manipulation of pumps, injectors, inspirators, all the devices by which the boiler is supplied with water. He should be familiar with the use of the gagues in use for determining pressure of steam, or the quantity of water in the boiler. The safety-valve should be under his care, always ready to perform its functions. Then he should have some idea of the difference between fibrous and crystallized iron; should be able to tell when a boiler had become weak and needed repairs, and have the courage to say so, and refuse to fire it. He should have skill sufficient to enable him to frequently inspect the boiler, and determine if the factor of safety is enough to insure absolute safety. He should be able to take such care of the boiler, that large or dangerous deposits of scale and mud are not possible; also, should know what to do when "priming" or "foaming" is evident. He should inform himself as to the effects of corrosion, internal scale and deposits, improper setting, impeded circulation, and improper steam and water.

TRADE REVIEW.

Office of CANADA LUMBERMAN,
May 25, 1894.

THE GENERAL SURVEY.

WERE it to be said that the lumber business in Canada was booming, the statement would be taken with a large grain of salt by business men generally, because commerce as a whole, in Canada, nor hardly anywhere else, seemingly, is not rushing at the present time. All over the world a depression in business exists, and Canada is not beyond the effects that touch the general body, though it can, with fairness, be said that there is nothing approaching the severity of distress here that has found a place in other countries.

Lumbermen will not, this season, make a pot of money, and yet of present trade it is to be said that matters are doing fairly well. Practically all mills at the leading lumber points are in operation. Word from Ottawa tells us that the large mill of J. R. Booth, as well as the other extensive mills of that district, are now running and expect to be able to keep going throughout the season. In the Georgian Bay territories the chief mills there are in operation. The Parry Sound Lumber Company have been sawing for a month past, and the mills of the Georgian Bay Lumber Company are also cutting. In the Ottawa, it is thought the logs will come along nicely, and that there will not be any delay in work for want of logs, but in the Georgian Bay section the outlook is not so hopeful and it is feared that a good many logs will be "hung up" in the streams this year. Export lumber trade, in the words of a prominent Chaudiere lumberman, is slow. The Quebec market for deal timber is considered to be somewhat improved over last year, but shipments to the United States are not brightening up very rapidly. With navigation opened, the trade between Ottawa, Albany and Oswego will, no doubt, develop, measurably, at least. Wholesalers do not tell of any large sales of lumber. What business is being done is of a very careful character. Sales are small. On another page the views of leading lumbermen in the Lake of the Woods territories are given. The trade there are agitated over the change in the tariff, making United States lumber free. They say that if any considerable quantity of Minnesota lumber should be brought in it is probable that both freight rates and prices would need to be reduced to meet the competition. In the meantime the uncertainty of the situation is giving a stagnant character to the lumber trade in those parts, that is not very acceptable at the present time, when trade is expected to be booming.

British Columbia conditions are not very much changed within a month. People there are not concerning themselves a terrible lot over the tariff changes, and yet they apprehend that these may have an influence on the trade of the province that will call possibly for some fresh moves among lumbermen. What export business is doing is not of an extensive kind. A number of vessels are loading for various points of shipment, but the actual selling of lumber for export is light. Shingle men are doing quite a good trade and they seem to be very well satisfied with the hold they are securing on Ontario. Some considerable shipments have gone forward to the east recently.

The mills in the Maritime Provinces are now at work and a large quantity of lumber will, it is expected, be cut this season. An improvement in the British markets, though slight, encourages the lumbermen in these provinces to look forward to a larger trade.

Nothing very bright is to be written of trade that is being done by local lumbermen, either in province, town or city.

UNITED STATES.

It would hardly be correct to say that the lumber trade of the United States is as badly in the dumps at the present writing as was the case a month ago. The new season being now well advanced, there is some measure of business activity. Lumbermen are recognizing that if they are going to do any trade at all it must be done now, and they are shaking off the lethargy that has grown upon them because of the long siege of dullness and uncertainty. Building operations are moving fairly well in some of the larger centres, and this is giving strength to the lumber trade. Fears of labor troubles that had commenced to show themselves at some points are disappearing. The drives are coming along in much better shape than was thought for a month ago. Whilst Congress continues to haggle over tariff affairs, still the feeling is that there is not going to be any radical change now in the tariff, and business men are beginning to accept that as the situation, and are disposed to enter with less fear into new ventures. These are the main features of the situation here, and are of a better class than the despondency and depression that has prevailed for so long a time. Yet these are not conditions that foretell any large amount of trade. This will only come by degrees. Prices are not just as firm as might be, but it is not thought that in white pine at any rate there will be any serious drop in prices.

FOREIGN.

If we say that the lumber trade in Great Britain is moving slowly that is the most that can be remarked of that field of operations.

Farnworth & Jardine, of Liverpool, Eng., in their monthly wood circular say of Canadian woods: "Of Waney and Square Pine the deliveries have been very small, values are practically unchanged, and stocks though not heavy are sufficient for the limited demand. Red Pine: The demand is almost nominal, the stock is light but quite sufficient. Oak: The deliveries have been on a very small scale, values have a downward tendency, and the stock is excessive. Ash moves off very slowly, prices are somewhat lower, and the stock is heavy compared with recent previous years. Elm has been in somewhat better request, prices are steady and the stock light. Pine Deals: The deliveries have been about the same as last year, values have been fairly maintained, several sales have been made for shipment, and the stock has been reduced to a more moderate compass."

The South American trade is considerably improved over what it was 12 months ago, and a good deal of lumber has been sent forward to those ports of late. Whilst there have been indications of further internal troubles in that country, it is not thought that these will develop to an extent to paralyze trade, as has been the case on former occasions. Australia is prominent before the people of this country at the present time owing to the visit of the Hon. Mr. Reid. It is likely that our trade with that colony will, in the future, increase, but at present lumbermen have not much to hope for from the Antipodees, commerce there being still very depressed.

TORONTO, ONT.

TORONTO, May 25, 1894.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1X10 and 12 dressing and better	20 00	22 00
1X10 and 12 mill run	16 00	17 00
1X10 and 12 common	13 00	14 00
1X10 and 12 spruce culls	10 00	11 00
1X10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch	2 50	2 60
XX shingles 16 inch	1 50	1 60
Lath, No. 1		2 15
Lath, No. 2	1 80	1 85

YARD QUOTATIONS.

Mill cull boards and scantling	$10 00		F. M.		
Shipping cull boards, promiscuous widths	13 00		1 1-2 in. flooring, dres'd	26 00	30 00
stocks	16 00		" " rough	18 00	22 00
Scantling and joist, up to 16 ft	14 00		" " dres'd	25 00	28 00
" " 18 ft	15 00		1 1-4 in. flooring, undressed, B.M.	16 00	18 00
" " 20 ft	16 00		1 1-4 in. flooring, dres'd	18 00	20 00
" " 22 ft	17 00		" " undres'd	12 00	15 00
" " 24 ft	19 00		Beaded sheeting, dressed	20 00	35 00
" " 26 ft	20 00		Clapboarding, dres'd		12 00
" " 28 ft	22 00		XXX sawn shingles per M.	2 60	2 70
" " 30 ft	24 00		Sawn lath		2 60
" " 32 ft	27 00		Red Oak	30 00	40 00
" " 34 ft	29 50		White "	37 00	45 00
" "	23 50		Basswood, No. 1 and 2	28 00	30 00
" " 36 ft	31 00		Cherry, No. 1 and 2	70 00	90 00
" " 38 ft	33 00		White ash, 1 and 2	24 00	35 00
" 40 to 44 ft	37 00		Black ask, 1 and 2	20 00	30 00
Cutting up planks, 1 and thicker, dry	25 00	28 00			
" board	18 00	24 00			
Dressing blocks	16 00	20 00			
Picks Am. inspection.		30 00			

HARDWOODS—PER M. FEET CAR LOTS.

Ash, white,	1 to 2 in.	$18 00	$20 00	Elm, soft	1	" 1½	$11 00 $12 00
" "	2½ to 4	20 00	24 00	" "	2	" 3	12 00 13 00
" black,	1 " 1½	16 00	18 00	" rock	1	" 1¼	14 00 16 00
Birch, sq.,	1 " 4	17 00	20 00	" "	1½	" 3	15 00 18 00
" "	4x4 " 8x8	20 00	22 00	Hickory	1½	" 2	28 00 30 00
" red	x " ½	20 00	22 00	Maple	1	" 1½	16 00 17 00
" "	2 " 4	22 00	25 00		2	" 4	17 00 18 00
" yellow	1 " 4	14 00	15 00	Oak, red, p'n	1	" 1½	28 00 30 00
Basswood	1 " 1¼	15 00	16 00	" "	2	" 4	30 00 32 00
"	1½ " 2	16 00	18 00	" white "	1	" 1½	28 00 30 00
Butternut	1 " 1½	23 00	25 00	" " "	2	" 4	30 00 35 00
"	2 " 3	25 00	28 00	" quart'd	1	" 2	48 00 52 00
Chestnut	1 " 2	2 00	25 00	Walnut	1	" 3	85 00 100 00
Cherry	1 " 1½	50 00	60 00	Whitewood	1	" 2	32 00 36 00
"	2 " 4	60 00	65 00				

OTTAWA, ONT.

OTTAWA, May 25, 1894.

Pine, good sidings, per M feet, b.m	$32 00 40 00
Pine, good strips, " " "	27 00 35 00
Pine, good shorts, " " "	20 00 27 00
Pine, 2nd quality sidings, per M feet, b.m	20 00 25 00
Pine, 2nd quality strips, " " "	18 00 22 00
Pine, 2nd quality shorts, " " "	15 00 18 00
Pine, shipping cull stock, " " "	14 00 16 00
Pine, box cull stock, " " "	11 00 13 00
Pine, s.c. strips and sidings " " "	11 00 14 00
Pine, mill cull	8 00 10 00
Lath, per M	1 60 1 90

QUEBEC, QUE.

QUEBEC, May 25, 1894.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	14 @	18
For fair average quality, according to average, etc., measured off	16	20
For good and good fair average, " " " " "	23	27
For superior " " " " "	28	30
In shipping order " " " " "	29	35
Waney board, 18 to 19 inch " " " " "	30	36
Waney board, 19 to 21 inch " " " " "	37	40

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	45	51

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	30	34

BIRCH.

16 inch average, according to average and quality	20	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $37 to $42 for 3rd quality.

Bright spruce, according to mill specification, $40 to $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality.

OSWEGO, N.Y.

OSWEGO, N. Y., May 25.—The opening of navigation has not brought with it very much activity for the lumber trade. Compared with some recent years trade is quite slow.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$47 00@48 00
Pickings, " "	39 00 40 00
No. 1, cutting up, " "	34 00 35 00
No. 2, cutting up, " "	24 00 25 00
In strips, 4 to 8 wide, selected for moulding strips, 14 to 16 ft.	32 00 34 00

SIDING.

1 in siding, cutting up picks and uppers	32 00@39 00	1¼ in selected	38 00@43 00
		1¼ in dressing	20 00 22 00
1 in dressing	19 00 21 00	1¼ in No. 1 culls	15 00 17 00
1 in No. 1 culls	14 00 15 00	1¼ in No. 2 culls	14 00 15 00
1 in No. 2 culls	13 00 14 00	1 in. No 3 culls	11 00 12 00

1X12 INCH.

12 and 16 feet, mill run	21 00 24 00
12 and 16 feet, No. 1 and 2, barn boards	19 00 20 00
12 and 16 feet, dressing and better	27 00 31 00
12 and 16 feet, No. 2 culls	15 00 16 00

1X10 INCH.

12 and 13 feet, mill run, mill culls out	21 00 23 00
12 and 13 feet, dressing and better	26 00 28 00
1X10, 14 to 16 barn boards	18 00 19 00
12 and 13 feet, No. 1 culls	16 00 17 00
12 and 13 feet, No. 2 culls	15 00 16 00
14 to 16 feet, mill run mill culls out	21 00 23 00
14 to 16 feet, dressing and better	26 00 28 00
14 to 16 feet, No. 1 culls	17 00 18 00
14 to 16 feet, No. 2 culls	15 00 16 00
10 to 13 feet, No. 3 culls	11 00 12 00

1¼X10 INCHES.

Mill run, mill culls out.	$22 00@25 00	No. 1 culls	17 00 18 00
Dressing and better	27 00 35 00	No. 2 culls	15 00 16 00

1X4 INCHES.

Mill run, mill culls out	17 00 21 00	No. 1 culls	14 00 15 00
Dressing and better	24 00 30 00	No. 2 culls	13 00 14 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20 00 25 00	6, 7 or 8, No. 1 culls	16 00 17 00
		6, 7 or 8, No. 2 culls	14 00 15 00
6, 7 or 8, drsg and better	25 00 30 00		

SHINGLES.

XXX, 18 in pine	3 70 3 90	XXX, 18 in. cedar	3 50 3 70
Clear butts, pine, 18 in.	2 70 2 90	Clear butt, 18 in. cedar	2 50 2 70
XXX, 16 in. pine	3 00 3 20	XX, 18 in. cedar	1 90 2 00
Stock cedars, 5 or 6 in.	4 50 5 00		

LATH.

No. 1, 1¼	2 30	No. 2, 1¼	2 25
No. 1, 1 in.	1 80		

SAGINAW, MICH.

SAGINAW, Mich., May 25.—Marking a start in the season's business, two transactions of some size were reported the early part of the month. Joseph Turner, of Bay City, closed a sale of 7,000,000 ft. E. T. Carrington is said to have sold 11,000,000 ft., which, it is thought,

was Spanish River stock, Mr. Carrington having a mill at that point; prices obtained are not given. These transactions have not, unfortunately, been followed up by many more of the kind. General trade continues quite dull. The hardwood market is unusually dull here.

FINISHING LUMBER—ROUGH.

Uppers, 1, 1¼ and 1½	45 00	Fine common, 1 in	35 00
2 in	46 00	1¼ and 1½ in	36 00
Selects, 1 in	40 00	2 in	37 00
1¼ and 1½	41 00	C, 7, 8 and 9 in	30 00
2 in	42 00		

SIDING.

Clear, ½ in	24 00	C, ½ in	19 00
⅞ in	48 00	⅞ in	34 00
Select, ½ in	21 00	No. 1, ½ in	13 00
⅞ in	40 00	⅞ in	23 00

TIMBER, JOIST AND SCANTLING.

2x4 to 10x10, 12, 14 and 16 ft.	$11 00	20 ft	14 00
18 ft	13 00	22 and 24 ft	15 00

For each additional 2 ft. add $1; 12 in. plank and timber $1 extra; extra for sizes above 12 in.

SHINGLES.

XXX 18 in. Climax	3 65	18 in. X (cull)	1 00
XXX Saginaw	3 40	XXX shorts	2 25
XX Climax	2 25	XX	1 50
18 in. 4 in. c. b	1 25		

LATH.

Lath, No 1, white pine	2 25	Lath, No. 2, W. pine, Norway	1 65

NEW YORK CITY.

NEW YORK, May 25.—A little more life is shown in the lumber market at this point, but buying continues to be marked by the greatest caution. Fair demand exists for white pine, but the call is seldom for the better grades. The effort is to keep prices firm. One does not hear of any large amount of stir in the export trade.

WHITE PINE—WESTERN GRADES.

Uppers, 1 in	$44 00@45 00	Coffin boards	20 00 22 00
1¼, 1½ and 2 in	46 00 47 00	Box, in	$17 00@17 50
3 and 4 in	55 00 58 00	Thicker	17 50 18 50
Selects, 1 in	40 00 41 00	Ccil'g, base, fig. No. 1	40 00 42 00
1 in., all wide	41 00 43 00	No. 2	35 00 37 00
1¼, 1½ and 2 in	43 00 44 00	No. 3	24 00 26 00
3 and 4 in	52 00 53 00	Shelving, No. 1	30 00 32 00
Fine common, 1 in	36 00 37 00	No. 2	25 00 27 00
1¼, 1½ and 2 in	38 00 40 00	Molding, No. 1	36 00 37 00
3 and 4 in	46 00 48 00	No. 2	34 00 36 00
Cutting up, 1 in. No. 1	28 00 30 00	Bevel sid'g, clear	22 50 23 00
No. 2	21 00 23 00	No. 1	22 00 22 50
Thick, No, 1	29 00 32 00	No. 2	20 00 20 50
No. 2	24 00 26 00	No. 3	16 00 17 00
Common, No. 1, 10 and 12 in	22 00 23 00	Norway, c'l, and No. 1	23 00 25 00
No. 2	20 00 21 00	No. 2	20 00 22 00
No. 3	17 00 18 00	Common	18 00 19 00

ALBANY, N.Y.

ALBANY, N. Y., May 25.—An improved and better feeling is shown in the white pine trade. The canal is opened for all the business that will come along, but it is not thought that boatmen will have a particularly heavy season. Prices are working downwards, somewhat, and orders do not run into large figures.

PINE.

2½ in. and up, good	$56	$60	10-in. common	$15	$16
Fourths		58	12-in. dressing and better	28	34
Selects		50	Common	15	17
Pickings		45	1¼-in. siding, selected, 13 ft.	40	45
1¼ to 2-in. good	52	55	Common	15	17
Fourths	47	50	1-in. siding, selected	38	42
Selects	42	45	Common	15	17
Pickings	37	40	Norway, clear	22	25
1-in. good	52	55	Dressing	16	18
Fourths	47	50	Common	11	15
Selects	42	45	10-in. plank, 13 ft., dressing	c.	c.
Pickings	37	40	and better, each	42	55
Cutting-up	22	27	10-in. plank, 13-ft. culls, each	23	25
Bracket plank	30	35	10-in. boards, 13 ft., dressing		
Shelving boards, 12-in. up	30	32	and better, each	28	32
Dressing boards, narrow	19	21	10-in. boards, 13-ft. culls	17	21

LATH.

Pine	$2 40	Spruce	$2 30 $2 40

SHINGLES.

Sawed Pine, ex. xxxx	$4 40	$4 50	Bound butts, 6 x 18	$5 90	$6 00
Clear butts	3 15	3 25	Hemlock	2 15	2 30
Smooth, 6 x 18	5 50	5 60	Spruce	2 20	2 30

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N. Y., May 25.—A trade in lumber is being done from day to day, but it is of a light character. The feeling is that the season's trade will run into comparatively small figures. At Buffalo pretty much the same conditions exist. Railroads are feeling the want of business and the lake trade is slow. What sales are being made are for common grades. Very little demand for better stocks.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in	$47 00	50 00	Shelving, No. 1, 13 in and up, 1 in	31 00@33 00
2½ and 3 in	55 00	57 00	Dressing, 1¼ in	26 00 28 00
4 in	58 00	60 00	1¼x10 and 12	28 00
Selects, 1 in	38 00	40 00	1½ in	24 00 25 00
1¼ to 2 in	40 00	42 00	2 in	26 50 28 00
2½ and 3 in	50 00	52 00	Mold st'ps, 1 to 2 in	33 00 35 00
4 in		54 00	Barn, No. 1, 10 and 12 in	23 00 24 00
Fine common, 1 in	35 00	38 00	6 and 8 in	22 00 23 00
1¼ and 1½ in	37 00	38 00	No. 2, 10 and 12 in.	18 00 19 00
2 in	39 00	40 00	6 and 8 in	18 00 19 00
3 in		45 00	No. 3, 10 and 12 in.	14 00 16 00
4 in		45 00	6 and 8 in	14 50 15 50
Cut'g up, No. 1, 1 in.	28 00	30 00	Common, 1 in	16 00 18 00
1¼ to 2 in	34 00	36 00	1¼ and 1½ in	18 00 20 00
No. 2, 1 in	18 00	20 00	2 in	20 00 22 00
No. 2, 1¼ to 2 in	24 00	26 00		
No. 3, 1¼ to 2 in	18 00	19 00		

BOX.

1x10 and 12 in. (No 3 out)	14 00	Narrow	13 00@14 00
1x6 and 8 in (No. 3 out)	13 50	1¼ in	15 00 18 00
1x13 and wider	15 00 17 00	1½ in	15 00 18 00
		2 in	15 00 18 00

SHINGLES.

18 in. XXX, clear	3 85	4 00	16 in., *A extra	2 60	2 70
18 in. XX, 6 in. clear		2 85	16 in. clear butts		2 10

LATH.

No. 1, 4 ft.	2 50	2 60	No. 1, 3 ft.		1 10
No. 2, 4 ft.		1 95			

BOSTON, MASS.

BOSTON, Mass., May 25.—From the fact that some business is doing, there is a more hopeful and pleasant feeling in the trade this month than last month, and yet there is a littleness about the kind of trade that does not auger large things for the whole season. Pine from the west is said to have improved with stocks somewhat small. The shingle trade has not reached the volume that was hoped for at this time of the year.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards		$12 00	¾ inch	$ 9 25	9 75
Coarse No. 5		16 00	11-16 inch		9 00
Refuse	11 00	12 00	⅝ inch		8 50
Outs	9 00	10 00	Clapboards, sap ext.	52 50	55 00
Boxboards, 1 inch	10 75	11 00	Sap clear	47 00	50 00
⅞ inch	9 75	10 00	Sap, 2nd clear	38 00	40 00
			No. 1		25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in	$52 00@54 00		Fine com., 3 and 4 in	42 00	46 00
1¼, 1½ and 2 in	52 00	55 00	No. 2, 1 in. Fine com.	28 00	30 00
3 and 4 in		60 00	1¼, 1½ and 2 in	29 00	31 00
Selects, 1 in	45 00	46 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in	48 00	50 00	No. 2	36 00	37 00
3 and 4 in		51 00	No. 3	28 00	30 00
Moulding boards, 7 to 11 in. clear	36 00	38 00	Cut ups, 1 to 2 in	24 00	32 00
60 per cent. clear	34 00	36 00	Coffin boards	21 00	23 00
Fine common, 1 in	40 00	41 00	Common all widths	22 00	26 00
1¼, 1½ and 2 in	41 00	43 00	Shipping culls, 1 in	15 00	15 50
			do 1¼ in.	15 50	16 50

SPRUCE—BY CARGO.

Scantling and plank, random cargoes	14 00@15 00		Coarse, rough	12 00@14 00	
Yard orders, ordinary sizes	15 00	16 00	Hemlock bds., rough	12 00	13 00
Yard orders, extra sizes	16 00	18 00	" " dressed	12 00	14 00
Clear floor boards	19 00	20 00	Clapbds., extra, 4 ft.	29 00	30 00
No. 2	16 00	17 00	Clear, 4 ft.	30 00	31 00
			Second clear	23 00	24 00
			No. 1	12 00	16 00

LATH.

Spruce by cargo	2 50@2 75

SHINGLES.

Eastern sawed cedar, extra	$3 00	$3 25	Eastern shaved sawed cedar, 1st quality	5 00	
clear	2 30	2 75	2nd quality	4 75	
2nd's	2 00	2 35	3rd "	3 85	4 00
extra No. 1	1 50	1 75	4th "	3 00	3 25
			Spruce No. 1	1 50	

NORTHWEST OPINION ON THE LUMBER TARIFF.

LAKE of the Woods lumbermen are a good deal agitated over tariff changes. They say they will not be able to compete under the new tariff unless freights from the mills to Winnepig and western points are reduced. John Mather of the Keewatin Lumber Co. states "that the prospects for the lumber trade were never worse than at present. The mills at Keewatin will not be operated this season. With the present freight tariff on the Canadian Pacific Railway it is a question whether it will ever pay to run the mills there till a large reduction is made." Mr. Graham, a lumber merchant of Fort William, stated, "that in view of the very high freight rate on lumber charged by the Canadian Pacific Railway, the shipping of lumber to Manitoba has been rendered unprofitable. The value of lumber has decreased through competition from the south, and lumbermen felt that the Canadian Pacific Railway should participate in the reduction of values generally by reducing its freight rates." D. C. Cameron, of the Ontario and Western Lumber Co., said: "While the tariff on lumber was enforced the mills here were making a small profit on the same, but now that the tariff has been done away with, and competition from the south is so keen, we find that we cannot hold our own. The amalgamation of the six lumber companies a year ago, now known as the Ontario and Western Lumber Co., was brought about by the fact that some of these companies were actually running at a loss, showing that the profits in this business, even with a protective tariff, are small. It may even seem strange that we are unable to produce lumber as cheaply as our competitors to the south, but this is owing to the fact that we have to move our logs by water a distance of about 300 miles, which entails a cost of about $3 per thousand feet; and while this water haul is in the direction of the market, and thus shortens the rail haul to that extent, yet, as compared with the firms in the same business to the south of us, we labor at that much of a disadvantage, inasmuch as we have still to pay a freight rate to the average point in Manitoba almost, if not quite equal to the freight rate alone of our United States competitors. I think that the Canadian Pacific Railway should freight our lumber as cheaply per mile as other railways do to the south of us."

CORRESPONDENCE

Letters are invited from our readers on matters of practical and timely interest to the lumbering and wood-working trades. To secure insertion all communications must be accompanied with name and address of writer, not necessarily for publication. The publisher will not hold himself responsible for opinions of correspondents.

A LUMBERMAN ON THE LOG DUTY.

To the Editor of the CANADA LUMBERMAN:

Sir, Much is at present being said in the Dominion Parliament and elsewhere throughout this country regarding the export duty on sawlogs. Recently a deputation of influential gentlemen waited on the Premier in Ottawa and urged the Government to reimpose this duty, because large quantities of logs had been taken from Canada, to be sawn in United States mills, thereby causing mills in Midland and in other places to stand idle. The fact is, no mill owner in Midland, or anywhere in this province was ever compelled to shut down his mills because of the export duty on logs having been removed. The removal of this duty is one of the best things the Dominion Government ever did for mill owners. It gained for this country a reduction of $1.00 per M feet B. M. on all pine lumber entering the American market from Canada. It at once caused numerous American buyers to come over here in search of lumber, which immediately advanced in value, and has ever since commanded higher prices than it ever did before. At the same time logs also have advanced in value, and mill owners in Midland or anywhere on the Georgian Bay could, if they desired, sell their logs to Americans at such prices as would give nearly as much net profit as could at any previous time have been made by sawing the stock into lumber and at the same time evade the usual risk of water, fire, and of making unsafe sales. Surely we ought to let well enough alone, especially when it is dangerous to do otherwise.

Without the American market there would be no use whatever for more than half of the sawmills there are now in Canada, and it is beyond doubt that if the duty referred to is reimposed there will be danger of such a retaliation being put in force by the American government as will totally exclude all grades of our lumber from their market, causing an inestimable loss to this country. It is often said: "What need we care for the American market, why not ship to the English market?" This is easily answered, for there is not now and never has been a profitable market in England for any of our lumber other than deals, and only a very small per cent. of an ordinary stock of logs is suitable for making deals. Therefore we are depending almost entirely on the United States market for the sale of our lumber.

Canada is not losing as much by the logs that are taken away as is generally supposed, as the cost of cutting, skidding, hauling and driving usually amounts to from $4.00 to $7.00 per M ft. B. M., nearly all of which is spent in Canada, and the cost of sawing into lumber, which is not spent here, is only $1.00 per M ft. B. M. Most of the logs referred to are made out of the limits purchased from our Government and from private parties at the highest prices, at a time when there were no restrictions as to where they should be sawn, and it would be unjust to restrict the owners of limits from sawing their logs wherever it would be most profitable for them to do so.

Yours, &c.,

A. TAIT.

Orillia, Ont., May 17, 1894.

APPRECIATION OF "THE LUMBERMAN."

MR. Herman Noss, York, Pa., writes: "I failed to see my CANADA LUMBERMAN for April. Please see that April number is sent at once. Also see that I get it regular every month, as I am lost without it."

Mr. J. K. Ward, Montreal, writes: "Please find enclosed one dollar, one year's subscription to THE LUMBERMAN, with which we are well pleased. Hoping for its success, and that your influence may be exerted in getting the Government to reimpose the export duty on logs, unless the U. S. Government puts our lumber on the free list."

THE Ottawa Lumber Co., of Ottawa, Canada, have purchased the output of the McCracken, Boyle & Co. white pine logs which were cut on the Gatineau River. They are now having them sawed at East Templeton, and expect to turn out about five or six million feet B.M.

THE "MORSE" VALVE RESEATING MACHINE.

WE present to the lumbering trade, an illustration and description of the above machine for reseating steam or water valves.

The makers claim the following advantages for this machine: 1st. That the valves can be reseated or repaired without disconnecting them from the pipes, a very important point, as the saving in labor and new pipes and valves is immense. 2nd. That it is the only machine that can be attached to all make of valves from ¼" to 12" inclusive, either flat or taper seat, regardless of the size of thread or diameter of opening in the valve. This machine is made in three different sizes, as follows: No 1 machine for ¼" to 4" valves; No. 2 for 3" to 9"; No. 3, 9" to 12". 3rd. The "Morse" Valve Machine is so constructed that it will make a perfectly steam tight joint, without having to grind the seat after it has been faced with the cutter.

The accompanying cuts show machines Nos. 2 and 3, and the tools furnished with each outfit.

The makers have these machines in use in the largest mills and factories throughout Canada. They supply them on 30 days trial, and if they do not prove satisfactory they can be returned at their expense. Within the past eighteen months they have sold 200 machines, and feel sure that it will pay parties with steam plants of any extent to look into the merits of this machine.

For further particulars apply to Darling Brothers, Reliance Works, Montreal.

INDIFFERENCE TO BOILER FIRING AND MANAGEMENT.

BY DANIEL ASHWORTH. MEM. AM. SOC. M. E.

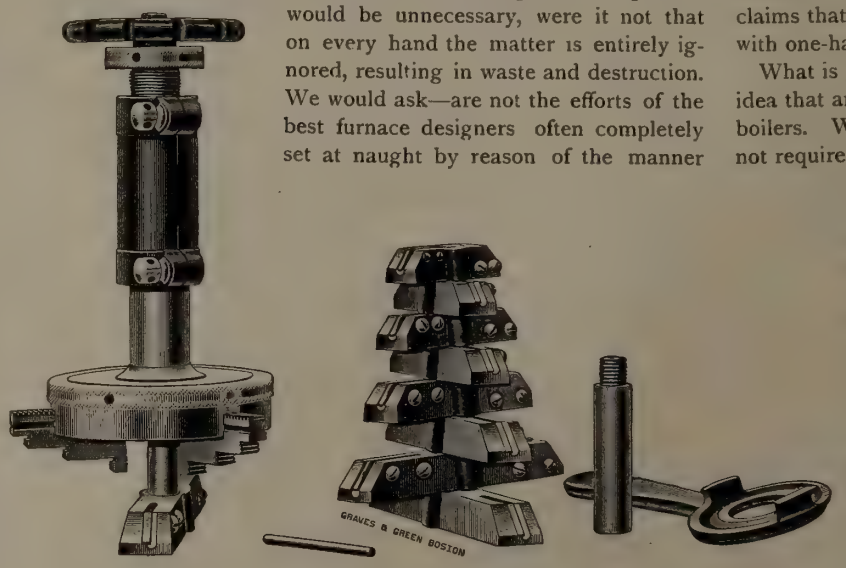
OBSERVATIONS extending over a period of a quarter of a century in a practical and professional way have presented opportunities to note, in the greater number of manufacturing establishments, a continuous decline in the grade of service of those in the position of firemen and boiler room managers, this corps of operatives seeming, at least, to have remained in "statu quo." The evil has become so glaring and the results so palpably fraught with disaster, destruction and waste as to warrant an effort to call the attention of those who desire to progress, to the false and inconsistent position which they occupy by permitting such a narrow policy in management, so widely at variance with true economy ignoring directly that the better intelligence renders the more valuable, and, hence, more profitable service.

It goes without saying that, during the past ten years, the concentration of efforts by scientists and eminent mechanics looking to the more perfect development of the steam engine in its various types has produced results which challenge the admiration of the most critical in this line of thought. Within the same period, from every source, there have been a multitude of features in the form of designs and novel applications of boilers, all converging to the important factors of increased economy, efficiency and safety. In the engine sphere, condensing, compound and triple expansion engines, with and without jackets; in brief, seemingly, all the necessary refinements have received and are now receiving close attention. In the boiler domain there has been also the evolution from the plain cylinder type to the tubular, and from that through the multifarious forms of water-tube designs, each striving for a superior degree of excellence. The amount of research and practical application that have been and are being instituted in attempting to increase efficiency and economy, is such as to be incalculable. A retrospect of the past, viewed in the light of present results, shows that these efforts have been of an exceedingly fruitful character.

The development has carried with it the imperative advancement of those in charge of engine management to such an extent as to create almost anew this body of men. Such an intellectual advancement in the department of mechanics, the writer believes, is without precedent, and in every sense challenges admiration from every quarter. Notwithstanding these favorable features we are constrained to say that all this is somewhat like the play of Hamlet—with Hamlet left out; or, in other words, we are radically defective at the very threshold of this field, by reason of relegating the firing of boilers to the most ignorant of operatives; or, to put it in a plain way, there seems to be an almost unanimous idea that any one who can shovel and throw fuel is good enough for a fireman. Close observation and contact for a period of years, with numerous plants of varied character, increase the conviction of the writer upon this point. Recognizing, as we all do, that the furnace of the boiler is the prime feature and great initial point from which comes the source of power, does it not properly follow that if economy and efficiency are deserving of efforts in the advanced stages, as has already been pointed out,

4" TO 12" OUTFIT.

this is the very point that should be treated with every consideration of intelligence? Should not the fuel, furnace and boiler receive the thoughtful attention that the engine receives from the careful engineer? I think this will be accepted by every one interested in advanced ideas. No one, I think, will question the fact of the importance of the initial point of the boiler and its furnace, and that with mismanagement these other efforts of refinement are rendered, in many cases, completely void. It would seem so simple that argument would be unnecessary, were it not that on every hand the matter is entirely ignored, resulting in waste and destruction. We would ask—are not the efforts of the best furnace designers often completely set at naught by reason of the manner



3" TO 9" OUTFIT.

in which they are operated? Is it not a glaring fact that in all cities where smoke abatement has been and is being attempted, the great stumbling block is the low grade of intelligence and low grade of the boiler operatives?

In looking upon this subject from a mechanical and engineering standpoint, we are fully alive to all the requirements to give complete combustion and thorough distribution of heat units, proportion of grate area and openings. Proper amount of air, conduction of the heated gases, all are carefully considered. When all is completed we have the wonderful spectacle of these conditions being turned over to the simple treatment of ram-jam shoveling and slice-bar operations. I claim that the fireman should know, at least, the elements of combustion, the importance of proper management of fires to produce the greatest results with the least expenditure of fuel. It may be said that the application of mechanical stokers makes intelligent firemen unnecessary, a point that is frequently (and I believe without thinking) claimed by those interested in placing such stokers. This is a great mistake, well known by those conducting tests, the results always being superior with the greater intelligence of the operator of the machine.

Within the past few years, in every community where cleanliness, taste and health are considered, there has come forth a crying appeal to the authorities to lesson the great evil of smoke in the atmosphere. In response to this, inventive genius has promptly come forward. The multitude of devices that have been perfected and put in operation furnishes ample testimony of this fact. Many of these, when properly operated, accomplish satisfactory results in smoke abatement, but no inventor has ever had the temerity to label his machine or furnace, "No skilled fireman required." Per contra, it is well known that the most intelligent fireman produces the best results, and it is also an undeniable fact that the best devices are set at naught by incompetent operating. The writer has been brought in contact with large fields of boiler practice, and in many cases, aside from other disqualifications, the firemen were unable to speak or understand a word of the English language. It may be said, as I have heard it said, that these men are not paid to think, but to do. Well, they do do. They will "do up" a coal pile, furnace and boilers with alarming rapidity. I say alarming to those whose views are broad enough to consider the initial and important points. On the other hand, it is a lamentable fact that there are a great number of men in official positions, as superintendents and proprietors of establishments, who seem to be utterly incapable or unwilling to note the importance for the necessity for a higher grade of labor in the firing and management of boilers.

One of the most surprising features in connection with this state of affairs is the tendency of those interested to place boilers claiming, among their numerous merits, that less attention is required for them than for others, precisely on the old exploded claim applied to engines, "No skilled engineer required." I have now before me a letter from a boiler representative, who claims that his boiler will give the utmost satisfaction with one-half the attention that others receive.

What is greatly needed at present is to lay aside the idea that any one is good enough to fire and manage boilers. When you engage a man for your office do you not require that he shall possess some qualifications for the position, and if aptness is shown do you not show appreciation by advancement to a higher plane, the interest being mutual? Why not apply this to the selection of firemen? As it now stands we cannot but exclaim, "Strange, what a difference there should be twixt tweedle-dum and tweedle-dee!" There are many plants in operation where, by incompetency in this line the steam efficiency is greatly lessened, furnaces and boilers are working in neglected conditions, fuel is wasted and the community is begrimedwith volumes of unnecessary smoke. In addition to these evils, lives and property are jeopardized. Unless this matter is considered and such action taken as will improve this corps of operatives, it would seem absurd to be continually reaching and extending into the higher refinements of steam engineering. Under these conditions do not the pertinent questions present themselves to the employers: Are we not occupying a false position by this indifference? Do we not retard the development of a class of labor which, by a recognition, by an appreciation, that some skill and judgment are required, would be animated by some spark of ambition to qualify for advanced positions?

Is not this condition of affairs a gross inconsistency, nay, a mockery, in the face of the query put by those guilty of this indifference.

THE EXPANSION OF CHIMNEYS.

IT is seldom that facilities are afforded for the making of exact measurements of the expansion and contraction of a factory chimney. It is generally conceded that boiler chimney shafts should not be attached to the walls of any important building on account of the risk of cracking the walls by the expansion of heated brickwork, but data on the subject are scanty, and there are even persons who have doubts whether brickwork really expands or contracts when heated. An excellent opportunity of settling this question has recently presented itself in England. It was necessary to erect a casing of ornamental brickwork around a boiler chimney of 90 feet high, the inside of which was provided with a brick flue up to over one-third of its height. The near completion of the brickwork surrounding the chimney gave the opportunity of observing from the top of the casing any movement of expansion or contraction of the chimney itself. As the boiler fires were drawn on Saturday afternoon, and relighted on Monday morning, the chimney cooled down, and observations made from the top of the casing will show a contraction of the chimney of 5 millimeters, or 2-10 inches during that time. As the surrounding wall was still about six feet below the top of the chimney when the measurements were made, and the first 33 feet of the shaft remained practically cold on account of the air space between it and the centre flue, it may be taken that the length of the brickwork in which the expansion took place was about 50 feet. According to this a shaft 100 feet high would expand 4-10 inches when in use. It is probable that the expansion observed would have been 50 per cent. greater if the chimney had been allowed a longer time to cool.

J. F. EBY HUGH BLAIN

SNOW GONE

Of course you will want CAMP SUPPLIES. Your Fall orders must be nearly exhausted. BEFORE ordering your Spring Supplies write us for samples and quotations. We quote Currants and Raisins 'WAY DOWN, and our JAPAN TEAS are special value. Just drop us a line.

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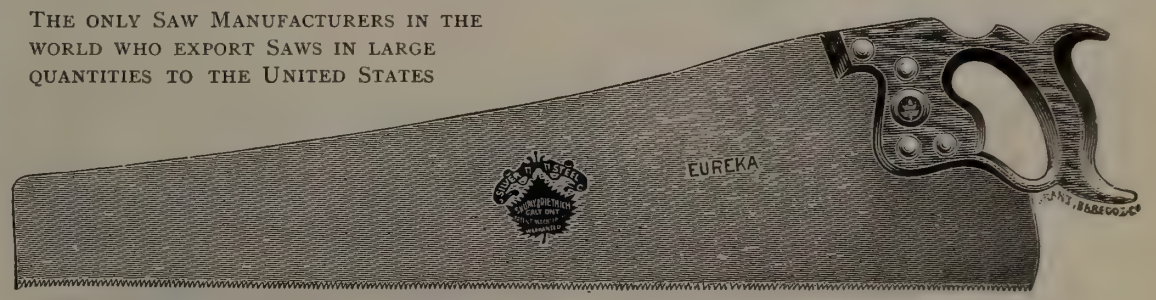

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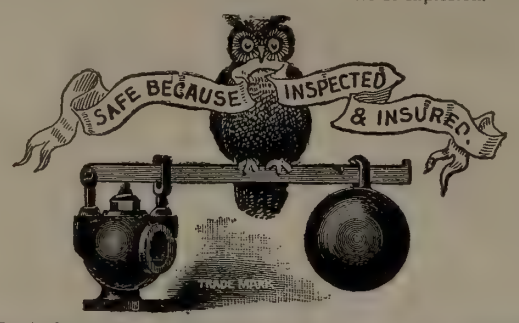
Our Steam Boiler Policy covers all loss or damage to the Boilers, also to property of every kind on the premises or elsewhere, whether it is the property of the assured or of others for which the assured would be liable in case of explosion.

SUBSCRIBED CAPITAL, $200,000.



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Dauntless Shingle and Heading Machine

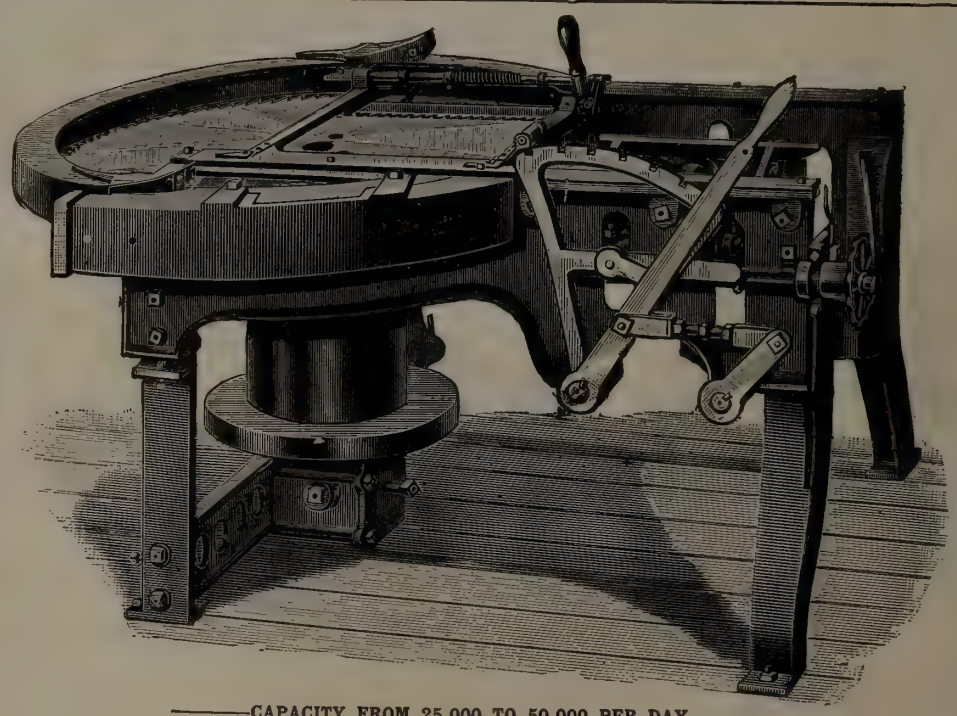
∴ WILL make more Shingles per day than any self-acting machine with vertical saw in existence, and more Shingles from the same quantity of timber.

THE FRAME

... Is of Iron throughout, very heavy and rigid, strongly bolted and braced.

THE CARRIAGE

... Is very light and strong, made of forged Cast Steel Plate, running on steel ways or tracks. Will take in a block 18 inches wide and 19 inches long, adjustable for 16-inch or 18-inch shingles.



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[COPY.]

LINDSAY, May 18th, 1893.

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Dear Sir,—The shingle machine we bought of you over a year ago is doing well- Last year we ave aged over 32,000 shingles per day all through the season. We did not lose 15 minutes' time from all stoppages, and all repairs so far have not cost 50c. We expect to make a still higher average cut this year.

All our other machinery purchased from you is as good as the shingle machine. Your drag saw, with friction drive, cannot be beaten. We run ours 180 strokes per minute; with 6½ ft. saw it would easily make blocks for two shingle machines. The splitter, with balance wheel 4 feet diameter, weighing 1,000 lbs., is perfect and runs without the least jar. The iron frame shingle jointer with 40-inch saw is the only good jointer we ever saw. In fact, all your machinery, line shaft, pulleys, etc., give us the best satisfaction.

We expect to require another mill in a few days, and, if we do, will send you the order for complete outfit.

Truly yours,

M. DOVEY.

P.S.—If any one wants to see a good working shingle mill send them to me.—M. D.

F. J. DRAKE

PATENTEE AND MANUFACTURER OF SAW, SHINGLE AND LATH MACHINERY

BELLEVILLE, ONT.

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Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 24th of each month to insure insertion in the following issue.

$5,000 CASH and balance can remain on mortgage for finest lumber yards in Toronto, at Queen's Wharf, with buildings and brick residence and large tract of land, best of railroad facilities for shipping. $22,500 will purchase this property, which is a bargain seldom offered, easily worth $35,000. Apply G. G. Christie, Lumber Dealer, 86 Bay street, Toronto.

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About three miles of 25 lb. T-Rail; 12 Logging Cars complete, and a Shay Locomotive

IN GOOD CONDITION, FOR SALE ON ADvantageous terms.

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JOHN J. GARTSHORE,
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RAILS FOR TRAMWAYS

NEW AND SECOND-HAND STEEL AND iron rails for tramways and logging lines, from 12 lbs. per yard and upwards; estimates given for complete outfit.

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VIRGIN WHITE PINE SAW LOGS

THESE LOGS ARE THE FIRST CUT FROM new timber limits; choice quality; are cut principally 16 feet long, and average from 5 to 6 logs per 1,000 feet, and can be delivered in the Georgian Bay by the 1st of June, 1894.

For particulars apply to

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1,400 SQUARE MILES

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WEDNESDAY, AUGUST 29, '94

commencing at 2 p.m. prompt, the following valuable timber limits:—

Townships of Caldwell, Dill, Snider, Morin, McMahon, Houghton and Nos. 51 and 43; also berths No. 2 Finlayson; No. 3 McCraney; No. 5 Livingston; Nos. 2, 3 and 6 McClintock; South Burleigh and North Burleigh; No. 3 McMurrich; No. 3 Perry; No. 1 Laurier; No. 1 Pringle; Nos. 2, 3, 4 and 8 Thunder Bay District; also Nos. 19, 20, 21, 25, 27, 65, 67 and 68 Rainy River District. All the above are in the Province of Ontario, many of them being choice and valuable properties.

Also the following berths in the Upper Ottawa Agency, P. Q.—Nos. 591, 592, 593, 594, 600, 597, 598, 599, 601, 602, 603, 604, and lot 7, range 1, block A., Lake Expanse. Amongst the above will be found some of the best timber properties on the Upper Ottawa.

Also at the same time and place there will be offered to close the partnership account of

BARNET & MACKIE,

the following choice and valuable Timber Berths, Waney Timber Logs, Plant, etc.

IN ONE LOT, Berths 5 and 6, Township of Butt, Province of Ontario, 22¼ square miles, together with 13,695 cubic feet of Waney Timber, also 75,000 feet B. M. of Saw Logs, Plant, etc.

Also IN ONE LOT, the following well timbered and conveniently situated Limits in the Province of Quebec, together with the Farm and Depot Buildings on Brennan's Lake: Plant, etc.: Berths Nos. 26, 27, 28, 35, 37, and River Kippewa Berth, in all 230¼ square miles.

Also IN ONE LOT, Limits 181 and 182, known as the Kippewa Berths No. 73, 50 square miles, and No. 74 of 14 square miles, with plant, etc.

For catalogues, terms and further particulars apply to the undersigned.

PETER RYAN
28 Victoria Street
TORONTO

BEST MAIN DRIVE. REGISTERED GANDY'S PATENT TRADE GUARANTED. MARK

GANDY'S AMERICAN COTTON BELTING

Sole Canadian Agents :-: Prices Reduced.

WATEROUS, BRANTFORD, CANADA.

JUDICIAL SALE BY TENDER

—OF—

TIMBER LANDS AND TIMBER LIMITS

"Marked tenders re. Toronto Wood & Shingle Company (limited)," and addressed to him, will be received by the Master in Ordinary up to 12 noon of the

9TH DAY OF JUNE, 1894,

for the purchase of the interest of the Toronto Wood & Shingle Company (Limited), in liquidation, in parts of lots 11 in the 6th, 4 in the 8th, 11 in the 7th, 4 in the 9th and 4 in the 10th concession of the Township of Muskoka, in the District of Muskoka, and containing upwards of 400 acres; and also the interest of the said Company in the timber on lots 8, 9, 10 and 12 in the 6th; 4, 5, 6, 7 and 10 in the 7th; 4, 5, 7 and 10 in the 8th; 5 in the 9th, 2 in the 10th, 16 in the 5th, 3 in the 11th and 8 and 9 in the 4th concessions of said Township, containing about 1,800 acres; and also for the purchase of the lands of the said Company lying near Penetanguishene, and being known as lots lettered D and E in the 19th concession of the Township of Tiny, in the county of Simcoe, containing about 314 acres, and on said lot E is erected a large dock at what is known as Sawlog Bay.

No tender necessarily accepted.

The other conditions of sale are the standing conditions of court.

For further particulars apply to the liquidator.

HENRY BARBER, Esquire,
18 Wellington St. East, Toronto.

Dated at Toronto this 15th day of May, 1894.

J. J. TURNER & SON

.. Sail, Tent and Awning Maker ..

251 George St. and 154 King St.

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Canoe, Yacht and Boat Sails made to order. Perfect Fits Guaranteed.

Every description of Lumbermen's Supplies and Waterproof Clothing.

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FROM

Port Huron and Detroit

Is the Short Line to

SAGINAW AND BAY CITY

(Centres of the vast lumber interests of Michigan)

MT. PLEASANT, CLARE, REED CITY

BALDWIN, LUDINGTON, MANISTEE

AND

MILWAUKEE, WIS.

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The line thus formed is a short and direct route from

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To ST. PAUL, DULUTH and Pacific Coast Points.

This road traverses a section of Michigan with unrivalled advantages to settlers. Cheap lands, thriving villages and towns, well watered with streams in all directions; a market for every product of Forest and Field. The policy of the "F. & P. M." is known to all travellers and settlers.

A. PATRIARCHE, Traffic Manager.

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F. E. DIXON BELTING CO.

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TRADE CAMEL BRAND MARK BELTING

BREAKING STRAIN 6 IN. CAMEL HAIR BELT—14,181 lbs

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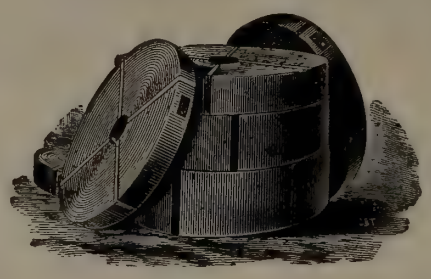
SUPERIOR QUALITY
RUBBER GOODS
for Mechanical Purposes
RUBBER BELTING, PACKING, HOSE



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Seamless Rubber Belting
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These Patents we control for Canada

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Western Branch: CORNER YONGE AND FRONT STREETS
TORONTO
J. H. WALKER - Manager.

Representative Lumber Manufacturers and Dealers

Town	Railway, Express, or nearest Shipping Point	Name	Business	Power, Style and Daily Capacity
Ottawa, Ont.	Ottawa	**Booth, J. R.**	Lumber, Wholesale and Retail	Steam, Circular and Band Mill
Ottawa, Ont.	Ottawa	**Bronson & Weston Lumber Co.**	2 Sawmills, White and Red Pine, Wholesale	Water, Gang and Band, 450m
Parry Sound, Ont.	Utterson	**Conger Lumber Co.**	Lumber, Wholesale and Retail	
Parry Sound, Ont.	Parry Sound	**Parry Sound Lumber Co.**	Saw, Shingle and Lath Mills, Pine, Wholesale	Water, Gang, Circular, Saw 90m, Shingles 70m, Lath 30m
Muskoka Mills, Ont.	Midland	**Muskoka Mill and Lumber Co.,** Head Office, Arcade, 24 King st. w., Toronto	W. Pine Lumber, Lath and Bill Stuff, all lengths.	2 Mills, Water, 1 Band, 2 Gangs and 3 Circulars.
Alexandria, Ont.	Alexandria	**McPherson, Schell & Co.**	Cheese Box Factory, Pine, Spruce, Cedar	
Almonte, Ont.	Almonte	**Caldwell, A. & Son**	Sawmill, Pine, Lumber, Hemlock, Hardwoods	Circular, 3m
Barrie, Ont.	Barrie	**Dyment & Mickle**	Sawmill, Pine, Spruce, Cedar, Hardwoods	Steam, Circular, 40m
Barrow Bay, Ont.	Wiarton	**Barrow Bay Lumber Co., Limited**	Saw, Shingle and Heading Mill, Pine, Cedar Oak, Oak Railway Ties, Paving Blocks	Steam, Circular, 16m
Blind River, Ont.	Blind River	**Blind River Lumber Co.**	2 Saw, Sh. and Lath Mls., Pine, Hem., Bl. Birch	Stm., Band, Cir., S. 75m, Sh. 60m
Bobcaygeon, Ont.	Fenelon Falls	**Boyd, Mossom & Co.**	Lumber, Wholesale and Retail	
Barrie, Ont.	Barrie	**Burton Bros.**	Lumber, Wholesale and Retail	
Waubaushene, Ont.	Waubaushene	**Georgian Bay Consolid. Lumber Co.** Hd. office arcade 24 King st. w., Toronto	Pine only.	Waubaushene mill, stm., 200m; Pt. Severn mill, water, 120m
Calabogie, Ont.	Calabogie	**Carswell, Thistle & McKay**	Lumber, Wholesale and Retail	
Callander, Ont.	Callander, G.T.R.	**John B. Smith & Sons** Head Office, Strachan Ave., Toronto	White and Red Pine Lumber, Bill Stuff, Lath and Shingles	Steam, 2 Circular, 80m
Collins Inlet, Ont.	Collins Inlet	**Collins Inlet Lumber Co.**	Lumber, Pine, Oak, Ash, Birch, Whol. and Ret.	
Glammis, Ont.	Pinkerton	**McIntyre, N. & A.**	Saw, Shingle and Lath Mill, Timber Lands, Hemlock, Pine, Lumber, Hardwoods	Steam, Cir., Saw 14m, Sh. 20m
Hamilton, Ont.	Hamilton	**BRADLEY, MORRIS & REID CO.**	Lum., Tim., Pine, Hem., Hwds., Whol. and Ret.	
Huntsville, Ont.	Huntsville	**Heath, Tait and Turnbull**	Sawmill, Pine, Spruce, Hemlock, Hardwoods	Steam, Circular, 25m
Hamilton, Ont.	Huntsville and Katrine	**Thomson, Robert & Co.**	Sawmill, Pine, Spruce, Hardwoods	Steam, Circular, 4m
Keewatin, Ont.	Keewatin	**Dick, Banning & Co.**	Sawmill, Pine, Hardwoods, Wholesale	Steam, Circular
Keewatin, Ont.	Keewatin	**Keewatin Lumber & Mfg. Co.**	Saw, Lath, Sh. and Pl. Mill, Moving Posts, Pine	Water, Band and Circular, 100m
Lakefield, Ont.	Lakefield	**Lakefield Lumber Mfg. Co.**	Lumber, Wholesale and Retail	
Little Current, Ont.	Sudbury	**Howry, J. W. & Sons.**	Lumber, Wholesale and Retail	
London, Ont.	London	**Gordon, James**	Exp. and dlr. in Am. Hwds, made to specification	
Longford Mills, Ont.	Longford	**Longford Lumber Co.**	Saw and Plan. Mill, Tim. Lands and Logs, Pine	Steam, Band and Circular, 100m
Norman, Ont.	Norman	**Minnesota & Ontario Lumber Co.**	Lumber, Wholesale and Retail	
Louise, Ont.	Elmwood, G.T.R.	**S. B. Wilson & Son**	Hardwoods, Shingles, Lath, Handles.	Steam, Circular, 20m.
Toronto, Ont.	Warren, C.P.R	**The Imperial Lumber Co., Limited.**	Pine	80 M. per day, Stm., 2 Cir. Saws
Toronto, Ont.	Cache Bay, Ont.	**Davidson, Hay & Co.**	W. Pine, Lath, Shingles, Dim. Timber, Car Sills	Stm, 2 Band, Cir. & Gang, 140m
Toronto, Ont., Mill: Stony Lake	Lakefield	**S. J. Wilson & Co.**	Pine and Hardwood, Wholesale	Steam, Circular, 15m.
Toronto, Ont.	Toronto	**F. N. Tennant**	Lumber, Wholesale	
Toronto, Ont.	Toronto	**Donogh & Oliver**	Lumber, Wholesale	Com.
Toronto, Ont.	Toronto	**Victoria Harbor Lumber Co.**	3 Saw, Shingle and Lath Mills, White Pine, Whol.	Stm., Cir., Gang and Band, 140m
Toronto, Ont.	Toronto	**W. N. McEachren & Co**	Lumber, Wholesale	Com.
Toronto, Ont.	Toronto	**James Tennant & Co.**	Lumber, Lath, Shingles, etc., Wholesale	Com.
Toronto	Toronto	**DeLaplante & Bowden**	Pine and Hardwood Lumber, Whol. and Retail.	
Toronto, Ont.	Toronto	**James McBain Reid.**	Ry. and Ship Timber, any required dimensions	
Wiarton, Ont.	Wiarton	**Miller, B. B.**	3 Sawmills, Lumber, Barrel Heads	Stm., Wr., Cir., Port. & Sta., 10m
Montreal, Que.	Montreal	**Dufresne, O. Jr. & Frere**	Sawmill, Pine, Spruce, Hemlock, Hdwds., Whol.	Steam, Circular and Band, 50m
Montreal, Que.	Montreal	**SHEARER & BROWN**	4 Sawmills, Oak, Ash, Elm, Pine, Hem., Dim.	2 Stm., 2 Wat., Band, Cir., 40m
Moodyville, B.C.	New Westminster	**MOODYVILLE SAWMILL CO.**	Sawmills, P. Fin, Spruce, Cedar, Hardwoods	Steam, Circular, 20m
New Westminster, B.C.	New Westminster	**Brunette Sawmill Co.**	Saw and Planing Mills, Sash, Doors and Blinds. Fir, Cedar, Spruce, Hardwoods	Steam, Gang and Circular
Canterbury, N.B.	Canterbury Stn.	**James Morrison & Son**	Sawmill. Pine, Hardwoods	Steam, Circular, 38m
Bridgewater, N.S.	Bridgewater	**DAVIDSON, E. D. & SONS**	5 Saw, Shgle. and Lath Mills, Pine, Spr., Hwds.	Water, Circular and Gang, 200m
South River, Ont.	South River, G.T.R.	**South River Lumber Co., Ltd.**	Pine, Spruce, Birch, Hemlock, Shingles.	Stm., Cir., 40m, Shingles, 35m, Lath, 15m

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The Montreal Car Wheel Co.

.... MANUFACTURERS OF ....

Charcoal Iron Chilled
RAILROAD WHEELS

OFFICES:
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We make a specialty of Wheels suitable for the requirements of Lumbermen and Street Car Service, and can supply them Bored, Finished and Balanced.

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SUPPLIED
SPECIALLY
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WE MAKE A ... SPECIALTY OF LONG BILL STUFF IN ROCK ELM, PINE, CEDAR AND HEMLOCK

Quotations furnished on application

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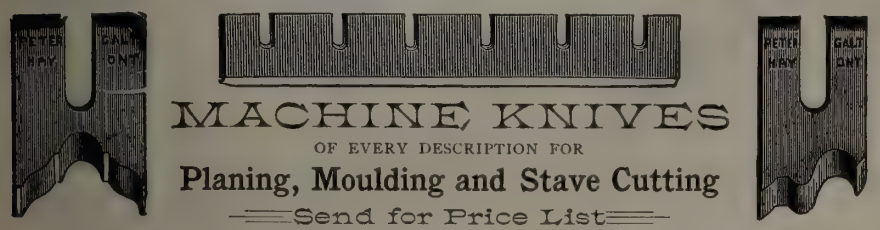

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HARD-MOUTHED HORSES

AND PULLERS CONTROLLED WITH ABSOLUTE EASE.

RUNAWAYS IMPOSSIBLE.

This statement is now repeated by thousands who have purchased

BRITT'S AUTOMATIC SAFETY BIT.

SAFETY GUARANTEED

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This Bit, by an automatic device, closes the horse's nostrils.

HE CANNOT BREATHE, AND MUST STOP.

SAFETY FROM RUNAWAYS ABSOLUTELY GUARANTEED WITH THIS BIT

Any horse is liable to run, and should be driven with it. By its use ladies and children drive horses men could not hold with the old style bits.

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(LATELY WITH THE RATHBUN CO.)

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Every Lumberman wants it 35 cents buys it

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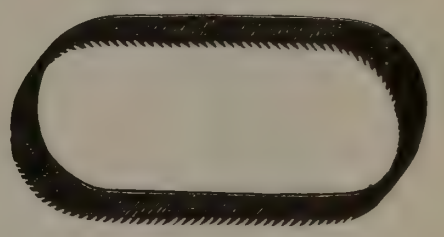
SAVES TIME SAVES MISTAKES SAVES MONEY

BRIMFUL OF EVERY-DAY, PRACTICAL INFORMATION

Address: THE CANADA LUMBERMAN, Toronto

WHY BAND SAWS BREAK

SIXTEEN REASONS, AND HOW TO AVOID THEM



Being instructions to filers on the care of large band saw blades used in the manufacture of lumber.

A book filled with valuable information on the care of band saws. Giving the reasons for breaking; analyzing each reason; giving instructions to dispense with the causes as laid down in each reason; and full details on filing and brazing. The proper styles of hammers to use are illustrated and described, and views of blades showing the blows of the different styles of hammers form an important part of the illustrations. Improper and unequal tension are then treated, and the manner of properly setting irregular teeth is described. In connection with the treatise is a history of the invention, manufacture and use of the saw from its origin to the present time. The work in whole makes an accumulation of information such as has never before been published.

The book is printed on fine paper, good clear type, and is handsomely and substantially bound in cloth. It will be sent to any address on receipt of the price, **ONE DOLLAR.**

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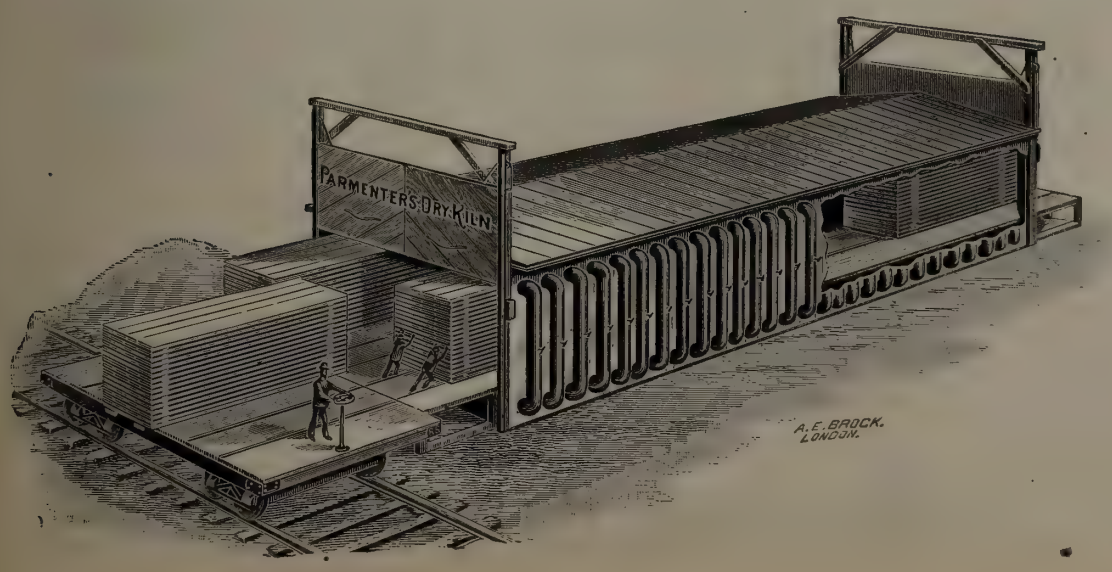
Montreal & Toronto.

: : For SAW MILL WORK our Belting is specially prepared to resist moisture. : :



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FOR DRYING LUMBER, SHINGLES, STAVES,

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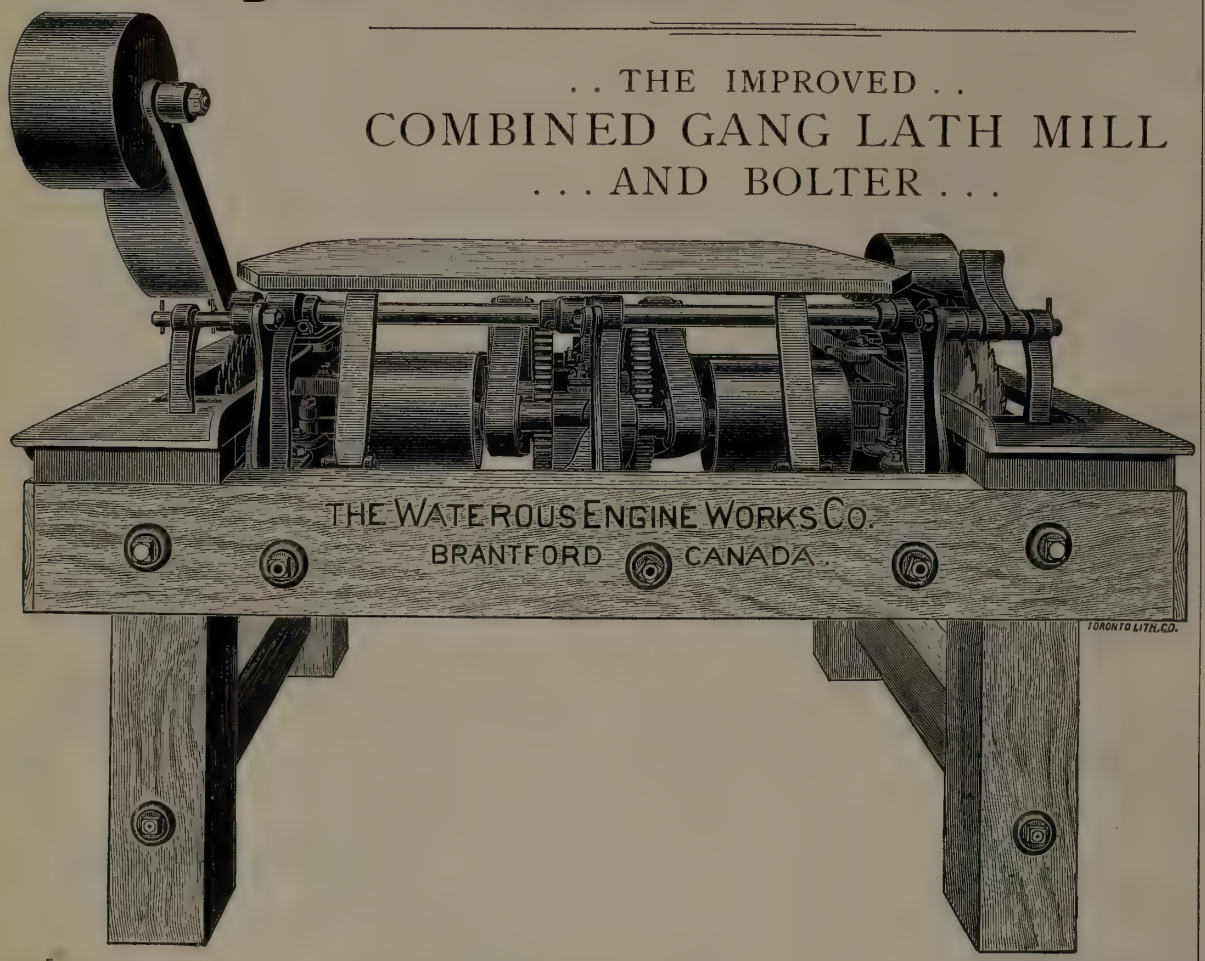
much more profitable when made into Lath than when dumped into the Burner...

..THE IMPROVED..
COMBINED GANG LATH MILL
...AND BOLTER...



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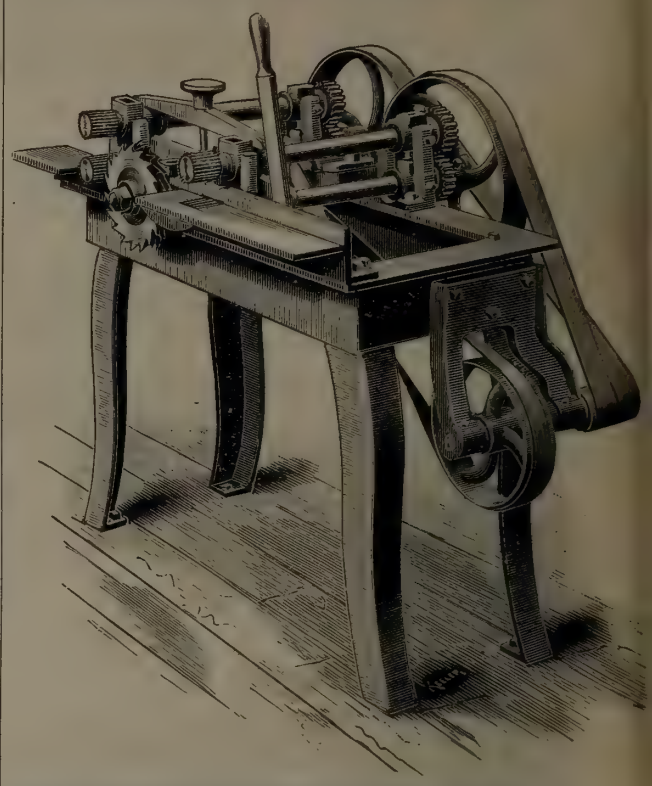

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Change need not delay your mill more than one day.

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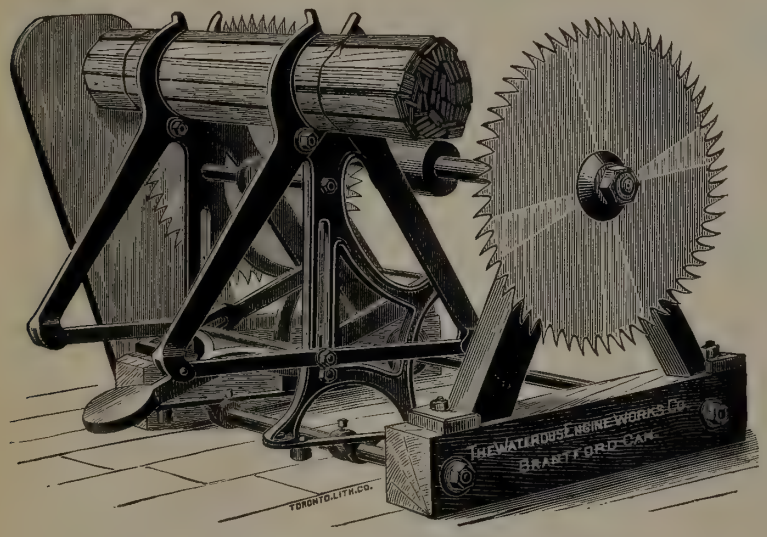

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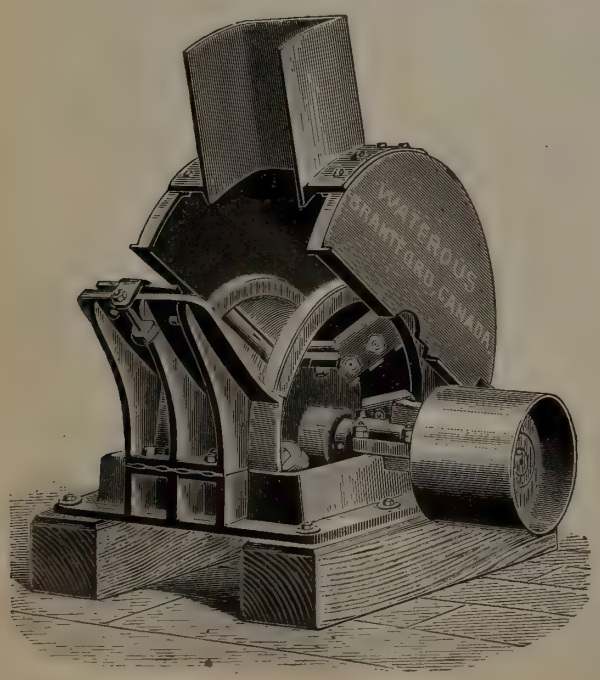
Tidy Bundles bring the .. Best Price ..

With this Machine they are an absolute certainty.....



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Some of our customers burn the chips the grinder makes and sell the sawdust. Some mix the chips with band sawdust.

THEN IT BURNS.

This "HOG" chews up shingle sawdust and splints.

For Refuse Carriers, Lumber and Lumber Transfers, Slashers and Trimmers, use

EWART LINK BELTING

We carry all sizes in stock—over ten tons weight.

THE ORIGINAL GANDY **Is guaranteed best MAIN DRIVE BELT.**

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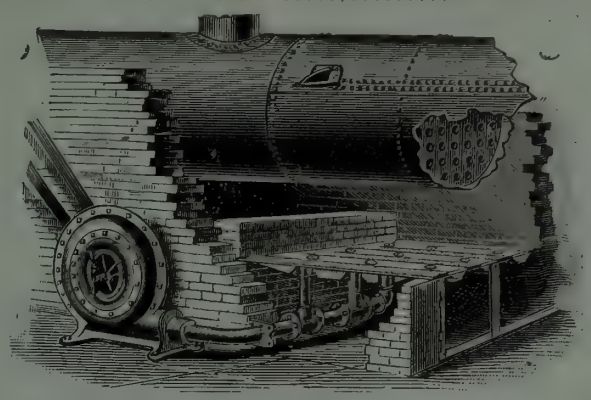
Do you LACK STEAM?



We can HELP YOU.

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AARON GORDON, Staves and Hoops, Dresden, Ont.: "I do not consider a saw mill complete without Blast Grates."

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STEINHOFF & GORDON, Dealers in all Kinds of Cooperage Stock, Wallaceburg, Ont.: "We are greatly pleased with your grates. We can make all the steam we require no matter how wet our fuel is. For burning sawdust they are unequalled."

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THOS. C. DAWSON, Saw Mill, Renfrew, Ont.: "The Grates are giving good satisfaction. I am well pleased with them and everyone who sees them working thinks they are just the thing."

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British Columbia Red - Cedar - Shingles

All kinds of Dimensions and Fancy Butts made to order. We will guarantee quality satisfactory.

NEW WESTMINSTER, B. C.

BRITISH COLUMBIA RED : CEDAR : SHINGLES

I BEG to advise our numerous Customers and the Trade generally that we have a large reserve Stock of . . . . .

H. H. SPICER & CO. EXTRA BRAND

of these Shingles in Vancouver, ready to ship (in connection with their cut of three hundred thousand daily) into Ontario during the months shingles are most required. As I have a large number of cars continually on the road coming to North Bay, I am in a position to fill orders on short notice when necessary. . . . . .

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THE ONTARIO MUTUAL LIFE

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One 20-year Survivorship Distribution Policy embraces all the newest features, and is the best form of Protection and Investment money can buy. It has no equal. Guaranteed values, attractive options and liberal conditions.

A WISE AND GENEROUS PLAN.

Our Annuity Endowment Policy ensures a certain annual income to yourself during 20 years after maturity of the Policy or to your family at earlier death; and the Annuity Life Policy guarantee a sure income to your family during 20 years after your death; first payment immediate. The rates are lower than on ordinary plans.

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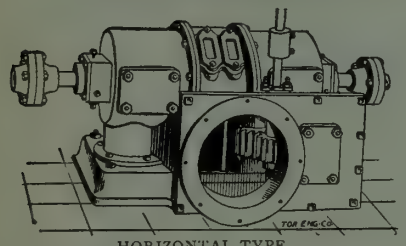

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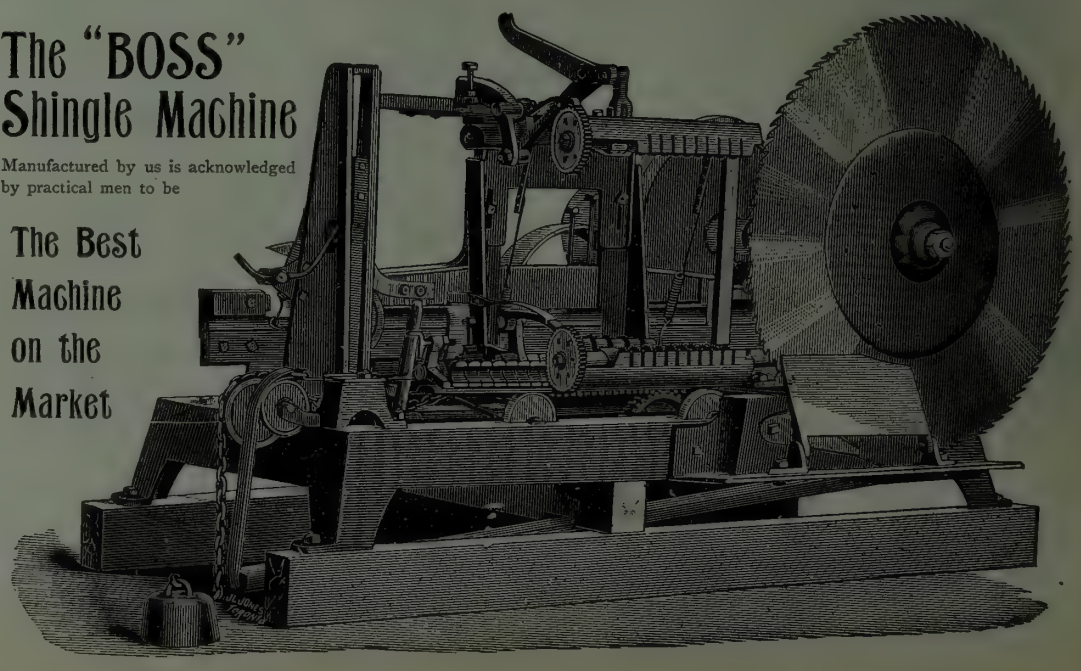

THE CANADA LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XV. NUMBER 7. | TORONTO, ONT., JULY, 1894 | TERMS, 1.00 PER YEAR SINGLE COPIES, 10 CENTS

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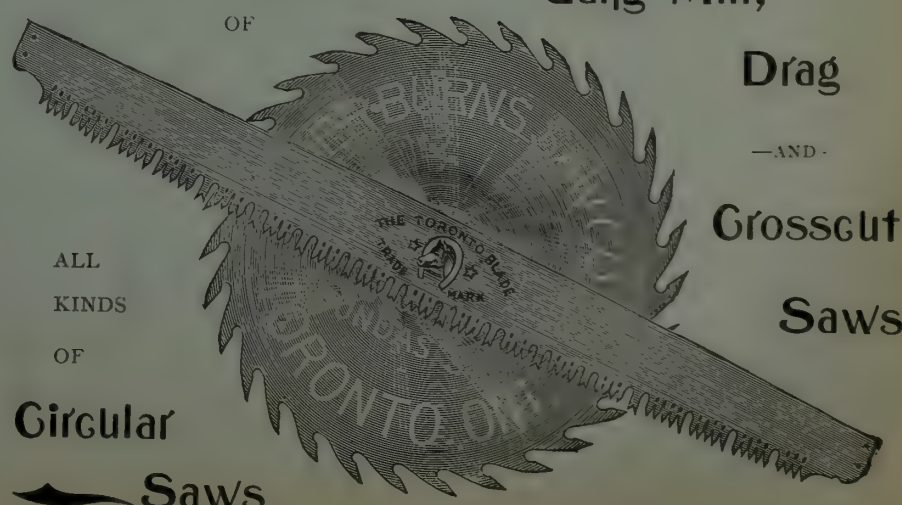

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THE CANADA LUMBERMAN

VOLUME XV.
NUMBER 7

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BY THE WAY.

IT was quite fitting, that the Royal Society, which met in session in Ottawa, a few weeks ago, should invite Prof. B. F. Fernow, the talented chief of the Division of Forestry in the United States department of Agriculture, to deliver an address before that body. Nowhere in his own country, nor in Canada, could he have found more appropriate soil for the delivering of his paper, which was entitled "The Battle of the Forest." A pleasing reference was made by Prof. Fernow in opening his address to the work of Mr. Wm. Little, of Montreal, and Prof. Wm. Saunders, of Ottawa, who, he said, had furnished the momentum to the American Forestry Association. These well-known Canadian students of forestry protection had by their enthusiasm stirred up their neighbors to practical activity. Prof. Fernow spoke in very plain terms of the rapidity with which the forests of North America were being cleared out and even now, he said, over the whole stretch of territory from Ottawa to Washington, not a forest was to be seen. This ought to be a matter of grave concern, when we consider how singularly placed North America had been with forests. Nowhere else in the world were nearly so many species of woods to be found. In all 425 species of woods were known to grow on the continent and yet only 40 or 50 of these have become known to the lumberman. Prof. Fernow referred to the attempt that was being made to strengthen the forests in France and predicted Canada and the United States would yet be put to the same emergencies, if matters were not remedied within 25 years. France had expended forty billion of dollars in this direction and expected to spend four times this amount, for the same foolishness that was now going on on this continent. In Canada, he said, there was three times as much timber as in the Republic.

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One of the great drawbacks in formulating into practical shape suggestions in the line of forest preservation is the little interest that the people as a whole take in the subject. It is not, as we use the term politically, a live question. Those who study the matter, either from a national or scientific standpoint, realize what it must mean to any country that neglects the care of its forests for any great length of time. A glance at the position of France, Germany and India to-day is evidence enough in this direction; the people do not trouble themselves about the matter. Prof. Macoun, of the Canadian Geological Survey, has well said that the government had to be backed up by the people before it would do anything in the way of forest preservation from Winnipeg to Ottawa, a distance of 1400 miles. He gave it as his opinion that throughout this stretch of forest much shameful destruction had taken place, whilst bush fires had destroyed even the British Columbia forest to a great extent. In some cases these forests had been burnt even up to the mountain sides.

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The anxiety to lumbermen by forest fires has been less of late years than formerly, and yet no season goes by without serious loss being suffered from this one cause. News has reached us within the past month that Michigan has experienced some concern on this account and it is also stated that forest fires are reaching along the Northern Pacific in the West Superior district. We hear of fires in other points, but so far as information is in our hands nothing of the kind has occurred in Canada. It is well, however, even on very small suggestion, that attention should be drawn frequently to the necessity of every care being exercised to prevent forest fires and that our governments should be most vigilant in seeing that very complete protection is afforded the forests in their respective jurisdictions. A month ago Mr. W. C. Edwards, M. P., one of the largest lumbermen in the Dominion, stated in the House of Commons that he believed, after a wide experience, that 20 times as much timber had burned as was cut. Prof. Fernow, to whose address we make reference elsewhere, emphasizes in the strongest language the same matter. In truth the degree of carelessness exhibited towards our forest assets is so shameful as to be hardly pardonable. One who has recently been over the Rainy River section tells us that the destruction there of valuable timber by fire has been on a very large scale. Explorers will roam about and build fires for cooking their meals. They may not put them out when leaving and the result is forest fires destroying to our province thousands of dollars of valuable property.

A CANADIAN BANKER ON LUMBER.

MR. B. E. Walker, general manager of the Canadian Bank of Commerce, in his address at the annual meeting of this bank a week ago said of lumber: For the year ending June 30th, 1893, the value of our exports of woods in all conditions, manufactured and unmanufactured, was about $29,000,000, against $25,000,000 five years ago.

What the year just closing will show we cannot say, but one of the features which showed conclusively in what strong hands the business is generally held, was the promptitude with which the United States firms, who had contracted to take our lumber, carried out their obligations, notwithstanding the financial storm. Had it not been for this our lumbermen would hardly have known what course to pursue during the past winter. As it was, they doubtless intended, as a whole, to take out about the usual quantity, but the early mild weather broke up the winter roads, and as a consequence, some hundreds of millions of feet are left in the woods. In the Ottawa district most of the logs were got out, and despite some trouble with low water will in the main reach the mills promptly. The logs held back are mainly in the Georgian Bay and North Shore districts.

In the Ottawa district the cut of logs and the logs carried over will make the supply about the same as last year, a little over six million pieces, but the quantity of timber made is trifling.

The nature of the market will depend much on the United States tariff. The entire cut of deals has been contracted for and is being actively shipped to Great Britain, aided by low freights. The business with Great Britain in thin lumber is steadily growing, and that part of the trade is very satisfactory. On the other hand, part of the lumber paid for by United States buyers is not yet shipped, and although many good contracts for this season's sawing have been made, the actual shipments are smaller than at any time recently. While this is due partly to the very bad condition of business in the United States, the settlement of the tariff will doubtless make a market for our lumber, although perhaps with a slight concession in price from last year. Stocks in the United States are said not to be large and our supply will no doubt be required.

LET NOTHING BE WASTED.

THE age in which we live is characterized by its utilization of what has been known as waste material. Debris and refuse are being reclaimed from their supposed worthlessness, while wealth and comfort, says the Age of Steel, are now deduced from what has hitherto been without commercial value or public service. With epoch-making discoveries we are tolerably familiar, their magnitude giving them dramatic interest, and their coincidence with our own time table of life adding not a little to our conceit and boasting. While our progress, however, is a fact, and our bigheadedness a misfortune, the smaller economies of the age are of the unobserved, yet the veritable potentials of our prosperity. Everything has specific value, be it great or small, the difference being in gradation but not in essentials. The pebble is but the microcosm of the rock, and the molehill of the mountain, the difference being one of magnitude but not of substance. In the matter of our industrial waste or refuse this law has generally been neglected till science exposed the folly of waste and the stress of industrial competition compelled its utilization. Necessity has always been the mother of economies, and in this instance when the margins of profits were attenuating into consumptive decimals, applied science came to the rescue and gave commercial value to what had hitherto been a nuisance. Examples are numerous, and by way of emphasis we collate a few of the most conspicuous.

For many years the slag from iron furnaces was but useless refuse. It was dumped on waste land, in convenient ravines, and in unsightly masses wherever possible. It is now manufactured into asbestos, cement, glassware, pottery, fire-brick, fertilizers, and into the paint which now embellishes the Pullman palace car. Sawdust, so long the nuisance of saw mills, once dumped into swamps and pits, can now be made into sheeting for buildings, and when mixed with paper pulp supplies an excellent article. It is also serviceable in making aniline dyes, wood alcohol and certain acids. Cotton seed, once left to rot at the cotton gin and used for fuel, now furnishes the oil, lint, food for cattle and fertilizers; the product of the oil industry amounting to $16,000,000 per annum, with the sale of lint and hulls realizing over $1,500,000 each in the same period. The refuse of silk factories or warehouses, once a nauseating and uncleanly compound of leaves, imperfect cocoons and dead worms is now utilized, being sorted by machinery, and the short threads incorporated in valuable commercial fabrics. Coal tar was once but an olfactory nuisance, and sometimes got rid of by burning it under gas retorts, now aniline dyes are obtained from the benzole it contains. Other by-products of coal, such as sulphate of ammonia, etc., are now sources of industry and wealth. The refuse of woolen mills, once a sanitary sinner in the pollution of creeks and rivers has come in the range of chemical science, while in many large chemical works the saving of gases, since a menace to public health, have by condensation been transferred into valuable commercial articles.

Other examples might be quoted, but the catalogue as so far given is ample evidence of the fact that these modern economies of waste play no insignificant part in the general make-up of our industrial products and prosperity.

THEORY AND NATURE.

THERE are, says Power, a good many points where theory and nature have a falling out. The steam utilizes but a small proportion of the thermal value of the fuel it consumes, and its improvement appears to be open only in the direction of higher initial and lower rejection temperatures. The maximum efficiencies are obtained with fiercely hot furnaces, low uptake temperature, high pressures, and high grades of vacuum, giving the greatest available range in both boiler and engine. In the animal organism combustion is carried on at a moderate rate and low temperature, and there is apparently little available difference of temperature in the body, yet as a machine the mule is more efficient than the engine, and will do more work per pound of fuel consumed. The man who finds out the principle upon which this is done, and teaches us to apply it, will be a greater scientist than Faraday, a greater inventor than Watt.

TALKS WITH WOOD-WORKERS.

SOME fine results are said to be obtained in the ornamental working of wood by the use of an ingraining machine brought forward by a Pennsylvania inventor. The mechanism is described as a hollow cylinder, ten and one-half feet in circumference, to which the grain of a piece of oak of the width of the cylinder has been transferred, this grain being covered with a soft cement which sinks into the depressions, and in these about 200,000 bits of metal, like type, are set, above this being placed a small, smooth steel cylinder, adjustible to different heights; between the two cylinders both revolving, a piece of birch, poplar, bass, spruce or maple may be passed, which comes out with the grain of the oak transferred to it, after which it has passed between two other steel cylinders, one revolving in a trough containing a liquid consisting of oil, coloring matter, and another ingredient—not yet disclosed—used as a "filter." After being treated in this manner the wood is subjected to processes of polishing and varnishing, and when finished presents the appearance of choice quartered oak.

* * * *

Several references have been made in these monthly talks to various features of moulding machines. A writer in the Tradesman furnishes the following contribution on the subject, which will be appreciated, I think, by wood-workers: Manufacturers of moulding machines often make a great mistake in recommending too high speed for their machines and by this means defeat their own honest intentions. While it is safe to assume that the average modern moulder is sufficiently strong so far as weight and strength are concerned to stand any reasonable amount of speed under certain conditions, still the conditions under which the moulding machine is subjected are different from the ordinary planing machine. With the ordinary planer the knives are all of the same width and project an equal distance beyond the point of the cylinder, so that there is no good reason why they may not be kept at all times in good running balance, hence the cylinders of the planer may be run to 4,000 revolutions per minute or even more, with but little vibration. Such is not the case with the moulding machine. There is no point to speak of upon the cutting edge of a moulding knife, where the distance from the point of the cutter head to the edge of the knife is the same, consequently if two knives are used, which is generally the case with nearly all standard mouldings, the utmost care should be manifested in not only the perfect corresponding shape upon the cutting edge, but also in the exact length of the bevel and thickness; even then, when both may show exactly the same weight upon the balancing scale, a very slight imperfection in the bevel when run at high speed will cause a vibration that will plainly manifest itself upon the surface of the moulding. For this reason it is not good practice to speed a moulding machine as fast in proportion as a planer, no matter how heavy and strong it may be. In this respect the manufacturers do not seem to realize the difficulties which even the best and most experienced moulding machine operators have to contend with, especially where sectional cutters are used, which is becoming a common practice in nearly all mills, and where a number of different shapes are used to form the moulding. The difficulty in combining them so as to form a perfect running balance is greater than where two perfect shapes are used.

* * * *

The demand for maple flooring has become something enormous (that is, it was when there was a demand for anything, and probably will be again). A few years ago since planing mills turned it out to order only. Now immense factories, so far at least as our neighbors to the south are concerned, turn out little else. Special machines are used to produce it, among them those that bore it for the nails and those that tongue and groove the ends. In the words of a lumber paper: "Maple flooring has come to be regarded as the thing indispensible in most public buildings, and is largely used in private dwellings. Such an extent has the demand reached that the large dealers are obliged to make contracts for millions of feet far in advance of requirment, the same as is done with pine or any other wood of extensive sale and consumption in the building trades and manufacturing."

JAS.

SHAFTING.*

I NEED offer no apology for bringing a subject of this kind before an Association of Stationary Engineers, for wherever you find a stationary engine you will also find more or less shafting; and if any other excuse were required it will be found in the fact that questions on shafting are quite frequently found in the Question Box at our meetings.

It may be, however, that there are some present who think that as engineers they are not expected to have anything to do with shafting. They may argue something like this: "Our employers expect too much from us; they look for us to wheel in coal, fire two or three boilers, wheel out the ashes, attend our engines and a score of other jobs, as well as find tools for the whole establishment; and it would be just as well not to know anything about shafting, or we would be expected to attend to that too." In answer to such I would say, that it is not often that a man loses his situation by being too well posted, and in this world of changes one never knows when he may be called on to make use of the knowledge he possesses.

It is of the greatest importance that all shafting should be properly proportioned and correctly put up, as it not uncommonly happens that great loss of power and much annoyance results from carelessness or ignorance, and a plant that is otherwise of the best, rendered unsatisfactory.

The first question the engineer has to decide is what size or strength of shaft he requires to do a certain amount of work, and in doing so he must bear in mind that a small increase in diameter will give a large increase in strength. It is not an uncommon thing to hear a man say that such a size ought to do the work, but to be on the safe side will put in a size larger, not knowing that he is adding a much larger factor of safety than he had any idea of. The strength of a shaft varies as the cube of its diameter varies. Let us assume that 1" shaft will safely drive at a given speed four horse-power; a 2" shaft will drive as much more as the cube of its diameter in excess of the cube 1. The cube of 1" is $1\times1\times1=1$. The cube 2" is $2\times2\times2=8$. The cube of 3 is $3\times3\times3=27$ and the cube of 4 is $4\times4\times4=64$.

Now we assume that the 1" shaft drives 4 H. P., the 2" shaft drives as much more as the cube of its diameter is in excess of the cube 1; the cube of 2 is 8, therefore its power compared with the 1" shaft driving 4 H. P., is $2\times2\times2=8\times4=32$ H. P., and comparing the 3" shaft with the 1", the cube of 3" is 27 and the power of the 1" is 4 H.P.—$4\times27=108$ H.P. It must be borne in mind that these figures are comparative and are given to show the rapid increase of strength in a small increase of size, for if we were to use a 3" shaft instead of a 2" we would have 108 H. P. instead of 32 H. P.

Another fact we must not lose sight of is, that the power a shaft will drive is in direct proportion to its speed. If a shaft drives 4 H. P. at 100 revolutions per minute, at 200 revolutions it will drive 8, and at 300 it will drive 12 H. P. The higher the speed of the shaft the smaller the diameter of the shaft to drive a given H. P. Then there is another important consideration in selecting a proper size for a shaft—as they are inclined to bend and also to twist we must take into account the weight of the pulleys and the distance they are from the bearings and whether the strain of the belts is down or the reverse. The bending of a shaft as well as the torsion contributes towards its liability to break, but the bending is the most likely to cause it. The bending also causes a considerable loss in power as well as the liability of belts running to one side of the pulleys. It follows therefore a shaft loaded with pulleys must have a greater number of bearings and the pulleys placed as near the bearings as possible.

To put up a larger line of shafting than is necessary, is objectionable for two reasons; 1st it costs more to put it up; and 2nd it costs more to run it after it is up. The extra weight of the long shaft as well as the larger circumference which has to move through a greater distance will add materially to the friction. There is one other fact I would notice before leaving this part of the subject, and that is, that the second and third lines may be smaller than the main driver. The reason of this obvious, for the first line has not only its own machinery to drive but also the second and third lines with the machinery driven from them.

To make this clear, I have prepared a diagram which I believe will make it plain to everyone. We will call it a mill or factory, and we assume that the machinery in it requires 100 H. P. to drive. The machinery on the first floor requires 45 H. P., that on the second, 30 H. P., and on the third, 25 H. P. Now the shaft A and B are practically one shaft, being coupled together by the gear; so are C and D, and E and F; but while practically one shaft, A has to transmit 100 H. P., while B only transmits 45 H. P., therefore B may be smaller than A. B having absorbed 45 H. P., it follows that C has only to transmit 55 H. P., therefore C may be smaller than A. The machinery on the first and second floors has now absorbed 75 H. P., leaving only 25 H. P. for the third floor, therefore the shaft E and F may be smaller than C.

The same argument will hold good with the shafts B, D, and F. If the machinery which they drive was equally distributed from end to end, then the ends furthest from the motive power might be smaller because they would have less power to transmit, but in practice the disadvantage would be greater than any gain that would be derived from so doing.

I will now give one or two rules to determine the size required to drive a given H. P.

* Paper read before Toronto No. 1, C. A. S. E. by Geo. Gilchrist.

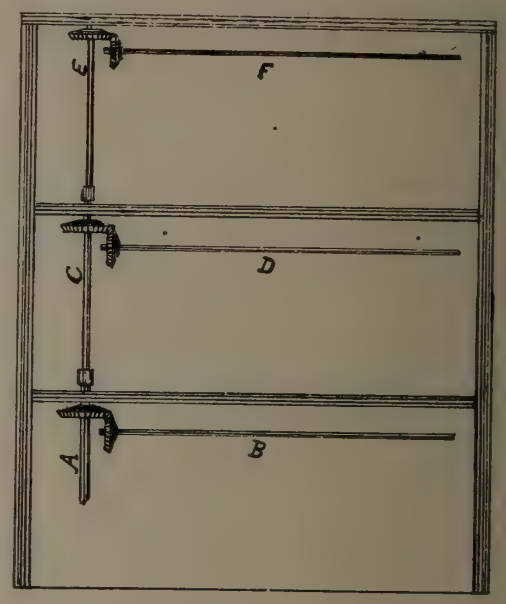
To find the power a shaft will transmit, cube the diameter and multiply by the number of revolutions per minute, and by two, if it is the first line from the engine, and by three if it is the second, and divide by 100.

The crank shaft being the first or prime mover, what power will a 2" shaft transmit as a second mover running at 300 revolutions per minute? $2\times2\times2=8\times300=2400\times2=4.800\div100=48$ H. P. If steel add 30 per cent. If this shaft was to be used as a second line then it would be: $\times2\times2=8\times300=2400\times3=7.200\div100=72$ H. P. Where the power required is known and number of revolutions is given and the size of shaft is wanted, proceed as follows: What diameter of shaft is required as a prime mover to transmit 75 H. P. at 175 revolutions? $75\times100=7.500\div175=42\ 86\div2=21.43$. The cube root of 21.43 is 2.75, (2.7776) the diameter required.

The same problem with the shaft used as a second line, would be: $75\times100=7\ 500\div175=42\ 86\div3=14\ 28$. The cube root of 14 28 is 2.42 (2.4261) the diameter required.

Having got the size we want, the next thing is to get it put up, and it is right here where many failures and mistakes are made. There is perhaps no part of the plan which should be more carefully looked after than the proper lining of the shafting because it is a never-ending source of annoyance if out of line. The rules governing the putting up of shafting are few and very simple:

1st, Be sure that your shaft is exactly at right angles with the engine pulley; 2nd, see that it is dead level; and 3rd, be sure that it is as straight as a line can make it. The same rules should



be observed with intermediate and counter-shafts, they must be parallel with main shaft. All shafts carrying pulleys must be level; a shaft driven with gear from a horizontal shaft must be at right angles with it but may be run at any angle from the horizontal, and the same if driven from a perpendicular—in this case the driven shaft must be level, but may be run in any direction. If the building is likely to settle the adjustable hanger should be used, but where there is no danger of settling, stationary bearings should be used, especially for dynamos and all heavy machinery which ought to be a rigid as possible.

I do not think it advisable to give any rule for the distance at which bearings should be set, as circumstances vary in almost every case, but would state that for a a 3" shaft the distance should never be more than 15 feet, and for a 2" shaft not more than 11 or 12 feet. These distances in both cases are for shafts without pulleys.

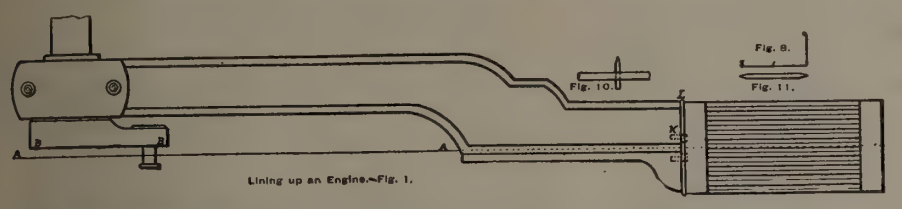
We have stated that second and third lines of shafting may be smaller than the first, but this applies only where they run at the same or at higher speed, and does not apply where the speed is reduced for the purpose of driving heavy and slow speed machinery or lifting heavy weights. Let us try to make it plain. Let us assume we have a weight of 33,000 lbs. to lift and a one H. P. engine to lift it with; we can raise the weight one foot high in one minute, but if our weight is ten times as heavy, or 330,000 lbs., it is evident that to lift this with the same engine it can only be done by a sacrifice of time, or in other words a reduction of speed (bear in mind that to lift a weight greater than the motive power can only be done at a sacrifice of time). Now what are we going to do? Our weight is 330,000 lbs., and our engine is only 1-10th the power required to lift it. It is evident we must construct a system of reducing gear. We will assume that we require three reductions—the first reduction will be from the engine to the first shaft, and so on until we reach the third or last shaft which supports the weight. Now the nearer we get to the weight the stronger must the shafting be, and the same with the gear, because as each shaft is reduced in speed it is capable of transmitting less power, and therefore must be increased in size.

Precisely the same principle is clearly shown in the use of the lever—a man can lift a heavy weight with a lever, but it is always at a sacrifice of time or speed. It is also well understood that the end of the lever on which the man rests may be very much smaller than the end which rests on the fulcrum, because on it rests the whole weight.

LINING UP AN ENGINE.

By W. E. Crane.

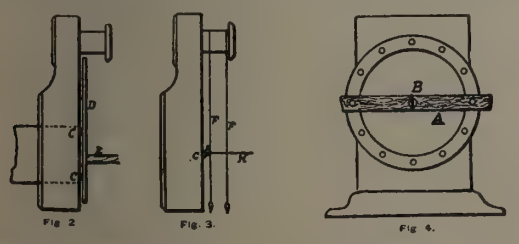
ENGINEERS are often bothered by the pounding of their engines, and as pounding can be heard by everyone in the neighborhood, it is very annoying. There are many things that cause pounding, so that in some engines the cure of it is quite a complex subject. Being out of line is the general cause. Either the shaft is not in line with the cylinder, or the crank pin is not put in straight, or something else of the kind is the matter. A high speed engine perfectly in line will be very



Lining up an Engine.—Fig. 1.

apt to pound with a light load, unless there is considerable depression, owing to the heaviest thrust coming on the end instead of the commencement of the stroke. The thrust is caused by the momentum of the moving parts. To ascertain if an engine is in line, the back cylinder head should be taken off, the piston, piston rod, and cross-head should be taken out of the way, and a line A A, Fig. 1, should be put through the cylinder and extended beyond the crank. To hold this line in the cylinder we take a strip of board, A, Fig. 4, and bore a couple of holes to fit over two of the studs at the end of the cylinder, and in the center of the board we bore a larger hole, say 1½ or 1¼ inches in diameter, and attach the cord to a little stick B, that stretches across the hole. The strain on the cord will hold this in position, and it can be readily shifted.

In front of the crank set up an upright, A A, Fig. 5, with a hole in it and a stick B across it. The hole should be in line with the middle of the crank pin. The cord used for this purpose should be strong and small, and should be made of something that will stretch perfectly straight. A silk hair line, such as is used by fishermen for fly fishing, is the best. Some men use annealed wire, but wire gets hard and stiff, and kinks get in it which can never be perfectly straightened, and one of these kinks is very apt to come where you want a perfectly straight line. Wire is not recommended. Be sure that the stuffing box K, Fig. 1, is perfectly clean. Attach one end of the cord to the stick B, Fig. 4, and the other end to the other stick. The cord should then be drawn so tight as to be perfectly straight. It can be tightened by turning the stick B over and over. To center the string cut a stick a trifle over one-half the



diameter of the cylinder in length, and try the cord in the end of the cylinder, cutting off the caliper stick as occasion requires, until the cord is exactly in the center of the cylinder. Then get a shorter stick and try in the stuffing box, moving the end of the cord that is beyond the crank until the cord is centered in the stuffing box. Then go to the back end of the cylinder and try that again, and so on from one to the other until the line is exactly in the center in both ends of the cylinder. There is now a line to work from to bring everything straight with the cylinder.

The first thing is to find out if the guides are in line. Take a stick (Fig. 10) with one side straight. Bore a small hole in it and put in a second stick, as shown in the cut, so that it will be held snugly but will still be loose enough to be easily moved. Set this stick against the edge of the guides at I and J, Fig. 6, and move the small stick up to just touch the line. The end of this stick should be sharpened so as to bring a small surface to the line. If the guides are in line, the stick should just touch the line when tried at both ends. If they are not in line it will touch the line at only one end. If that is the case there is but one remedy, and that is to swing the cylinder around and put in strips of brass at L, Fig. 1, as this is the place that the guides are usually out. This is quite a job and requires some time and considerable patience. It is occasionally necessary to shim the cylinder up on the other side. The line will now have to be set over again until it is once more straight with the cylinder and guides. Fig. 7 is a cross section of the guides through the line XX, Fig. 6. A plump line suspended from point P will tell if the guides are perpendicular. If not, the bed should be swung over, or around, until they are. In case this cannot be done, either the cross-head will have to be changed in the shoes, or the shoes themselves changed so as to run straight in the guides, and at the same time bring the cross-head pin level. Knowing the style of cross-head it would be easy to tell how to do this. It is a very good test for an engineer's judgment.

The next thing to consider is the crank. Cut a small stick that will just fit into the crank, and mark a line across the center. Bring the crank pin up under the line till it touches, and note whether the line crosses the mark on the stick, or how much of it is out; and then turn the crank around and bring the pin up under the line on the other side. Note how much it is out on that side, and if out, whether it is on the same side of the mark as before, or on the opposite. If on the same side, it shows that the center of the pin is not in line with the cylinder, and the shaft must be shoved endwise until the line crosses it at the middle. If the construction of the engine will not allow this with the means at hand, take off from the side of the crank-pin boxes the amount that the line shows that it is out. Then fit pieces of brass on the other side of the crank-pin boxes to make up what has been taken off. If the boxes can be recessed for these pieces, all the better; but if not, they can be fastened in with pins. If the line is on one side of the mark when the crank is on the center, and on the other side when on the other center, it shows that the shaft is not square with the cylinder, in which case the outer end of the shaft should be swung around to bring it straight with the line. If it should happen that the shaft could not be moved at that time, the distance that it must be moved can be calculated, and then it can be done any time afterwards.

Fig. 5.

Suppose that Fig. 8 is a shaft and crank. It is plain that as the distance from the angle to 1, in either direction, is the same, moving one of these points a certain distance will move the other one the same distance; but if we double the distance to one of them, carrying us to 2, then we should move 2 twice the distance that we should 1; so that to find the distance we should move the end of the shaft we must divide the length of the shaft up to the outer pillar block by the length of the crank (not the length of the stroke), and multiply the result by the distance that the line is out from the mark on the pin. For instance, if the mark on the pin is out 1-16, the shaft 2½ feet long, and the crank one foot long, we multiply the 1-16 by 2½,

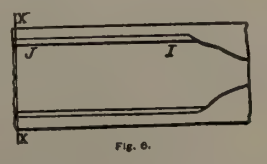


Fig. 6.

which makes 5-32 that the outside pillow must be moved. To find if the shaft is level, place the crank upright and suspend the plumb line down over the end of the pin, and then turn the crank down and note how much it is out. A similar calculation will give the amount the end of the shaft must be raised or lowered. To determine if the crank pin is straight with the shaft would be an easy matter if the face of the crank was flat; but as a general thing, when the shaft is finished it is left uneven, as can be seen by putting on a steel straight edge. Even if the face is flat it is possible that it is not square with the shaft. To determine, then, if the pin and shaft are parallel, take two thin blocks C C, Fig. 2, and a straight edge D, and hold them in position by the stick E placed against any handy support. The blocks C C should be placed against the end of the shaft the same distance from the center. The straight-edge D will then be at right angles to the shaft, and a square placed against the face of it and against the pin will show if the pin is straight one way. To determine if it is straight the other way, place the blocks C C and the straight-edge D in a horizontal position, suspend two plumb lines, F F, over the pin, as shown in Fig. 3, and run the square H along the straight-edge to the lines, when it should touch both lines. Should the pin become loose in the hole, and it be necessary to bore out the hole before putting in another pin, the boring can be set in the same way.

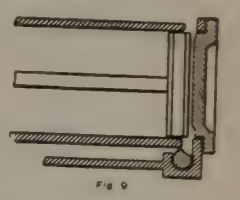


Fig 9

It should be remembered that a crank-pin wears only on one side, and also that, if it has been out of line, one end may be worn more than the other. This can be ascertained by calipering, and if the pin is not straight the difference must be allowed for, according to the circumstances of the case in hand. When the brasses have been babbitted, there will be a small ring on each end of the pin that will not be worn. Pounding is sometimes caused by the piston running over the ports, as shown in Fig. 9. The piston may then be thrown to one side, or raised up from the bottom, even when the steam enters the top. When such is the case, nothing can be done except to make the piston fit the cylinder as well as possible. Fig. 11 is a caliper stick for setting the line, and can be whittled out of any handy piece of pine.

SPLIT PULLEYS.

HAS it ever occurred to you, says J. A. Allen in the Iron Trade Review, that there are some methods coming into vogue that are cheaper in the long run to use than to be without? Among these is the split pulley. It costs money, and big money, too, at times to cut a keyway in a shaft when a new pulley is to be located. Have you ever used a good split pulley? If not, do so. A short time since I fitted out a whole shop with pulleys and shafting, and used nothing but split wooden pulleys. Hold? Well, not at first. Each pulley was tightened as well as we could do the work at the start and then watched. At the first indication of a slip the wrench was put on again and that settled the matter for all time. I had those pulleys driving every conceivable kind of ironworking tool, from a light drill to a heavy hammer, and never had the slightest indication of trouble. Then, when new tools were bought and old ones had to be shifted, ten minutes sufficed to take down the pulley. But when I did that job, I didn't know as much as I do now. I allowed builders to sell me tight and loose pulleys on the counter-shafting, so that for every machine having a four-inch belt I had to buy a nine-inch split pulley. If I had the job to do again I would specify clutches. Of course the clutch would cost more than the extra paid for the double width split, and the additional loose pulley, but not so very much. And then I would save weight on my main line; and room also.

CAUSES OF EXPLOSIONS.

THE causes of explosions may be summed up in one sentence, namely, lack of strength to withstand the pressure. This want of strength may be due to faulty construction, but as a rule it is due to some acquired weakness, unknown simply because unlooked for. Weakness results from unequal heating, which produces unequal expansion, from corrosion, improper setting, scale, low water and want of circulation. It may not always be possible to avoid unequal heating, as for example, in getting up steam many boilers will be hotter in some parts than in others, but scale can be prevented by "boiler compounds," and low water by a little care. In some types of boilers no provision is made for water circulation, and unequal heating is bound to occur. A thorough inspection from time to time will inform the engineer if his boiler is weakened by it, but the best plan is to use some other type. To sum up, the engineer must understand and act upon the motto, "eternal vigilance is the price of safety."—Safety-Valve.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

THE LUMBER SITUATION.

NOTWITHSTANDING the excitement of a general election for Ontario, and the continued sittings of the House of Commons, the question of lumber has been quite to the front in discussions of the month. As our Ottawa correspondent has remarked the very fact that an election is on has given zest to lumber affairs. A letter written by Mr. John Charlton, M. P., to the Senate committee at Washington, suggesting a certain measure of retaliation on Canada regarding United States duties on lumber and manufactures thereof, provoked a stirring discussion in the Commons a week ago. The Wilson tariff bill, as it came finally before the United States Senate, made lumber practically free, with the one condition that a retaliatory duty shall have been levied upon those articles only upon which a Canadian export duty might have been imposed. The Wilson tariff, as will be noted from what we say further on, embraced a large list of free lumber items, and it appears that Mr. Charlton in his communications with Washington suggested: "Provided, that if any export duty is laid by any foreign country upon any of the articles mentioned in paragraphs 672 to 683 inclusive, that all said articles imported from said country shall be subjected to the duties existing, prior to the passing of this act." Had the bill gone through without this amendment it would have been possible for Canada to have imposed an export duty on logs and at the same time obtain free admission to the United States for a large number of forest products. It is for opening up this matter, which was perhaps an oversight on part of the United States Senators, that Mr. Charlton is to-day being so severely criticised both in and out of the House. With a people as sagacious, and shrewd, as our neighbors to the south, it might have been as well to have allowed them to figure out the tariff matter, according to their own notions, without help from Canada.

Lumber is cutting quite a figure in the Ontario campaign, the government timber policy being severely criticised by the opposition. What enters into the discussion, however, is largely politics, and not business; and outside the political leanings of lumbermen, the subject has little, if any, interest to our readers. A point that has frequently been raised before is coming to the front in this discussion, namely, that the provincial government should provide that all logs cut in the province shall be manufactured into lumber here. The government's reply to this question was made in these columns at the time the question was discussed in the House. Their contention is that any such step would lead to a serious shrinkage in the values of timber in Ontario. Mr. Bennett, member in the Commons for Simcoe, has suggested that the Ontario government might increase its stumpage dues from $1.25 per 1,000 feet to $5.25 per 1,000 feet, with a rebate of $4.00 thereon on all logs sawed in Canadian mills, and meet what is asked for in this manner.

With free lumber, as now reported by the United States Senate, and likely to become law, many contentions of politicians, both in the Dominion House and the Provincial Legislature, will be removed. It has been generally accepted by lumbermen, holding different opinions on the question of an export duty, that entire free trade in lumber would meet the case of Canada quite completely. The new tariff places upon the free list the following articles of lumber or lumber manufacture: Firewood, handle bolts, heading bolts, stave bolts and shingle bolts, hop poles, fence posts, railroad ties, ship timber and shingle bolts, not specially provided for in this act; timber, hewn and sawed, and timber used for spars and in building walls, timber, squared or sided, sawed boards, plank deals, and other lumber; pine clap-boards, spruce clap-boards, hubs for wheels, posts, last blocks, heading, and all like blocks or sticks, rough hewn or sawed only; laths, pickets and palings, shingles, staves of wood of all kinds, wood manufactured. The one rider to this proposition is that contained in the paragraph we have quoted above, relative to an export duty, suggested by Mr. Charlton. What will be the effect of this tariff change on Canadian lumber interests? This is the vital question. Under a reduction in duty on lumber to $1.00 a thousand a large increase took place in the export of Canadian lumber to the United States. With lumber entirely free it is reasonable to expect a further increase in our exports to that country. Logs are already going in free, so there is not any incentive to further enlargement in that respect, and this is perhaps not desirable. An important question is this: Will the removal of the $1.00 duty on manufactured lumber prove an influence in causing United States lumbermen to establish mills on this side of the line and manufacture their logs into lumber here. It looks somewhat as if this would be the outcome of the present change. Geo. W. Stevens, of the Cranberry Lumber Co., Duluth, Minn., who was in Washington during the passing of the free lumber bill, and who, by the way, does not believe in free lumber, is of the opinion that the effect of striking down the tariff of $1.00 a thousand on lumber will be to cause Americans who own Canadian timber to establish mills in Canada. He is reported to have said: "I know one Michigan firm which owns 500,000,000 feet in Canada, who are planning to erect mills and saw over there instead of rafting and sawing their logs here." One of the leading operators in Bay City says: "The removal of the duty on dressed lumber will render it impossible to bring Canadian logs over here and manufacture them at a profit. It means that every box establishment will either have to go to Canada or shut up shop, and this will throw hundreds of men in this valley out of work. The blow is a serious one and it will be disastrous." Another firm operating a large planing mill and box factory at the same place is said to have resolved at once to remove their box factory to Canada as soon as the bill becomes law. A little time will, of course, show just what will be the outcome, but it seems quite certain that free lumber will not be a bad thing for Canada; and the fact that after so much discussion, and when other articles were given a go-by, it may be assumed that free lumber, in the opinion at least of the American Congress and Senate, will be a good thing for our neighbors across the line.

EDITORIAL NOTES.

IT is not alone in certain parts of our own country that a depreciation in property is being felt because of the exhaustion of timber near to the place where mills had operated. Figures are given by the Michigan correspondent of a lumber contemporary, showing that in that country a serious shrinkage in values is taking place on this acount, certain property on the rolls footing up only $485,000, or about one-fourth of the assessment of four years ago.

AN answer frequently made, when criticism is levelled at the large export of Canadian logs to the American side, is that much money is expended in labor before the logs are in shape to be rafted and that Americans who are cutting in our woods are paying a higher average wage to shantymen than had hitherto been paid. This is a statement of the case that does not square with the views expressed by Mr. B. H. Turner, of Little Current, on the Eli page, who says that American companies now bring in Poles and Hungarians to work for $12 to $18 a month, where the local standard of wages had formerly stood at $26 a month.

THE present financial troubles of the Nicaragua Canal Company must be a source of regret not alone to the lumbermen of British Columbia, but also to the lumber interests of the United Kingdom. The Timber Trades Journal, of London, Eng., commenting on this matter says, that the only drawback to the use of larger quantities of coast timbers is the long voyage over several months and the consequent heavy freights. Once let the canal in question be constructed and all these obstacles would disappear, and the splendid timber of those regions would reach our market in a few years, at a lower freight cost than is now paid from the pitch pine ports."

THOSE who have had occasion to study commercial conditions in Russia have been made aware of the large figure that the country of the Czar plays in fixing the prices of wheat. More and more development is being made along those lines. But, if information that comes to us through a Mr. Nicholas Nesteroff, who is at present in America at the instance of the Russian Government, to investigate forestry, is correct, his country will, before long, become quite a factor in the world of lumber and saw milling. He is largely interested in the study of band mills, and it is not unlikely that this modern method of milling will be introduced into Russia. It is claimed that Russia has almost no limit to its lumber supplies; the figures given by Mr. Nesteroff are 600,000,000 acres. The government will be the great capitalist in this case and may erect as many as 200 saw mills. No high price is placed on timber in Russia, fir trees selling at what in currency would be equivalent to 12c. and 18c. each.

KIND words, evidently well deserved, are being given to the W. C. T. U., by our lumber contemporaries in the Western States, for the excellent work that this organization has been permitted to do in the lumber camps of Wisconsin, Minnesota and other points. The life of shantymen during the winter now closed has been made much more agreeable, and doubtless profitable, through the amount of attractive and entertaining literature that has been steadily supplied them. The suggestion is made by the Mississipi Valley Lumberman that a great work would be done if some steps could be taken "towards removing the temptation from the boys when they come down from the woods in the spring of the year." All interested in lumber know how much there is in this remark, for it is just at this time that the most serious breaks are made by the "boys." On another occasion we have referred to the excellent work on similar lines, that is done for the Ottawa and Georgian Bay lumbermen by the Canadian W. C. T. U. workers. As a leading official of that order, in a letter to the writer some time since remarked, perhaps the only drawback to a further extension of work is the want of sufficient funds.

The mill of the British Columbia Mills Timber & Trading Co., New Westminster, B. C., was partially destroyed by fire recently. Loss, $30,000. Rebuilding has been commenced.

MR. H. B. Turner, of Little Current, Ont., when in the city a week ago, told of the effect of the free export of logs, upon that particular section of the Province. He said: "When that duty was in force we had three large saw mills at the Current running on full time. Now one of these, with a capacity of 100,000 feet, daily, is lying idle and another is only half stocked. Before the change in policy 125 men were employed in our own town on the mills and in loading lumber, and an American company were negotiating for the purchase of Goat island as a site for another mill that would have added largely to the number of employees. But this latter deal is off now and companies that would otherwise give work for from one to two hundred men in the town employ only six or seven. The innovation has also reduced the price of labor in the woods. American companies now bring in Poles and Hungarians who work for $12 to $18 a month, and this has brought down the local standard of wages that formerly stood at $26 a month. This is a matter that effects Toronto as well as the Manitoulin Island and the North Shore. The transfer of the work of manufacturing lumber from mills at Little Current, Midland, Parry Sound, Serpent and Spanish River, to those at Bay City and Saginaw, has enormously reduced the sales formerly made by Toronto wholesalers in our country. There is no division of feeling in the lumber towns of the north. They are all for a restoration of the duty on logs and we feel, in view of the facts I have just stated, that Toronto ought to help us in this."

* * * *

It is no easy matter to down a lumberman. Physically they will hold their own with most men, as the case which I am going to recite is evidence. They have a faculty of "getting there," to employ an expression of Sam Jones. When they run for parliament they are usually successful. When they aspire to office and honors in other directions the occasion is a rare one when they are beaten. Mentally there is a robust vigor about them that commands attention, whether in asserting a business proposition or in any other work of life. Perhaps the active training, many have had in fighting their way through the bush, and in levelling, after persistent blows, the hardy giants of the forests, is an exercise that has developed muscle and mind. They seem, all through life to have drunk in the ozone of success. Now to illustrate. The story comes from the Lower Provinces, and tells of the forcible resistance encountered by a couple of officers of the provincial police in their efforts to execute a warrant upon a citizen of New Brunswick and the incident has adventure enough in it to recall to mind the story of Morrison, the Lake Megantic out-law. The present case arises out of a timber dispute, Mr. Connor, a rich timber merchant in a small town called after him, at the terminus of the Temiscouata railway, being the party for whom the officers of the law were sent to the sister province. A client of Mr. C. E. Pouliot, ex-M. P. P., and a resident of Temiscouata, took a seizure upon some logs he had sold to a Mr. Chisholm but that the latter had not paid for. Mr. Connors made a claim upon the logs, too, and finally a seizure was made upon them in his hands. This Mr. Connors entirely disregarded, and also resisted arrest at the hands of a bailiff sent to capture him, knocking down the officer of the law. Then Detective Patry and Sergt. Burke, of the Provincial Police, of Quebec, were sent for by telegraph. They succeeded after some time in discovering their man, who is described as a perfect Hercules, is also a millionaire, and was found hiding behind a barrel in his shop. He was brought out by them, despite the desperate resistance he offered, but immediately shouted to his employes, who were in the vicinity, to come to his assistance, and in less than five minutes 250 of them were crowding around the officers, and naturally succeeded in freeing Connors, although the police gallantly stuck to their man until forced to the last extremity and compelled to leave him and return to Quebec.

* * * *

Mr. Geo. Bertram, who has a very complete knowledge of lumber matters, from the fact of being largely interested in Canadian timber limits and saw milling, as well as being in the way of supplying mills with much of their equipment, is of the opinion, that the passing of the Wilson free lumber bill will be the means of stimulating saw milling in Canada in a very marked degree. Speaking, as he says, out of his own experience and knowledge, he refers to a saw mill at Midland, which has been lying idle for some time. It is owned by a Michigan firm, and just as soon as dressed lumber is admitted into the States free, that mill, he says, will be started running. At Parry Sound a large mill there is lying idle. To-day it is only a matter of negotiation, who will take the active management of it, and with free lumber, sawing will commence there. The same conditions apply in other places, that might be named; and what is more, Mr. Bertram is quite convinced that United States lumber concerns will, in a very short time, commence the erection of mills in Canada and send there stuff forward manufactured. It is just like this, argues Mr. Bertram, To day much lumber is being sent to Michigan in the shape of logs. There it has to be sawed into lumber and distributed from that point. With mills sawing on this side of the line, in many cases manufactured lumber can be sent direct from here to the point of destination without stopping midway and then being reshipped. It may be remarked here that this view is voiced very plainly by lumbermen from Bay City and other Michigan points. Some of these views are given elsewhere, I understand, in this month's LUMBERMAN.

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A conversation I had the other day with Mr. F. N. Tennant, lumberman, confirms the reports reaching the east of the unsettled condition of the shingle market in British Columbia. Mr. Tennant has been handling red cedar shingles in considerable quantities and had anticipated a solid growth of trade in this province. A combination of the shingle men of British Columbia was perfected in the early spring season with the idea of helping in that direction. "It is just like this," said Mr. Tennant, "the combination is still in existence, but prices have not been maintained, though there is no cutting as yet, as far as I know, among the manufacturers themselves. Prices are uniform. The prices of cedar shingles had been fixed at $2.75. This figure has now been dropped to $2.60, for the reason that some manufacturers had taken orders, perhaps up to the amount of 200 cars, at a lower rate than that fixed by the combination, before this organization had been formed, and these men and their customers in Ontario have insisted that in so far as they are concerned the lower price must hold good. The result is that red cedar shingles to-day are being sold in many hands throughout the province at a reduced figure, which does not give any inducement at present to push things. Of course when the supply at the lower figure is exhausted, the expectation is that prices will go up again, but 200 cars of shingles reaches close to the estimated consumption of the province for one season. Possibly 50 cars additional would be sold, but not any more. There is no money to the British Columbia manufacturers in this change. In fact, to quote the words of one of my correspondents, 'If they manage to get themselves out of the hole even this season, they will be satisfied.'" I asked Mr. Tennant if he anticipated that free lumber would have any effect upon shingle manufacturing on the Pacific coast. His reply was that, "He feared our people there would find strong competition from Puget Sound manufacturers. When the Dominion government announced that the duty was taken off shingles, we, along with other dealers, no doubt, in the province, received circulars quoting shingles from the Sound at $2.35. Of course pressure was brought upon the government, and they returned the duty until such a time as free lumber would become a certainty. It looks as though this time had about arrived, the Senate having passed that clause in the Wilson bill. So soon as this regulation comes into effect, I fancy, we are likely to hear more from the Puget Sound shingle men. They will be able to drop thirty cents, the present duty; and freight rates are in their favor, the United States roads carrying freight at a less rate than the Canadian roads." Mr. Tennant says that the lumber business generally throughout the province is very quiet, there not appearing to be any activity in building operations in the rural sections. He looks upon free lumber as a step that will help to revive trade and that will probably lead to a very considerable increase in saw milling in Canada, as he thinks United States lumbermen will find it will pay to cut their lumber here, when it can be exported free of any duty, rather than ship the logs and then have them cut up and re-shipped again to the trade. Being reminded of a statement that I had heard made, namely, that nearly all the oak and birch used for manufacturing furniture in Canada was brought in from the States, and the reason given that our mills could not cut these timbers in a manner to make up into furniture, I asked Mr. Tennant if he could give any explanation of this strange condition. He said the statement was perfectly correct, and putting his hand on a handsome desk at which he was sitting, he said it was not possible, or at least it was not being done by our hardwood saw mill men, to cut oak so as to make up into stock of that kind. He had frequently spoken to hardwood men about the matter and their only reply was that it paid them better to go on as they were going, cutting the timber more in the rough.

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How true it is, that, as a people, we know little of the beauties and riches of our country. Fashion compels us to go abroad for recreation and sight-seeing but the greater beauties are at our own door, within the limits of our own beautiful Dominion. It is not the first time that reference has been made in these columns to that very interesting portion of country known as the Lake of the Woods. It delights everyone, who has had an opportunity to visit it. To lumbermen it has not alone the attractiveness of picturesque beauty, but it has been learned, that in this country there are wonderful riches of timber, that will yet prove most valuable to our people. One who has recently been there says of the Rainy River: "The river without doubt is one of the most beautiful on the American continent, if not in the world. The banks of the Rainy river on both sides, along its entire length, are clear cut and well defined, and are from 20 to 30 feet past high water mark. The well-tilled fields and comfortable homes, many of them of pleasing, attractive exterior, the large barns, the sleek horses, cattle, sheep and hogs, all along the Canadian side of the river, bear ample witness of the richness and productiveness of the soil." Norway pine is the principle wood of the Rainy lake country. Some of this is of quite an inferior quality, but large quantities of valuable logs have nevertheless been cut there, floated down to Rat Portage and cut up into lumber. There are timber limits of Norway pine with a sprinkle of white pine of considerable dimensions tributary to these waters. On the American side an agitation is going on for a railway into this country. The statement is that hundreds of millions of feet of pine are still standing unsurveyed on that part of Minnesota. Another writer who has travelled over the ground expresses the opinion that one of the best opportunities on this continent for lumber mills is now opening out in the vicinity of Rainy river, either on American or Canadian soil. I like in these monthly chats to keep readers posted in regard to lumber affairs in all parts of our province and it is especially interesting to hear from men of a particular section of country, which they have been able to observe with their own eyes.

DROWNED AT FRENCH RIVER.

THE death by drowning at French River, on Thursday, June 21, of Mr. John E. Waldie, second son of Mr. John Waldie, of this city, president of the Victoria Harbor Lumber Co., and who has for years been one of the most esteemed and representative members of the lumber trade in the Province, was a sad shock to the many friends of the deceased. The younger Waldie was 25 years of age, and had the management of his father's affairs at French River. The accident happened through the capsizing of a canoe which the young man had been paddling. Deceased leaves to mourn his loss, besides his parents, a number of brothers and sisters, to all of whom the LUMBERMAN extends its warmest sympathy.

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

FROM the fact that a general election is near by in Ontario, and the time cannot be far distant, before there will be an election for the entire Dominion, is no doubt a partial explanation of the attention that is given to lumber matters in the House of Commons. To an outsider not conversant with the whole situation this may seem difficult to explain, but when we remember that the timber resources of Ontario are among its largest assets and that criticism is being leveled at the timber policy of the Ontario government, we can understand how opponents at Ottawa will endeavor to make circumstances turn to the disadvantage of the Government at Toronto. When members of the Commons, therefore, rise to talk on export duty and other phases of the lumber question, it is sometimes the case, particularly when these gentlemen are representatives of Ontario constituencies, that they are not talking to the House of Commons, but making a stump speech for or against the local government in this province.

One of the liveliest debates the House has had on the question of lumber was that of a few days ago, when Mr. John Charlton was called to account for tendering his advice to Washington how to overcome opposition that existed in Canada against free lumber. I am not going to express an opinion on the merits of the debate, but to say the least, it does appear to have been an impolitic move for the member for Norfolk to have, seemingly at least, been so solicitous of American lumber interests. But I expect we may safely leave a settlement of that matter to Mr. Charlton's own constituents and the votes of Norfolk.

INDIFFERENT LENGTHS.

Senator Clemon has withdrawn his bill with reference to the sawdust pollution of the Ottawa river. An estimate puts the sawdust and mill refuse thrown daily in the river from the Chaudiere equal to about 150,000 feet of boards, say 12 car loads.

A prominent lumberman has said that a million and a quarter feet would be the full amount of this year's square timber drives down the Ottawa, where 4 years ago almost five million feet went down and 6 years ago there was almost eight million.

An official of the Canada Atlantic railway is authority for the statement that the shipments of lumber over that line are falling short of last year, owing to the continued depression in the American market.

W. C. Edwards & Co. are the purchasers of a large tract of timber from McKay & Hough on the Black and Colounge rivers, and over 4,000 logs of last winter's cut. The Klock timber limit of Bear creek, north of the Ottawa river, has been sold to Gillies' Bros., of Braeside. The limit measures 52½ sq. miles and the price obtained was about $310,000.

A valuable lecture on forestry was delivered here about a week ago before the Royal Society by Prof. Fernow of the Division of Forestry in the United States Dpt. of Agriculture.

A grand reception to members of the House of Commons and Senate and others was given by Mr. W. C. Edwards at his Rockland farm on the 2nd inst. It is needless to say that a jolly time all round was spent, and every one admired the prettily situated and growing town which clusters around Mr. Edward's mills. The cut of these mills is over 300,000 feet per day.

W. C. Edwards & Co. are shipping large quantities of lumber from the New Edinburgh piling grounds. The firm's saw mill at that point is cutting a large amount of green lumber. It is not anticipated, however, that there will be any night work.

OTTAWA, Can., June 22, 1894.

TRENTON LETTER.

[Regular correspondence CANADA LUMBERMAN].

THE effect of the recent coal strike was distinctly felt by some of the local manufacturing and railway companies here, and a great deal of alarm was occasioned by the prolongation of the dullness, consequent upon the refusal of the Grand Trunk to move freights of a certain class. The Central Ontario Railway ran short of soft coal, and were obliged to purchase a car load or so from Messrs. Gilmour & Co., in order to tide them over the strike. Freights are moving now, however, and business in this locality is beginning to assume a brighter color.

The Rathbun Co.'s logs are now passing through the corporation boom here, on their way to the Deseronto mills. A large gang of men is employed in the work.

Lumber prices continue about the same throughout this county, but dealers are looking forward hopefully to a change for the better.

American buyers are making fair purchases, and a boom in the right direction is shortly expected. Messrs. Gilmour & Co. have made large shipments to the other side this spring, in addition to their extensive local sales.

During the past few years the logs passing through the Government Works in the Newcastle district have been subject to a toll, the amount of which, although not much per piece, is considerable at the end of a season's driving. The lumbermen in this district are petitioning the Government to abolish these tolls, claiming that the works were made for the benefit of steamboats etc., and that the driving of logs and timber is not facilitated by the presence of these works. A large number of timber and lumber dealers are interested in the matter, and will meet the Hon. Mr. Haggart at an early date, and place the facts before him with a view to having the tolls removed.

Over fifty thousand logs have already been run over the Gilmour log-way at Dorset, and a drive has now started from Raven lake for the Trent waters, the alligators being used for this purpose.

Mr. David Clark, General Supt., has just returned from the new limits and reports everything progressing favorably; so that in all probability the logs will be in Trenton this fall.

TRENTON, Ont., June 24, 1894.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

IN a letter to the press, Mr. H. H. Spicer, the extensive shingle manufacturer of Vancouver, takes a rather gloomy view of the shingle situation. He figures up the markets in Canada for red cedar shingles not to exceed 200,000,000 per year. A moderate estimate of the capacity of the shingle mills of the province he places at 300,000,000 per year, and which can be increased by the present mills to 400,000,000. This is not a healthful condition for shingles, and it is feared that the inevitabie result will be that "most of the mills will have to close down for lack of orders." Under conditions of this kind the temptation, of course, is to cut prices, and this has been done too much in the past. The association of British Columbia shingle manufacturers, recently formed, will, it is hoped, be helpful in preventing anything of this kind. In answer to the criticism that the combine among shingle manufacturers will result in an unfair advance in prices, Mr. Spicer says, that "manufacturers in our association are not making 10c. per thousand profit on their shingles, when they reckon $1.30 per thousand as the cost of production." With shingle manufacturers occupying so important a position in the lumber economy of the province it is to be hoped that matters will shape rather better than Mr. Spicer anticipates.

COAST CHIPS.

W. L. Johnson & Co. are making considerable shipments of shingles. 500,000 went forward a few days ago for Ontario.

The Royal City mills are shipping several car loads of lumber to the East.

It is estimated that the Royal City planing mills of New Westminster will have lost $60,000 by their recent fire. The machinery was nearly new and of the most modern description. Insurance covered only one-third of the loss. Warehouses and mills are now being rebuilt.

The Burrard Inlet Red Cedar Co.'s saw mill at Port Moody is cutting considerable quantities of all grades of cedar, fir lumber and shingles. A specialty is being made of the bevel cedar siding, which has become so popular in all the fashionable class dwellings in the Sound and eastern cities.

NEW WESTMINSTER, B. C., June 16, 1894.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN].

A FINE lumber district of the province, embracing altogether 360 sq. miles, has come into the hands of the Muskoka Mill & Lumber Co., of Toronto. These limits are said to contain some of the best timber of the province, and represents one unbroken district, extending from the Restigouche river to the St. John, and up to the Quebec boundary line where it adjoins the company's timber limits in Quebec. The company intend to operate on both rivers. It is possible that at a later date they may build a mill at either Fredericton or St. John, where manufacturing will be carried on on an extensive scale. The custom here is for lumbermen to be placed in the woods about Oct. or Nov., but the Muskoka Co. will put their men in in July or August.

The drives have suffered through want of rain, though at present date most of them have been got through, but not without an increase of expenses. It was feared that Gilman Bros. and Borden had 6,000,000 or 7,000,000 tied up on the upper St. John, but they have got through safely. The drives in Queen's county are safe, but the cut is only about half of last year's.

The first week of the month showed 1,000,000 feet of long lumber cleared for United States ports; 5,000,000 feet of deals for the United Kingdom, and 4,500,000 laths for the States.

Some large shipments have gone out from Miramichi and there will be more to follow.

A. Cushing & Co. have shipped a car load of lumber for a port in Brazil.

James Miller & Co. have 10,000,000 feet safely down St. Mary's river, said to be the largest drives ever taken down that stream. In Queen's county, N. F. Douglas, J. A. Freeman and James Hunt have got about 6,000,000 into the booms near Milton.

ST. JOHN, N. B., June 20, 1894.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

WITH few exceptions Michigan lumbermen have received with favor word from Washington, that lumber has been placed on the free list, subject, of course, to the final authorization of the bill by the president. It may be taken for granted, however, I think, that lumber has gone through all right this time. Already lumbermen from here have crews out looking up limits in Canada, and when the tariff may be taken as a finality, some further purchases will likely be made. It is recognized by lumbermen that they will have to take into their calculations, in case of free lumber, competition from Canada, but they think that this will be more than offset by the advantage in receiving logs free, as without any doubt our lumbermen largely look to Canada, under present conditions, for supplies.

SLOW TRADE.

It is quite remarkable the extent to which the lumber business in Michigan is depressed. Letters coming to mill men from different points are of a very discouraging nature. What buying is being done is in quantities that would have been indignantly refused a year ago. More than likely a number of the mills will be closed down, unless the demand for lumber looks up speedily; for, what is most unusual, the piling grounds are really now taxed to their utmost capacity to hold stocks on hand. There can be no doubt that the close of the season will show the reduction in the size of cut to have run into large figures. The depression in lumber is reacting seriously upon the labor classes, throwing large numbers of them out of employment.

BITS OF LUMBER.

J. L. Hurst, who is well known as a holder of Canadian limits, is negotiating for a large trade in Minnesota.

R. A. Loveland, of the Saginaw Lumber and Salt Co., does not take so gloomy a view of the situation as others. His experience is rather different, having shipped by rail during April and May fully as much stock as he might have expected.

It would be remembered what a falling off there was in lake shipments of lumber last year, the business being the smallest in twenty-five years. It is quite likely that the figures this year will come still lower.

Mills at Alpeña have been forced to shut down, owing to the rains having swollen the waters of Thunder Bay river.

The Waubaushene and Muskoka of Toronto, two large Canadian vessels, have been loading at Ontonagan, Mich., taking 700,000 feet of board timber to Quebec for Geo. McBurney, and from there it goes to England. It is said to be very choice white pine.

Heavy rains the first week in the month have, in some cases, caused hard work for drives. In other cases, of course, the rains have been a help.

Lumber circles in Michigan lose one of their most prominent representatives in the death of Mr. Wm. McArthur, of the W. & A. McArthur Lumber Co., of Cheybogan, Mich. The deceased was one of several brothers, all of whom have been active and extensive operators in lumber for many years. The name is well known among the lumbermen of Canada.

In May 1893 the shipment of lumber from Bay City shows 21,577,000 ft. and from Saginaw 16,310,000 ft. Cut these figures in half and the shipment for the same period this year would not have been reached.

Three large rafts arrived at Bay City from Canada a week ago and have caused renewed activity in the mills.

All mills at Menominee and Marinette, numbering 21, are running their fullest capacity.

It is computed that up to the first of June over 30,000,000ft. of Canadian logs have reached the Saginaw river. The Michigan Log Towing Association is doing an extensive business in bringing Canadian rafts here. Among those who are receiving logs in large quantities are the Saginaw Lumber and Salt Company, the South End Lumber Company, Merrill, Ring & Co., Hargrave and Co. and the Holland, Emery Co.

SAGINAW, Mich., June 23, 1894.

VIEWS AND INTERVIEWS.

Ironwood

Lieutenant Schwatka, in describing some of the trees near Sonora, says that the ironwood looks very much like a fine variety of the mesquite, the wood of which is a bright cherry red. Its name is derived for its hardness and is well deserved. It uses up an axe to fell each tree, and as the quality of the different trees is always the same, and that of different axes is not, even that ratio of one axe to one tree has to be changed occasionally, and always in favor of the tree. It is said that a tramp who had wandered into that part of the country with the usual appetite of his class, applied for something to eat. In reply he was told that if he would get out a certain number of rails for a fence, the proprietor would give him a week's board. It was, as he thought, about a day's work he had assigned him, and bright and early the next morning he sallied out with his axe on his shoulder. Unfortunately the most tempting tree he met was an ironwood, and very late in the evening he returned with the axe helve on his arm. "How many rails did you split to-day?" asked his employer. "I didn't split any, but I hewed out one," was the reply, and the tramp resigned his position.

Rings In Trees.

Whilst common opinion is settled that the age of trees is to be fixed by the number and character of the rings to be found in every tree, technically the subject is open to debate. Accepting general opinion, however, as correct, a writer in the Literary Digest enlarges the subject by noting other phenomena to be explained by these rings. We are told, for example, that in the irregularities of these rings and other signs a very faithful register of climatic and other conditions in any given year during the whole period of growth is given. The years of small rings, that is of little growth, were either very dry, or the tree was exhausted by bearing an exceptionally heavy fruit-crop. The broad rings indicate abundant rain and good growing conditions. Brownish spots on the cut surface, looking as though they were worm-eaten, are evidence of a severe winter, the young sapwood formed in summer having been partly destroyed by severe cold, and the injured part covered over with sound wood the next year. The year may easily be fixed by counting the rings from the outside. If the layers of wood are not of uniform thickness all round they afford evidence that at this stage of growth there were conditions which hindered its growth on one side. The spread of its roots or branches has been arrested, perhaps, by a neighboring tree. The number of layers showing this irregularity indicates the number of years during which the tree was exposed to the unfavorable conditions. The student of forestry may learn lessons of practical value in the management of forests by a careful study of the annual rings.

English Walnut.

In a late number of Hardwood, Mr. O. S. Whitmore, the editor, who is a close student of forestry and attendant subjects, writes a special paper on the English walnut. He tells us that the tree called English walnut is a near relative of the native black walnut grown in certain parts of the United States. The name is a misnomer, for the tree is not a native of England at all, but of Asia, whence it was transplanted to Europe. It is true that it is cultivated to a large extent in England, both for the fruit which is sold in all American markets under the name of English walnuts, and for the lumber which the tree makes when it is fully matured. But it is also cultivated extensively in France, Germany and other parts of Europe. The continent exports far more of the fruit than does England. The tree is indigenous to the valleys and slopes of the Southern foot hills of the Himalaya mountains and on the eastern slopes of the Caucasus, and in fact entirely across the continent and in the islands of Japan. Its habitat is thus very extensive, and everywhere it is valuable, whether native or adopted. It is quite probable that the acclimated tree as now found in Europe, is quite as valuable as the Asiatic in its native wilds. The ancients call it the *Jovis glans*, the nut of Jupiter, whence our botanical term, *juglans*, which term covers the black walnut, *(j. nigra)* and the butternut *(j. cincera)*. The English walnut is the *juglans regia*. In its native haunts the tree is large, often from four to six feet in diameter and from 75 to 85 feet in height. In thick woods it is tall and with a smooth trunk and a smallish head well up, giving a good body for timber. But in open glades, which it loves best, it is lower and wide branching, like the butternut. The wood is hard, heavy and much like our own black walnut in texture, but not always so finely figured. In color it is a dark brown, almost black, the sapwood lighter. With one exception it is the nearest approach to the native walnut. That exception is the California walnut, *(j rupestris* Eng.) which in some respects is the finest of the three dark species. The wood can be used for the same purposes as the black walnut, and not one person in ten can tell the difference when finished up. The tree flourishes fairly well in any moderately warm latitude. Under good care it is easy to propagate from seeds, and it grows rapidly as a sapling, and under good conditions will commence fruiting when ten years old, and thereafter will increase rapidly and continue to bear a heavy crop for from 50 to 75 years. There are trees in Europe, known to be 200 years old, which still yield abundant crops of nuts. At 40 to 50 years the tree becomes valuable for lumber, increasing from year to year at a pretage.

HARDWOOD MATTERS

So extensive are the white pine resources of the country, that, naturally, at times, they overshadow the hardwood interests. When there is a fight in the Legislature or the Commons only white pine is heard of. Hardwood men know just how seriously this condition has operated against their interests in the past by allowing the duties, under the McKinley tariff, on white pine lumber to have been reduced to $1.00, while the duty on hardwood has remained at $2.00. Possibly when free lumber in its fullest extent becomes a tariff certainty with the United States this grievance may be removed. This is to be remembered that white pine and the softer woods can never fill the place of hardwoods, and already, we hear of cases where hardwoods have commenced to be more generally used, because of the scarcity of pine in some sections. I have always felt that the hardwood men have, unfairly, been compelled to take a side-seat. But possibly they have been to blame themselves, for have they not been altogether too easy going, and in more ways than one neglected to protest against wrongs, and organize to protect their own interests, when a step in that direction was much needed?

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A study of the report of the clerk of forestry for the Province shows that, in many counties, in fact in a large portion of them, what woods are left are hardwoods. In some cases, thanks to our prodigal methods of handling timber years ago, of these there is not any large quantity. But we have still rich resources, taking the province over, in these woods and we ought to make the most of them. It is known that a number of hardwood dealers in the United States, particularly those in the east, draw largely for their supply of lumber on the Dominion. An authority on the question tells us, that there are fine hardwood timbers to be found in Quebec and Ontario, within easy distance of the American border. Some of the best red oak, cherry, hard and soft maple, and rock and soft elm on the continent, says this writer, is found in these two Canadian provinces. Large holdings of hardwood in Canada are among American firms. One New York concern have something like 500,000 ft. of number 1 and 2, 4, 5, 6, and 8 quarter soft elm and probably 1,000,000 ft. of common and shipping cull, all old stock and dry ready for shipping. Other concerns in New York, Boston, Albany, Buffalo, says Hardwood, of Chicago, hold stocks of elm, birch, red oak, and maple in Canada.

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Mentioning this fact reminds me of a conversation I had a few days ago with one of the largest furniture dealers in the city. He tells me, on the authority of Canadian manufacturers, that nearly all the oak and birch, used in making up of furniture in Canadian factories, comes from the United States. These manufacturers say, what ever the reason may be, that they cannot get Canadian oak sawed in such a manner as to bring out the best features of the grain in the wood and this is also the case with burl birch. This occurred to me as an unpleasant reflection on our hardwood men; and certainly a method worthy of Dickens' circumlocution office that we send our woods from here to the States to be sawed, so that they might come back to our manufacturers in proper shape for their use. What have our hardwood men to say about this?

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For the first time, we are told, since quarter white oak came into fashion there is a decided shortage in the visible supply. The situation is explained by Hardwood thus: "In the first place the man who saws quartered oak must have plenty of timber to select from. He can use only his best clear logs, which naturally leaves those for plain sawing averaging a small per cent. of firsts and seconds. To even up, he must realize a price for the product of the selected logs for quarter-sawing which will cover loss on what is left. In the next place no lot of logs quartered will realize the per cent. of clears that they would plain sawed, and further they will produce a lower grade below clears, and the total product in feet will also be less. The difference between first and seconds plain and quartered is quoted at abous $10; but in actual sales has lately been as low as $8, while the average price of the balance of the log is not less than $2, the other way, or in favor of plain sawed. Add to this the extra cost of sawing, which cannot be less than $1 and is often $2, and the loss in percentage of uppers in the rejected logs and the loss in total output of the quartered logs, and it is plain to be seen why mill men cannot afford to quarter saw their white oak. It is doubtful if there is any extra profit in quartered oak when prices are at their best, with the highest difference ever known, even exceptionally fine timber, running extra high to clear logs. This is a point that has been slow to filter through the gray matter of the average hardwood man's brains."

ROB.

POSSIBILITIES OF SPEED BY STEAM.

In his recent inaugural address, the president of the French society of civil engineers, M. du Bosquet, pointed out that express trains daily attain seventy-five miles an hour on down grades, providing that such speeds are not dangerous. But the engines are not sufficiently powerful to maintain such speeds on a level. A draw-bar pull which would give seventy-five miles an hour on a down grade of one in 200 would give only fifty-seven and a half miles on a level, and thirty-one and a fourth miles on up grade of one in 200. A slight increase in the average speed greatly increases the power required. If 322 horse-power will draw a train at fifty miles an hour up an incline of one in 200, for a speed of 125 miles 2,960 horse-power would be necessary. High speeds, moreover, increase the weight of the engines per horse-power, and there is a limit beyond which the engines could not move themselves. At their maximum power, the modern French locomotives weigh about 158 pounds per indicated horse power; but a similar engine of 150 tons generating 2,000 horse-power, would be required to draw a train of 100 tons up a slope of one in 200. The highest possible speed for such an engine and train up the slope would be eighty-seven and a half miles an hour, and for this the engine would weigh 670 tons and would generate 8,932 indicated horse-power.

THE REASON WHY.

An engineer observed his steam gauge indicating a higher pressure than his safety valve spring was set for. He slackened the spring, but the gauge kept rising and the steam did not blow off. When the pressure rose to 200 pounds he became alarmed; and as he could not start the engine he started the injector and opened the water blow-off cock. The damper being closed, this had the effect to prevent further increase of pressure. On examining the safety valve it appeared that the brass seat of the valve was a bushing put into an iron casting, that it had become loose, and that the steam had pressed it up against the valve. As the valve rose the seat followed it, and there could not have been a release of steam until the bushing was pushed out of its hole.

TRADE REVIEW.

Office of CANADA LUMBERMAN,
June 25, 1894.

THE GENERAL SURVEY.

IN his annual address to the shareholders of the Bank of Commerce a few days ago, General Manager Walker devoted, as is his custom, some little attention to the position of the lumber trades. Remarking that the exports of woods in all conditions, manufactured and unmanufactured, for the year ending June 30, 1893, was $29,000,000, against $25,000,000 five years ago, he draws attention to a feature of the lumber trade that possesses a good deal of encouragement. It has more than once been remarked in these columns, that no matter how severely lumber might suffer through a financial depression, such as has existed for the past year, yet there can be no doubt of the generally solid condition of the trade. Lumber is an asset, whether vested in the individual or country, that in the present day must steadily increase in value. Mr. Walker's reference to the promptitude with which United States firms, who had contracted to take Canadian lumber, carried out their obligations, notwithstanding the financial storm, is practical evidence confirming this view. Though the failures of individuals and firms across the border during the past 12 months have been numerous, and running into large figures, yet it has been interesting to note how lightly disaster has touched the lumber trade. In Canada, this is more exactly the case. Barring a number of weak concerns that went under a few years ago, at the time of the break of the real estate boom in our own city, there has been little trouble to note in connection with these trades. Large amounts of money are invested in Canadian timber, and in most cases these properties are held by men who have the ability and means necessary to withstand a financial storm.

Writing of trade as we find it to-day, it has to be admitted, of course, that there is a shrinkage in the volume of business doing, a result of the monetary stringency of the year, and in no small measure to the unsettled tariff conditions prevailing both in the United States and our own country. There is good reason to suspect that a finality has been reached, so far as the American tariff is concerned. We are likely to have free lumber. It may not be wise to predict just what the result of this will be upon Canadian lumber interests, but it will hardly prove of an unfavorable character. Business, as a whole, both here and abroad, must show healthful signs of revival before there will be any large increase in the consumption of lumber, any more than of other commodities. People are not buying generously of anything just now. But when this revival takes place, and there is reason to believe that it is coming, though possibly slowly, lumber will feel the benefit of the turn in the tide about as quickly and completely as any other business.

It is now generally conceded, that the cut of logs this year will be lighter than for the past year, though there will be abundance of logs to meet all demands. The supply of logs carried over from last year represents quite an amount.

Foreign advices touching lumber are not over encouraging, and we speak now more particularly of the trade in England ; at the same time we learn that some heavy shipments are being made from the Ottawa section to Great Britain. Shipments of considerable size are also going forward from New Brunswick. At Quebec ports there is not any very strong evidence of a large trade being done.

Despite the magnificent timbers of British Columbia the way has not opened out this season for very large exports. The Australian market, that has in the past been helpful to British Columbia trade, continues depressed, and the volume of business is circumscribed on this account. Local trade is fairly active and if prices can be kept maintained perhaps a more paying business will be done by the shingle men than for some little time past.

Election matters are absorbing the most interest in Ontario for the past month, and lumber affairs are being discussed, but outside of political talk there is not any large volume of business doing. Lumber business, so far as local consumption in Toronto, keeps slow.

UNITED STATES.

It is realized by candid and plain-spoken lumbermen that trade in the United States is going to show up exceedingly light. Practically into the heart of midsummer now, there is nothing to give impetus to further trade this year. It may, with safety, be said, that the tariff, so far as lumber is concerned, is settled, and whilst various opinions are held as to what the effect of free lumber is going to be on the general trade, yet the fact that the result is known, will likely lead to the perfecting of definite plans. The most vigorous objection is coming from the Southern States, as yellow pine is looked upon as a competing line with Canadian white pine. But taken as a whole United States lumbermen are not very much terrified at the coming of free lumber, whilst it may be taken for granted that Canadians are satisfied. Recovery from the depression of a year and more, though slow, is coming along, and if crops, which now look hopeful, are of good size, and prices show anything at all of an upward tendency, the market will no doubt improve. One of the marked features of the trade is the general dullness that is shown in the Eastern States.

Were we to single out any one line as being in an especially demoralized shape it would be spruce. It is a hard matter to make out what will be the outcome of the spruce market. A continued decline in price is taking place. Large mills in Maine would like to close down, for there is no encouragement in manufacturing at present prices, but to close down means a serious loss. The Lumberman's Review, of New York, remarks on the situation : "It is but a natural sequence that the small mills should be the first to succumb under the present conditions, for it is evident that with logs either on the Kennebec or Penobscot ruling at $10 to $11 per thousand, no mill can saw out a spruce frame and deliver it at Boston or Sound ports for $13, and have as much money at the end as at the beginning of the season. But $13 is the basis to-day for any frame capable of being classed as "easy." One year ago the price opened at $14.50, and held to that figure until the cloud of depression began to settle over the country, when strength was replaced by weakness, and the price went to $13.50 at the close."

FOREIGN.

The Timber Trades Journal, of London, Eng., prefaces an article on the future of lumber with the words, "Hopes are delusive." It has really been impossible to keep track of the United Kingdom market for a year and more. It has certainly been dull. This much could easily have been written of it at any time, but yet this dullness has had frequent bright rays strike through it, and the hope on each occasion was, that this brightness might be lasting. It is here that hopes have been delusive. There has been no permanency in any revival that has shown itself, and we can hardly say any more of the British market at the present writing. Quoting again from our English contemporary, "Trade is as flat as ditchwater all the while the stuff keeps pouring in to speedily fill the gaps which the moderate supplies of previous years has brought about." A discouraging sign of the market is the manifest desire of dealers to undersell each other in a vain effort to make a turn in business. Farnworth & Jardine, of Liverpool, in their current circular say, that the arrivals from British North America during the past month have been 8 vessels, 3,929 tons, against 14 vessels, 10,601 tons, during the corresponding month of last year, and the aggregate tonnage to this date from all places during years 1892, 1893 and 1894 has been 87,750, 72,626 and 65,744 respectively. The same authority says that continued dullness prevails with very little signs of improvement ; the consumption has been moderate, and there is little change in value to record, but some articles, such as Canadian woods, have given away owing to a decline in freights. Stocks of all articles are quite sufficient, in some instances, too heavy.

A somewhat lengthy review of the Australian timber trade appears in the Melbourne Age of recent date, and it discloses the fact that the lumber market reports of late have been of more moving of timber. The terribly depressed conditions of lumber for a long period is admitted, but these indications of a revival, though not very marked, have much of encouragement in them.

The South American market, it is thought, will continue to improve.

TORONTO, ONT.

TORONTO, June 25, 1894.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch	2 50	2 60
XX shingles 16 inch	1 50	1 60
Lath, No. 1		2 15
Lath, No. 2	1 80	1 85

YARD QUOTATIONS.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	13 00
" stocks	16 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	16 00
" " " 22 ft	17 00
" " " 24 ft	19 00
" " " 26 ft	20 00
" " " 28 ft	22 00
" " " 30 ft	24 00
" " " 32 ft	27 00
" " " 34 ft	29 50
	23 50
" " " 36 ft	31 00
" " " 38 ft	33 00
" " 40 to 44 ft	37 00
Cutting up planks, 1 and thicker, dry	25 00 28 00
" board	18 00 24 00
Dressing blocks	16 00 20 00
Picks Am. inspection	30 00

F. M.		
1 1-2 in. flooring, dres'd	26 00	30 00
" " rough	18 00	22 00
" " dres'd	25 00	28 00
1 1-4 in. flooring, undressed, B.M.	16 00	18 00
1 1-4 in. flooring, dres'd	18 00	20 00
" " undres'd	12 00	15 00
Beaded sheeting, dressed	20 00	35 00
Clapboarding, dres'd		12 00
XXX sawn shingles per M.	2 60	2 70
Sawn lath		2 60
Red Oak	30 00	40 00
White "	37 00	45 00
Basswood, No. 1 and 2	28 00	30 00
Cherry, No. 1 and 2	70 00	90 00
White ash, 1 and 2	24 00	35 00
Black ask, 1 and 2	20 00	30 00

HARDWOODS—PER M. FEET CAR LOTS.

Ash, white,	1 to 2 in.			$18 00	$20 00	Elm, soft	1	" 1½	$11 00 $12 00
" "	2½ to 4			20 00	24 00	" "	2	" 3	12 00 13 00
" black,	1	" 1½		16 00	18 00	" rock	1	" 1¼	14 00 16 00
Birch, sq.,	1	" 4		17 00	20 00	" "	1½	" 3	15 00 18 00
" "	4x4	" 8x8		20 00	22 00	Hickory	1½	" 2	28 00 30 00
" red	x	" ½		20 00	22 00	Maple	1	" 1½	16 00 17 00
" "	2	" 4		22 00	25 00		2	" 4	17 00 18 00
" yellow	1	" 4		14 00	15 00	Oak, red, p'n	1	" 1½	28 00 30 00
Basswood	1	" 1¼		15 00	16 00	" "	2	" 4	30 00 32 00
	1½	" 2		16 00	18 00	" white	1	" 1½	28 00 30 00
Butternut	1	" 1½		23 00	25 00	" "	2	" 4	30 00 35 00
"	2	" 3		25 00	28 00	" quart'd	1	" 2	48 00 52 00
Chestnut	1	" 2		2 00	75 00	Walnut	1	" 3	85 00 100 00
Cherry	1	" 1½		50 00	60 00	Whitewood	1	" 2	32 00 36 00
"	2	" 4		60 00	65 00				

OTTAWA, ONT.

OTTAWA, June 25, 1894.

Pine, good sidings, per M feet, b.m	$32 00 40 00
Pine, good strips, " " "	27 00 35 00
Pine, good shorts, " " "	20 00 27 00
Pine, 2nd quality sidings, per M feet, b.m	20 00 25 00
Pine, 2nd quality strips, " " "	18 00 22 00
Pine, 2nd quality shorts, " " "	15 00 18 00
Pine, shipping cull stock, " " "	14 00 16 00
Pine, box cull stock, " " "	11 00 13 00
Pine, s.c. strips and sidings " " "	11 00 14 00
Pine, mill cull	8 00 10 00
Lath, per M	1 60 1 90

QUEBEC, QUE.

QUEBEC, June 25, 1894.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	14 @	18
For fair average quality, according to average, etc., measured off	16	20
For good and good fair average, " " " " "	23	27
For superior " " " " "	28	30
In shipping order " " " " "	29	35
Waney board, 18 to 19 inch " " " " "	30	36
Waney board, 19 to 21 inch " " " " "	37	40

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	45	51

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	30	34

BIRCH.

16 inch average, according to average and quality	20	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $37 to $42 for 3rd quality.

Bright spruce, according to mill specification, $40 to $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality.

OSWEGO, N.Y.

OSWEGO, N. Y., June 25.—Any expected revival in the lumber trade that may have been looked for after the opening of navigation is slow to show itself. The shipments are running light and the unsatisfactory

feature of the trade is that no one seems just certain how things may open out later on. There is no noticeable change in prices.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$47 00@48 00		
Pickings, " "	39 00	40 00	
No. 1, cutting up, " "	34 00	35 00	
No. 2, cutting up, " "	24 00	25 00	
In strips, 4 to 8 wide, selected for moulding strips, 14 to 16 ft.	32 00	34 00	

SIDING.

1 in siding, cutting up picks and uppers	32 00@39 00	1¼ in selected	38 00@43 00
1 in dressing	19 00	21 00	1¼ in dressing 20 00 22 00
1 in No. 1 culls	14 00	15 00	1¼ in No. 1 culls 15 00 17 00
1 in No. 2 culls	13 00	14 00	1¼ in No. 2 culls 14 00 15 00
			1 in. No 3 culls 11 00 12 00

1X12 INCH.

12 and 16 feet, mill run	21 00	24 00	
12 and 16 feet, No. 1 and 2, barn boards	19 00	20 00	
12 and 16 feet, dressing and better	27 00	31 00	
12 and 16 feet, No. 2 culls	15 00	16 00	

1X10 INCH.

12 and 13 feet, mill run, mill culls out	21 00	23 00	
12 and 13 feet, dressing and better	26 00	28 00	
1X10, 14 to 16 barn boards	18 00	19 00	
12 and 13 feet, No. 1 culls	16 00	17 00	
12 and 13 feet, No. 2 culls	15 00	16 00	
14 to 16 feet, mill run mill culls out	21 00	23 00	
14 to 16 feet, dressing and better	26 00	28 00	
14 to 16 feet, No. 1 culls	17 00	18 00	
14 to 16 feet, No. 2 culls	15 00	16 00	
10 to 13 feet, No. 3 culls	11 00	12 00	

1¼X10 INCHES.

Mill run, mill culls out.	$22 00@25 00	No. 1 culls	17 00 18 00
Dressing and better	27 00 35 00	No. 2 culls	15 00 16 00

1X4 INCHES.

Mill run, mill culls out	17 00	21 00	No. 1 culls 14 00 15 00
Dressing and better	24 00	30 00	No. 2 culls 13 00 14 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20 00	25 00	6, 7 or 8, No. 1 culls 16 00 17 00
6, 7 or 8, drsg and better	25 00	30 00	6, 7 or 8, No. 2 culls 14 00 15 00

SHINGLES.

XXX, 18 in pine	3 70	3 90	XXX, 18 in. cedar 3 50 3 70
Clear butts, pine, 18 in.	2 70	2 90	Clear butt, 18 in. cedar 2 50 2 70
XXX, 16 in. pine	3 00	3 20	XX, 18 in. cedar 1 90 2 00
Stock cedars, 5 or 6 in.	4 50	5 00	

LATH.

No. 1, 1¼	2 30		No. 2, 1¼ 2 25
No. 1, 1 in.	1 80		

SAGINAW, MICH.

SAGINAW, Mich., June 25.—All our advices from Michigan tell of a depressed market. This will be gleaned from what is said in our regular Michigan letter this month, and information that comes to us from any other source is much on the same lines. In the cargo market there is hardly anything to report. Those who may happen to make sales are not particular that much should be said about them. A stranger, unacquainted with the lumber business, were he to visit this port, would consider that the lumber trade was lively; for, of course, a large quantity of lumber, relatively, is going from here all the time. Michigan has by no means lost its hold as a lumber-producing, lumber-shipping state, but compared with other years and with what would be expected, the trade is light. With the tariff somewhat nearer to a settlement, apparently, there will be more definite conditions in the future; but everyone has been living on the future to so large an extent that the fare has become rather indigestible. Prices are unsettled.

FINISHING LUMBER—ROUGH.

Uppers, 1, 1¼ and 1½	45 00		Fine common, 1 in 35 00
2 in	46 00		1¼ and 1½ in 36 00
Selects, 1 in	40 00		2 in 37 00
1¼ and 1½	40 00		C, 7, 8 and 9 in 30 00
2 in	40 00		

SIDING.

Clear, ½ in	24 00		C, ½ in 19 00
⅞ in	48 00		⅞ in 34 00
Select, ½ in	21 00		No. 1, ½ in 13 00
⅞ in	40 00		⅞ in 23 00

TIMBER, JOIST AND SCANTLING.

2x4 to 10x10, 12, 14 and 16 ft.	$11 00		20 ft 14 00
18 ft	13 00		22 and 24 ft 15 00

For each additional 2 ft. add $1; 12 in. plank and timber $1 extra; extra for sizes above 12 in.

SHINGLES.

XXX 18 in. Climax	3 65		18 in. X (cull) 1 00
XXX Saginaw	3 40		XXX shorts 2 25
XX Climax	2 25		XX 1 50
18 in. 4 in. c. b	1 25		

LATH.

Lath, No 1, white pine	2 00		Lath, No. 2, W. pine, Norway 1 65

BOX.

1x10 and 12 in. (No 3 out)	14 00		Narrow 13 00@14 00
1x6 and 8 in (No. 3 out)	13 50		1¼ in. 15 00 18 00
1x13 and wider	15 00	17 00	1½ in. 15 00 18 00
			2 in 15 00 18 00

SHINGLES.

18 in. XXX, clear	3 85	4 00	16 in., *A extra 2 60 2 70
18 in. XX, 6 in. clear.	2 85		16 in. clear butts 2 10

LATH.

No. 1, 4 ft.	2 50	2 60	No. 1, 3 ft. 1 10
No. 2, 4 ft.	1 95		

NEW YORK CITY.

NEW YORK, June 25.—If any improvement in lumber is to be noted, perhaps it may be said it is for the best. Prices are a little firmer, and here is one indication along this line. With the railroad strike ended it is hoped that help will also come for this reason. White pine is not very brisk, nor is there any remarkable activity in Southern products. Spruce is slow to move.

WHITE PINE—WESTERN GRADES.

Uppers, 1 in.	$44 00@45 00		Coffin boards 20 00 22 00
1¼, 1½ and 2 in.	46 00	47 00	Box, in $17 00@17 50
3 and 4 in	55 00	58 00	Thicker 17 50 18 50
Selects, 1 in.	40 00	41 00	Ccil'g, base, fig. No. 1 40 00 42 00
1 in., all wide	41 00	43 00	No. 2 35 00 37 00
1¼, 1½ and 2 in.	43 00	44 00	No. 3 24 00 26 00
3 and 4 in.	52 00	53 00	Shelving, No. 1 30 00 32 00
Fine common, 1 in.	36 00	37 00	No. 2 25 00 27 00
1¼, 1½ and 2 in.	38 00	40 00	Molding, No. 1 36 00 37 00
3 and 4 in.	46 00	48 00	No. 2 34 00 36 00
Cutting up, 1 in. No. 1	28 00	30 00	Bevel sid'g, clear 22 50 23 00
No. 2	21 00	23 00	No. 1 22 00 22 50
Thick, No, 1	29 00	32 00	No. 2 20 00 20 50
No. 2	24 00	26 00	No. 3 16 00 17 00
Common, No. 1, 10 and 12 in.	22 00	23 00	Norway, c'l, and No. 1 23 00 25 00
No. 2	20 00	21 00	No. 2 20 00 22 00
No. 3	17 00	18 00	Common 18 00 19 00

ALBANY, N.Y.

ALBANY, N. Y., June 25.—A certain degree of activity in lumber that was noticeable the early days of the month has hardly been sustained throughout the month. No one wants to buy in large quantities. Buyers who had hitherto purchased by boat load prefer buying in smaller quantities, and this, when such methods are generally adopted, means a considerable lowering in the volume of trade. Planing mill men are agitated on account of the likelihood of free lumber going through. They say it will seriously affect manufacturing at this point, as our people will not be able to compete with dressed lumber coming from Canada.

PINE.

2½ in. and up, good	$56	$60	10-in. common $15 $16
Fourths	58		12-in. dressing and better 28 34
Selects	50		Common 15 17
Pickings	45		1¼-in. siding, selected, 13 ft. 40 45
1¼ to 2-in. good	52	55	Common 15 17
Fourths	47	50	1-in. siding, selected 38 42
Selects	42	45	Common 15 17
Pickings	37	40	Norway, clear 22 25
1-in. good	52	55	Dressing 16 18
Fourths	47	50	Common 11 15
Selects	42	45	10-in. plank, 13 ft., dressing c. c.
Pickings	37	40	and better, each 42 55
Cutting-up	22	27	10-in. plank, 13-ft. culls, each 23 25
Bracket plank	30	35	10-in. boards, 13 ft., dressing and better, each 28 32
Shelving boards, 12-in. up	30	32	10-in. boards, 13-ft. culls 17 21
Dressing boards, narrow	19	21	

LATH.

Pine	$2 40		Spruce $2 30 $2 40

SHINGLES.

Sawed Pine, ex. XXXX	$4 40	$4 50	Bound butts, 6x18 $5 90 $6 00
Clear butts	3 15	3 25	Hemlock 2 15 2 30
Smooth, 6x18	5 50	5 60	Spruce 2 20 2 30

BOSTON, MASS.

BOSTON, MASS., June 25—Unquestioned dullness is the record of trade in this port. This is not confined to lumber only but the fact that things are slow generally is after all poor consolation for the lumberman who has bills to pay. The hope is bright, that when the tariff is positively fixed, general business will improve and with it lumbermen will be helped. Free lumber is not going to be altogether acceptable to the trade here and yet the very fact that the tariff is fixed will have a steadying effect on trade. Spruce is out of all calculation in any record of lumber affairs. It is being knocked hither and thither and the question is being asked, when will come the end?

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards		$12 00	¾ inch $ 9 25 9 75
Coarse No. 5		16 00	11-16 inch 9 00
Refuse	11 00	12 00	⅝ inch 8 50
Outs	9 00	10 00	Clapboards, sap ext. 50 00 55 00
Boxboards, 1 inch	10 75	11 00	Sap clear 45 00 50 00
⅞ inch	9 75	10 00	Sap, 2nd clear 40 00
			No. 1 25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in	$52 00@54 00		Fine com., 3 and 4 in 42 00 46 00
1¼, 1½ and 2 in.	52 00	55 00	No. 2, 1 in. Fine com. 28 00 30 00
3 and 4 in		60 00	1¼, 1½ and 2 in. 29 00 31 00
Selects, 1 in.	45 00	46 00	No. 1 strips, 4 to 6 in. 43 00 44 00
1¼, 1½ and 2 in.	48 00	50 00	No. 2 36 00 37 00
3 and 4 in.		51 00	No. 3 28 00 30 00
Moulding boards, 7 to 11 in. clear	36 00	38 00	Cut ups, 1 to 2 in. 24 00 32 00
60 per cent. clear	34 00	36 00	Coffin boards 21 00 23 00
Fine common, 1 in.	40 00	41 00	Common all widths 22 00 26 00
1¼, 1½ and 2 in.	41 00	43 00	Shipping culls, 1 in. 15 00 15 50
			do 1¼ in. 15 50 16 50

SPRUCE—BY CARGO.

Scantling and plank, random cargoes	14 00@15 00		Coarse, rough 12 00@14 00
Yard orders, ordinary sizes	15 00	16 00	Hemlock bds., rough 12 00 13 00
Yard orders, extra sizes	16 00	18 00	" " dressed 12 00 14 00
Clear floor boards	19 00	20 00	Clapbds., extra, 4 ft. 29 00 30 00
No. 2	16 00	17 00	Clear, 4 ft 30 00 31.00
			Second clear 23 00 24 00
			No. 1 12 00 16 00

LATH.

Spruce by cargo	2 50@2 75

SHINGLES.

Eastern sawed cedar, extra	$3 00	$3 25	Eastern shaved sawed cedar, 1st quality 5 00
clear	2 30	2 75	2nd quality 4 75
2nd's	2 00	2 35	3rd " 3 85 4 00
extra No. 1	1 50	1 75	4th " 3 00 3 25
			Spruce No. 1 1 50

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N. Y., June 25—He would be a thorough going optimist who would anticipate that the month will close with either the volume of trade, or the prices, levelling up as well as for the corresponding month last year. The amount of trade doing is light and it is thought that any activity just at the present time will be cut very short as we enter into midsummer. Buffalo lumbermen are fearing that the continued dullness in trade will lead to a marked cutting of prices and this would demoralize trade not a little.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in	$46 00	48 00	Shelving, No. 1, 13 in and up, 1 in 31 00@33 00
2½ and 3 in	52 00	55 00	Dressing, 1¼ in 25 00 26 00
4 in	58 00	60 00	1¼x10 and 12 26 00
Selects, 1 in.	38 00	39 00	1½ in 24 00 25 00
1¼ to 2 in		42 00	2 in 26 50 28 00
2½ and 3 in	49 00	50 00	Mold st'ps, 1 to 2 in 33 00 35 00
4 in		54 00	Barn, No. 1, 10 and 12 in 21 00 23 00
Fine common, 1 in	35 00	38 00	6 and 8 in 20 50 22 00
1¼ and 1½ in	37 00	38 00	No. 2, 10 and 12 in. 18 00 19 00
2 in	39 00	40 00	6 and 8 in 18 00 19 00
3 in.		45 00	No. 3, 10 and 12 in. 14 00 16 00
4 in		45 00	6 and 8 in 13 50 15 50
Cut'g up, No. 1, 1 in.	27 00	29 00	Common, 1 in 16 00 18 00
1¼ to 2 in	33 00	34 00	1¼ and 1½ in 18 00 20 00
No. 2, 1 in.	17 00	18 00	2 in 19 00 22 00
No. 2, 1½ to 2 in	23 00	24 00	
No. 3, 1¼ to 2 in	18 00	19 00	

EXHAUST STEAM.

THE use of exhaust steam is the more profitable as the percentage of the steam utilized is increased, and as the back pressure produced by its use is reduced, if we add back pressure to an engine we increase the mean pressure required upon the piston in order to maintain a given mean effective pressure: that is, we increase the horse power of the engine, so far as the boiler is concerned, by an amount equal to the horse power constant multiplied by the back pressure added, and require a proportionately greater supply of steam. The condensing engine may be considered in the same way. Suppose we have an engine which develops one-horse-power for each pound of mean effective pressure running on a mean effective of fifty pounds, an absolute back pressure of five pounds, and a steam consumption of twenty pounds per hourly horse power. If we cut off the condenser, and exhaust at atmospheric pressure, we shall have added ten horse power to the work of the engine, requiring two hundred pounds of steam additional per hour. As this additional horse power is used in overcoming the increased back pressure, the effective horse power remains at fifty, and the steam consumed per effective or indicated horse power per hour is increased twenty-five per cent. Now if we have an application for as much or more heat as would be furnished by two hundred pounds of boiler steam we can take it profitably from the exhaust. If not, it would be better to use steam direct from the boiler.

SINGLE-VALVE ENGINES.

NOT very long ago it was almost universally conceded, says the American Machinist, that nothing in the way of an early cut-off in the cylinder of a stationary steam engine could be accomplished by a single-valve with, at the same time, a reasonably economical steam distribution. This belief prevailed long after the use of the link motion on locomotives, where the steam is so well handled by the operation of the link and single valve as to have kept other means for the most part out of the field. The practice, after it was found that some lap could be added to a slide valve, soon came to the point of making it such as it would cut off the steam at an average for both ends of the cylinder of three-quarters stroke. This was thought to be about the limit to expansion possible with a single valve. Now single-valve automatic engines are made to cut off at as early a point in the stroke as is desirable—many of them being so constructed that the following with steam for three quarter stroke is not possible, and the steam distribution is very good indeed: not equal to that of four-valve engines, but not so much behind in point of economy as would appear probable. The multiplied demand for small engines no doubt have a good deal to do with the perfecting of the governing devices, and with determining that it was not necessary that they be full-stroke machines; and the perfecting of the mechanism has had as much to do with increasing the demand for them.

THE NEWS.

—P. Atkins, lumber, Morden, Man., is dead.

—The saw mill at Rapid City, Man., has resumed cutting.

—Mr. Mitchell will erect a new saw mill at Selkirk, Man.

—A saw mill is being erected at Kenabutch, Sudbury, by Americans.

—Walnut lumber is being shipped from the vicinity of Leamington to Germany.

—An arc light electric plant has been put in Joseph Chew's saw mill at Chelmsford, Ont.

—Thos. Dumas, Bristol, Que., has purchased the sash and door factory at Eganville, Ont.

—McIlvanie & Ellis, saw mill and general store, have started business at Lumby, B. C.

—Lloyd & Co., lumber, St. Boniface, Man., have been succeeded by Lloyd & McCutcheon.

—T. Paradis, saw mill, Levis, Que., who recently assigned, is offering ten cents on the dollar.

—H. J. Hall has taken over and will refit and operate the Shantz planing mill at Berlin, Ont.

—Bush fires are reported to have done considerable damage in the vicinity of Fort William, Ont.

—Wm. Mason & Sons have recently put a system of fire protection in their saw mill at Ottawa.

—Wm. Proctor has sold his interest in the Beaverton, Ont., saw mill to John Ferris, late of North Bay.

—Two thousand six hundred pieces of yellow pine arrived recently down the Gatineau, having been rafted 156 miles.

—W. L. Johnson, of New Westminster, B. C., is shipping large quantities of shingles to the eastern provinces.

—Messrs. Paquette & Godbout, St. Hyacinthe, Que., will place a new 90 horse-power boiler in their planing mill.

—The Keewatin Lumber Co.'s large mill at Keewatin, Ont., has resumed operations for the regular summer's work.

—Ramesbottom & Spencer's saw mill at Little Current, Ont., has commenced cutting, with prospects of a busy season.

—F. Lloyd, of Chemaimus, B. C., is erecting a saw mill at Hall's Crossing, having a capacity of 20,000 feet per day.

—The dam of Messrs. Boivin & Gagnon's saw mill at Baie St. Paul, Que., was severely damaged by floods on the first of June.

—The city of Winnipeg has awarded the contract for the supply of lumber to Mr. D. E. Spragge, at $13.90 per M. delivered.

—The Muskoka Mill and Lumber Company, are reported to have secured 360 square miles of fine lumber district in New Brunswick.

—The Simcoe Wood & Lumber Company, Simcoe, Ont., has been incorporated under a provincial charter; capital stock, $45,000.

—Miller & Woodmain's steam saw mill at St. John, N. B., closed down a fortnight ago, the employees refusing to accept a reduction in wages.

—The W. C. Edwards Lumber Company, of Ottawa, has purchased a timber limit on the Black and Coulonge rivers, from McKay & Hough.

—The demolition of the old saw mills at Montmorency Falls, Que., has been commenced, their usefulness having become a thing of the past.

—It is reported that a large raft of logs belonging to the Victoria Harbor Lumber Co., containing 79,000 pieces, has broken loose in Georgian Bay.

—Burglars recently broke into the office of Messrs. Dyck & Dauming, lumber dealers, Winnipeg, but secured no booty beyond fifty cents' worth of postage stamps.

—J. R. Booth has finished the re-building of the old Perley mill on the Chaudiere river, Ottawa, and operations have begun. About two hundred men will be employed.

—O. E. Konkle, of the Hamilton Lumber Company, of Hamilton, in conjunction with an American capitalist, will erect a $200,000 opera house and hotel in that city.

A sawdust explosion took place in the Ottawa river a few days ago. After the explosion about fifty feet square of sawdust, two feet thick above the surface of the water, floated away.

—Since the opening of navigation there have been five million feet of lumber shipped from the Ottawa docks by barge for the English market. It is an unprecedentedly heavy shipment.

—The Musquash Lumber Co. has been incorporated in New Brunswick with a capital stock of $25,000, to manufacture lumber, etc. John Sealy, St. John, N. B., is one of the incorporators.

—Mr. C. H. Waterous, general manager of the Waterous Engine Works Co., Brantford, visited St. Paul recently in connection with the rebuilding of their branch factory recently destroyed by fire.

—The Montmagny Manufacturing and Electric Company, of Montreal, are applying for incorporation, with a capital of $10,000. The manufacture of lumber is one of the objects of the new company.

—Mr. Robert Stewart, lumber merchant, of Guelph, has purchased a timber limit, ten miles up the Muskoka River from Bracebridge, from Mr. C. W. Hays. There are 300 acres in the limit, all pine.

—J. W. Baker has erected a new steam saw mill at Lake Edward, Que., and will shortly commence sawing spruce logs there, of which a large quantity were cut last winter upon the limits around Rat river and the lake.

—The Eau and Bow River Lumber Company, of Calgary, met with a serious loss recently by the bursting of a boom by the freshet. The boom contained about $5,000 worth of logs, most of which have gone down the river.

—The Rathbun company's mill, at Lindsay, Ont., has recently been enlarged. A new 100 horse-power Wheelock engine, a shingle mill, and an automatic machine for feeding the furnaces with the refuse, have been added.

—A log drive, consisting of three million feet of timber, mostly white pine, recently arrived at D. Sprague's mill at Winnipeg, having been rafted over a distance of 500 miles. The timber was cut from the Lake of the Woods district.

—It is reported that the Canada Lumber Co., of Ottawa, have disposed of their limits and improvements on the Mississippi to Wm. Caldwell, formerly of Lanark, who owns the saw mill on the south side of the river. The sale includes the limits, all the logs on the river after this season's cut, the shanty and mill appurtenances.

The E. R. Burns Saw Co., whose works in Toronto were destroyed by fire recently, have begun the rebuilding of their factory. The new building, which is being constructed of brick, will be very much larger than the old one, and will be supplied with a full outfit of modern machinery. Orders are now being filled at their branch factory in Montreal.

Muskegon, Mich., from being one of the largest lumber producing points in the States, is fast retrograding, until this season the cut will not much exceed 100,000,000 feet.

—The W. C. T. U. of the Dominion are taking an active interest in the welfare of raftsmen and lumbermen. During the past winter large parcels of literature, scrap books and comfort bags have been sent to the lumbermen in the Ottawa and Muskoka districts, which, it is said, are much appreciated by the men. A missionary has been engaged for three months to visit the camps.

—From the Ottawa Citizen we learn that probably the most commodious mill platform in America is that in connection with Mr. J. R. Booth's mills in that city. Since the acquisition of the Perley & Pattee mill the platform has been extended in nearly every direction, and now ample room is afforded the large number of men to keep the lumber properly classified. The work is so thoroughly systematized that a particular place is allotted to lumber of every grade and dimension, and a fair average of what leaves the platform daily is obtained through the medium of a check book in which all loads are marked.

FIRES AND CASUALTIES.

FIRES.

—On the 10th of June A. Tuttle's planing mill at Moncton, N. B., was burned. Loss, $3,000.

—John Dale's saw mill on Trading Lake has been destroyed by fire. Loss, $2,000; no insurance.

—J. H. Davey's sash and door factory, Bradford, Ont., destroyed by fire. Loss, $1,000; no insurance.

—Kilbourn & Dunbar's saw mill at Kemble, Ont., has been destroyed by fire. Loss, $2,000; insurance, $1,000.

—The steamer Red River arrived at Selkirk on May 26 with the first barge load of lumber of the season. It came from Drake's mill.

—Corry Bros. steam saw mills at Havelock, Ont., were burned to the ground on the 6th of June. The loss is only partially covered by insurance.

—Hamilton's steam saw mill, St. John, N. B., was destroyed by fire recently. The insurance had recently been cancelled because the chimney had no spark arrester.

On the 13th of June the shingle and planing mill at Hepworth, Ont., owned by James Hawley and leased by William Foster, was burned. It is supposed that a spark from the furnace falling in the dry cedar shavings, was the origin of of the fire. No insurance.

—J. & T. Conlon's saw mill at Picnic Island, Little Current, Ont., was destroyed by fire on the 14th ultimo. The mill was one of the largest on the Georgian Bay, running two circulars and a gang saw, and employed from 100 to 125 hands. It will be some time before the mill can be rebuilt. The loss amounts to about $50,000, with insurance of about $20,000.

—A serious conflagration occurred at New Westminster, B. C., by which nearly the whole of the Royal City planing mills were consumed. The machine shop and plant, the shingle mill, box factory, three engines, four boilers, lumber racks, lumber piles, and wharf were destroyed. The loss is estimated at $100,000, and insurance $75,000. The fire originated in the furnace room.

CASUALTIES.

—While adjusting a belt in Philip Brook's saw mill near the village of Newmarket, Ont., a few days ago, James Titus, had his left arm nearly severed from his shoulder.

4

QUARTERLY ANNUAL INSPECTIONS BY AN EXPERT ENGINEER

Our Steam Boiler Policy covers all loss or damage to the Boilers, also to property of every kind on the premises or elsewhere, whether it is the property of the assured or of others for which the assured would be liable in case of explosion.

SUBSCRIBED CAPITAL, $200,000

FULL GOVERNMENT DEPOSIT

THE STEAM BOILER AND PLATE GLASS INSURANCE CO. OF CANADA

Head Office - London, Ontario

J. H. KILLEY, Consulting Engineer. JAMES LAUT, Manager. S. JONES PARKE, Q.C., President.

REAMER LUMBER CO. LTD.

WHOLESALE DEALERS IN

WHITE PINE AND HARDWOODS

41 Park Row New York

PERSONAL.

Mr. Alex. Fraser, the millionaire lumberman of Weatmeath, Ont., has purchased a residence in Ottawa, and is going to the capital to reside.

Mr. W. H. Drydale, of Buenos Ayres, in company with Mr. C. A. McCulloch, of New York, visited Ottawa recently. Mr. Drydale is a son of the president of the widely known Drysdale Lumber Company, of Buenos Ayres, and is making a tour of the lumber districts to study the various phases of the business preparatory to being accepted as a member of the firm.

PUBLICATIONS.

A handsome catalogue of 190 pages, in embossed cloth binding, has been received from Messrs. John Bertram & Sons, proprietors of the Canadian Tool Works, Dundas, Ont. The book is embellished with illustrations made direct from photographs of numerous iron, brass and woodworking machines manufactured by this company, accompanied by letterpress descriptions, prices, &c.

An unique feature of the Review of Reviews, so ably edited in England by Mr. W. T. Stead and in America by Dr. Albert Shaw, is its summary each month, of the contents of the leading magazines of the world, for this summary includes the best of English and French journals. Even newspaper men, who are forced to cover a good deal of reading each month, find this feature of the Review of Reviews most helpful.

TRADE NOTE.

Mr. John J. Gartshore, of Toronto, recently sold 70 tons of steel rails to Giles Bros. & Co., Braeside; also locomotive, 12 cars and 1½ miles of light steel rail to C. A. McCool & Co., Cartier, for logging purposes.

The CANADA LUMBERMAN, $1.00 per year. Subscribe.

J. F. EBY HUGH BLAIN

SNOW GONE

Of course you will want CAMP SUPPLIES. Your Fall orders must be nearly exhausted. BEFORE ordering your Spring Supplies write us for samples and quotations. We quote Currants and Raisins 'WAY DOWN, and our JAPAN TEAS are special value. Just drop us a line.

EBY, BLAIN & CO.

WHOLESALE GROCERS - TORONTO, ONT.

SHURLY & DIETRICH

GALT, ONT.

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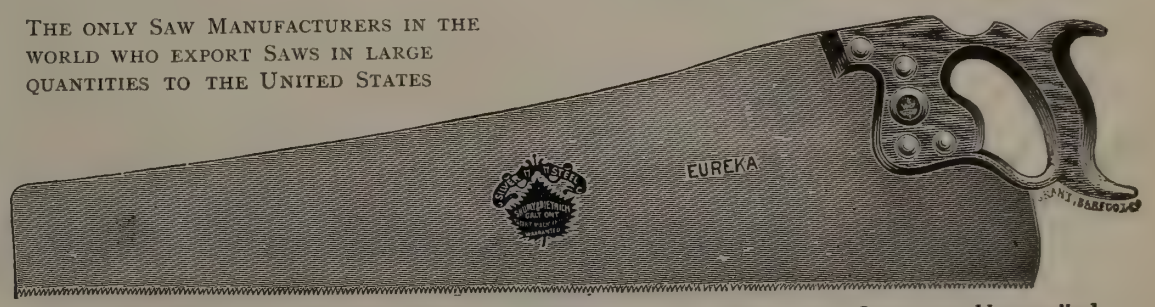
THE ONLY SAW MANUFACTURERS IN THE WORLD WHO EXPORT SAWS IN LARGE QUANTITIES TO THE UNITED STATES



SOLE PROPRIETORS OF THE SECRET CHEMICAL PROCESS OF TEMPERING : : Our Silver Steel Saws are Unequalled

Pumps & HYDRAULIC MACHINERY

DUPLEX AND SINGLE STEAM AND POWER

NORTHEY, LD. TORONTO

BRITISH COLUMBIA DOUGLAS FIR.

CORRESPONDENCE being carried on in the columns of the Timber Trades Journal, of London, Eng., brings out some strong points favorable to the Douglas fir of British Columbia. A writer from Virginia would give a larger meed of praise to the pine of his state, but an answer comes from A. C. McDonald, of Victoria, B. C., pointing out that the largest ship building firms on the Clyde give their preference to the "suitability of theDouglas fir lumber for ship building purposes." Strength is given to this communication when it is remembered that the United States Navy at Wilmington, Del., have used lumber from Burrard Inlet for supply purposes in preference to that from their own country. Considerable quantities of British Columbia timber have also been used by the Montreal Harbor Board in their operations of deepening the canals of the St. Lawrence. W. J. Stevens, another ship builder, confirms all that is said by these others as to the superiority of Douglas fir, where durability is desired.

WHY PULLEYS RUN UNSTEADY.

CENTRIFUGAL force has less to do with making a pulley run unsteady than the mere tendency it has of trying to get where it can rotate about its own centre of gravity. A wheel is generally looked upon as so much weight, and, if held off its centre, must go switching about like a heavy stone in a short arm sling, tending to pull the machinery to pieces. This may be well enough for a start, while the wheel is getting up to speed, but the time soon comes when the wheel will turn to its own centre and let the shaft swing for a while. Just notice how the juggler can seize a dish of any kind, as a dinner plate, for instance, and throw it up with a whirling motion, and while in the air, catch it on the end of a stick and cause it to rotate with ease. At first the plate is switched about by holding it off to one side of centre, but as the speed increases, it gradually brings the point of support near the centre, till at last it is allowed to spin on its own centre of gravity. In this case all the driving power, supporting force and the resistance of the load were brought to one single point, with nothing to react upon but the inertia of the plate.

THE POWER OF FLOWING STREAMS.

COMMON opinion respecting the energy or power of flowing streams is nearly always exaggerated, and greatly so. A current of large area conveys an idea of an almost irresistible force, when in fact it represents but a trifling power. The following table, taken from the Mechanical World, will serve to show how little work is represented by the current of streams. The force that may be utilized, or the head seen in the third and fourth columns, is very slight, and is the height to which the water will rise when obstructed. This depends, in a measure, on the shape of the obstructing faces. A plain radial current wheel will give not more than two-thirds the work that a well made Poncelet wheel will, because the water will rise higher on the curved floats of the latter named wheel.

Velocity of Steam.		Equivalent Head.		Pressure.	Total Energy.
Miles per Hour.	Feet per Second.	Feet.	Inches.	Pounds per Square Inch.	H. P. per Square ft. Sec. Area.
1	1.467	0.033	0.43	2 1	0.0055
2	2.933	0.134	1.62	8.4	0.0445
3	4.4	0.300	3.69	18.9	0.15
4	5.867	0.534	6.42	33.0	3.355
5	7.333	0.834	10.07	52.5	0.694
6	8.8	1.200	14.36	75.6	1.2

POWER OF MILL STREAMS AND FLUMES.

THE following table shows the number of pounds of water that will pass through an orifice an inch square under various heads from one to ten feet ; also the foot pounds of work there are in those quantities of water, the net foot pounds per minute utilized by a wheel with a rating of 80 per cent., and the horse-power developed by the wheel :

Head feet	Cubic feet per minute (actual)	Lbs. per min. (62½ lbs. = 1 cubic foot.	Foot lbs. per minute (gross.)	Net foot lbs. per min. (80 per cent. realized).	Horse-power (80 per cent. duty.)
1	2.1376	133.2437	133.2437	106.592	.0034120
2	3.0272	188.6955	377.2910	301.913	.009149
3	3.6992	230.5835	691.7505	553.400	.016770
4	4.2752	266.2935	1065.1740	852.139	.025822
5	4.7808	298.0032	1450.0160	1160.013	.035152
6	5.2352	326.3275	1957.9650	1566,372	.047466
7	5.6576	352.5671	2468.5997	1974.880	.059845
8	6.0480	376.992	3015.936	2412.749	.073114
9	6.428	399.7312	3597.58c8	2878.065	.087214
10	6.7648	421.6725	4216.725	3373.380	.102252

Representative Lumber Manufacturers and Dealers

Town	Railway, Express, or nearest Shipping Point	Name	Business	Power, Style and Daily Capacity
Ottawa, Ont.	Ottawa	**Booth, J. R.**	Lumber, Wholesale and Retail	Steam, Circular and Band Mill
Ottawa, Ont.	Ottawa	**Bronson & Weston Lumber Co.**	2 Sawmills, White and Red Pine, Wholesale	Water, Gang and Band, 450m
Parry Sound, Ont.	Utterson	**Conger Lumber Co.**	Lumber, Wholesale and Retail	
Parry Sound, Ont.	Parry Sound	**Parry Sound Lumber Co.**	Saw, Shingle and Lath Mills, Pine, Wholesale	Water, Gang, Circular, Saw 90m, Shingles 70m, Lath 30m
Muskoka Mills, Ont.	Midland	**Muskoka Mill and Lumber Co.,** Head Office, Arcade, 24 King st. w., Toronto	W. Pine Lumber, Lath and Bill Stuff, all lengths.	2 Mills, Water, 1 Band, 2 Gangs and 3 Circulars.
Alexandria, Ont.	Alexandria	**McPherson, Schell & Co.**	Cheese Box Factory, Pine, Spruce, Cedar	
Almonte, Ont.	Almonte	**Caldwell, A. & Son**	Sawmill, Pine, Lumber, Hemlock, Hardwoods	Circular, 3m
Barrie, Ont.	Barrie	**Dyment & Mickle**	Sawmill, Pine, Spruce, Cedar, Hardwoods	Steam, Circular, 40m
Barrow Bay, Ont.	Wiarton	**Barrow Bay Lumber Co., Limited**	Saw, Shingle and Heading Mill, Pine, Cedar Oak, Oak Railway Ties, Paving Blocks	
Blind River, Ont.	Blind River	**Blind River Lumber Co.**	2 Saw, Sh. and Lath Mls., Pine, Hem., Bl. Birch	Steam, Circular, 16m
Bobcaygeon, Ont.	Fenelon Falls	**Boyd, Mossom & Co.**	Lumber, Wholesale and Retail	Stm., Band, Cir., S. 75m, Sh. 60m
Barrie, Ont.	Barrie	**Burton Bros.**	Lumber, Wholesale and Retail	
Waubaushene, Ont.	Waubaushene	**Georgian Bay Consolid. Lumber Co.** Hd. office arcade 24 King st. w., Toronto	Pine only	
Calabogie, Ont.	Calabogie	**Carswell, Thistle & McKay**	Lumber, Wholesale and Retail	Waubaushene mill, stm., 200m; Pt. Severn mill, water, 120m
Callander, Ont.	Callander, G.T.R.	**John B. Smith & Sons** Head Office, Strachan Ave., Toronto	White and Red Pine Lumber, Bill Stuff, Lath and Shingles	
Collins Inlet, Ont.	Collins Inlet	**Collins Inlet Lumber Co.**	Lumber, Pine, Oak, Ash, Birch, Whol. and Ret.	Steam, 2 Circular, 80m
Glammis, Ont.	Pinkerton	**McIntyre, N. & A.**	Saw, Shingle and Lath Mill, Timber Lands, Hemlock, Pine, Lumber, Hardwoods	
Hamilton, Ont.	Hamilton	**BRADLEY, MORRIS & REID CO.**	Lum., Tim., Pine, Hem., Hwds., Whol. and Ret.	Steam, Cir., Saw 14m, Sh. 20m
Huntsville, Ont.	Huntsville	**Heath, Tait and Turnbull**	Sawmill, Pine, Spruce, Hemlock, Hardwoods	
Hamilton, Ont.	Huntsville and Katrine	**Thomson, Robert & Co.**	Sawmill, Pine, Spruce, Hardwoods	Steam, Circular, 25m
Keewatin, Ont.	Keewatin	**Dick, Banning & Co.**	Sawmill, Pine, Hardwoods, Wholesale	Steam, Circular, 4m
Keewatin, Ont.	Keewatin	**Keewatin Lumber & Mfg. Co.**	Saw, Lath, Sh. and Pl. Mill, Moving Posts, Pine	Steam, Circular
Lakefield, Ont.	Lakefield	**Lakefield Lumber Mfg. Co.**	Lumber, Wholesale and Retail	Water, Band and Circular, 100m
Little Current, Ont.	Sudbury	**Howry, J. W. & Sons.**	Lumber, Wholesale and Retail	
London, Ont.	London	**Gordon, James**	Exp. and dlr. in Am. Hwds, made to specification	
Longford Mills, Ont.	Longford	**Longford Lumber Co.**	Saw and Plan. Mill, Tim. Lands and Logs, Pine	Steam, Band and Circular, 100m
Norman, Ont.	Norman	**Minnesota & Ontario Lumber Co.**	Lumber, Wholesale and Retail	
Louise, Ont.	Elmwood, G.T.R.	**S. B. Wilson & Son**	Hardwoods, Shingles, Lath, Handles	
Toronto, Ont.	Warren, C.P.R	**The Imperial Lumber Co., Limited.**	Pine	Steam, Circular, 20m.
Toronto, Ont.	Cache Bay, Ont.	**Davidson, Hay & Co.**	W. Pine, Lath, Shingles, Dim. Timber, Car Sills	80 M. per day, Stm., 2 Cir. Saws
Toronto, Ont., Mill: Stony Lake	Lakefield	**S. J. Wilson & Co.**	Pine and Hardwood, Wholesale	Stm, 2 Band, Cir. & Gang, 140m
Toronto, Ont.	Toronto	**F. N. Tennant**	Lumber, Wholesale	Steam, Circular, 15m.
Toronto, Ont.	Toronto	**Donogh & Oliver**	Lumber, Wholesale	
Toronto, Ont.	Toronto	**Victoria Harbor Lumber Co.**	3 Saw, Shingle and Lath Mills, White Pine, Whol.	Com.
Toronto, Ont.	Toronto	**W. N. McEachren & Co**	Lumber, Wholesale	Stm., Cir., Gang and Band, 140m
Toronto, Ont.	Toronto	**James Tennant & Co.**	Lumber, Lath, Shingles, etc., Wholesale	Com.
Toronto	Toronto	**DeLaplante & Bowden**	Pine and Hardwood Lumber, Whol. and Retail	Com.
Toronto, Ont.	Toronto	**James McBain Reid.**	Ry. and Ship Timber, any required dimensions	
Wiarton, Ont.	Wiarton	**Miller, B. B.**	3 Sawmills, Lumber, Barrel Heads	
Montreal, Que.	Montreal	**Dufresne, O. Jr. & Frere**	Sawmill, Pine, Spruce, Hemlock, Hdwds., Whol.	Stm., Wr., Cir., Port. & Sta., 10m
Montreal, Que.	Montreal	**SHEARER & BROWN**	4 Sawmills, Oak, Ash, Elm, Pine, Hem., Dim.	Steam, Circular and Band, 50m
Moodyville, B.C.	New Westminster	**MOODYVILLE SAWMILL CO.**	Sawmills, P. Fin, Spruce, Cedar, Hardwoods	2 Stm., 2 Wat., Band, Cir., 40m
New Westminster, B.C.	New Westminster	**Brunette Sawmill Co.**	Saw and Planing Mills, Sash, Doors and Blinds. Fir, Cedar, Spruce, Hardwoods	Steam, Circular, 20m
Canterbury, N.B.	Canterbury Stn.	**James Morrison & Son**	Sawmill. Pine, Hardwoods	Steam, Gang and Circular
Bridgewater, N.S.	Bridgewater	**DAVIDSON, E. D. & SONS**	5 Saw, Shgle. and Lath Mills, Pine, Spr., Hwds.	Steam, Circular, 38m
South River, Ont.	South River, G.T.R.	**South River Lumber Co., Ltd.**	Pine, Spruce, Birch, Hemlock, Shingles	Water, Circular and Gang, 200m
				Stm., Cir., 40m, Shingles, 35m, Lath, 15m

Lumbermen desirous of being represented in this Directory can obtain information in regard to rates by communicating with the Publisher.

LUMBER TRUCK WHEELS

The Montreal Car Wheel Co.

.... MANUFACTURERS OF ....

Charcoal Iron Chilled

RAILROAD WHEELS

OFFICES:

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WORKS: LACHINE, QUEBEC

We make a specialty of Wheels suitable for the requirements of Lumbermen and Street Car Service, and can supply them Bored, Finished and Balanced.

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OAK TANNED BELTING

TORONTO
20 FRONT ST EAST
TELEPHONE 475

THE J.C.McLAREN BELTING Co MONTREAL

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 24th of each month to insure insertion in the following issue.

WANTED

FOR HEMLOCK, DIMENSION LUMBER, hardwood flooring, cedar shingles, piles, sawdust, etc., write J. E. MURPHY, lumberman, Hepworth Station, Ont.

$5,000 CASH and balance can remain on mortgage for finest lumber yards in Toronto, at Queen's Wharf, with buildings and brick residence and large tract of land, best of railroad facilities for shipping. $22,500 will purchase this property, which is a bargain seldom offered, easily worth $35,000. Apply G. G. Christie, Lumber Dealer, 86 Bay street, Toronto.

FOR SALE

PORT ROWAN SASH AND DOOR EACTORY and Sawmill and Shingle Mills. The Factory is fitted with new 60 h. p. steel boiler, also with following new machinery by Macgregor and Gourlay, of Galt.

Large Matcher and Planer combined, Band Saw, Power Mortiser, Shafter, Jointer and Sandpape.er.

Apply

Box 16, Port Rowan, Ont.

FOR SALE OR TO LET

TWO-STOREY FRAME PLANING MILL AND Carpenter Shop—Vine Avenue, Toronto Junction, including boiler and engine, with or without machinery; size of building, 40x120 ft.; steam heated; stable, storehouse, office, and large yard in connection; can be utilized for any manufacturing business. Apply, J. P. WAGNER, Toronto Junction.

RAILS FOR TRAMWAYS

NEW AND SECOND-HAND STEEL AND iron rails for tramways and logging lines, from 12 lbs. per yard and upwards; estimates given for complete outfit.

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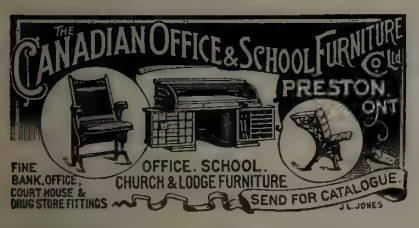

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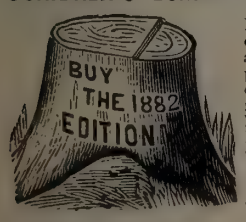

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— ON —

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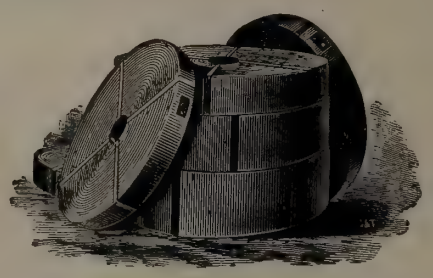

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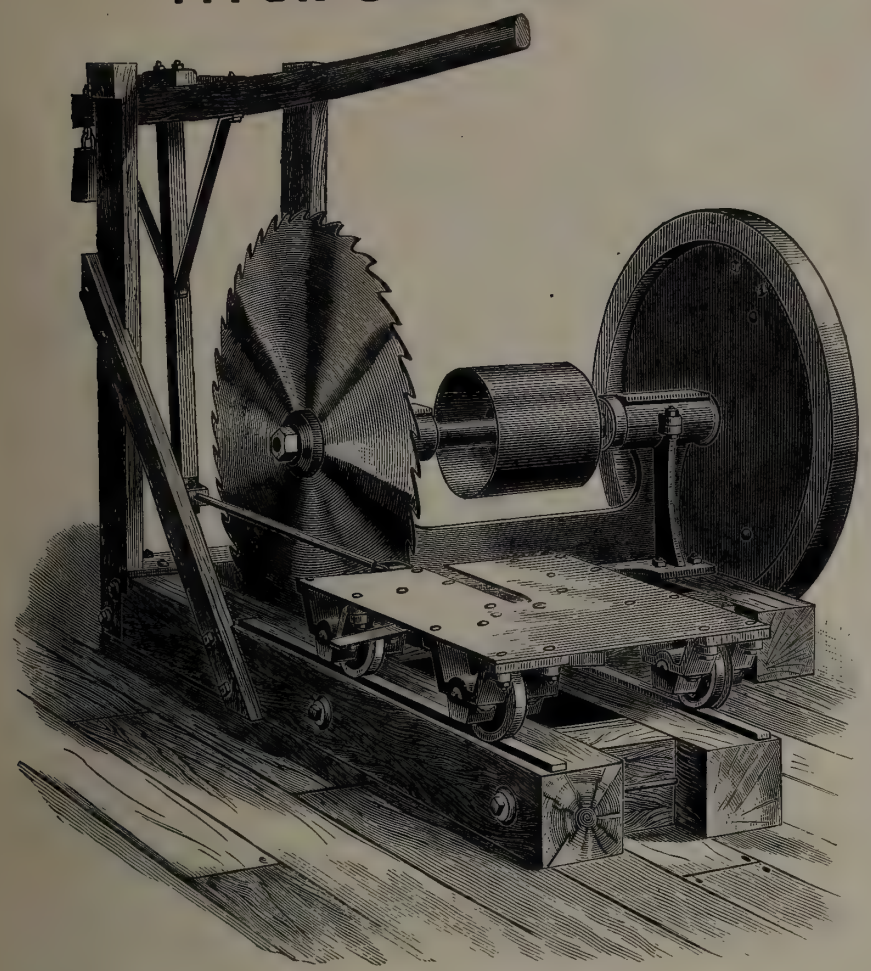
...OR SPLITTER...



Timber when split with an axe will follow the grain of the wood, when split with a saw it is of course perfectly straight—no matter how winding the timber may be—and the first cut then is a perfect shingle; on this account alone a splitter will not only save from 10 to 25% of the timber, but will add about 5,000 shingles to each day's cut.

Make more Shingles per Day and more from the same quantity of timber and **You Will Save Money!**

F. J. DRAKE'S IMPROVED

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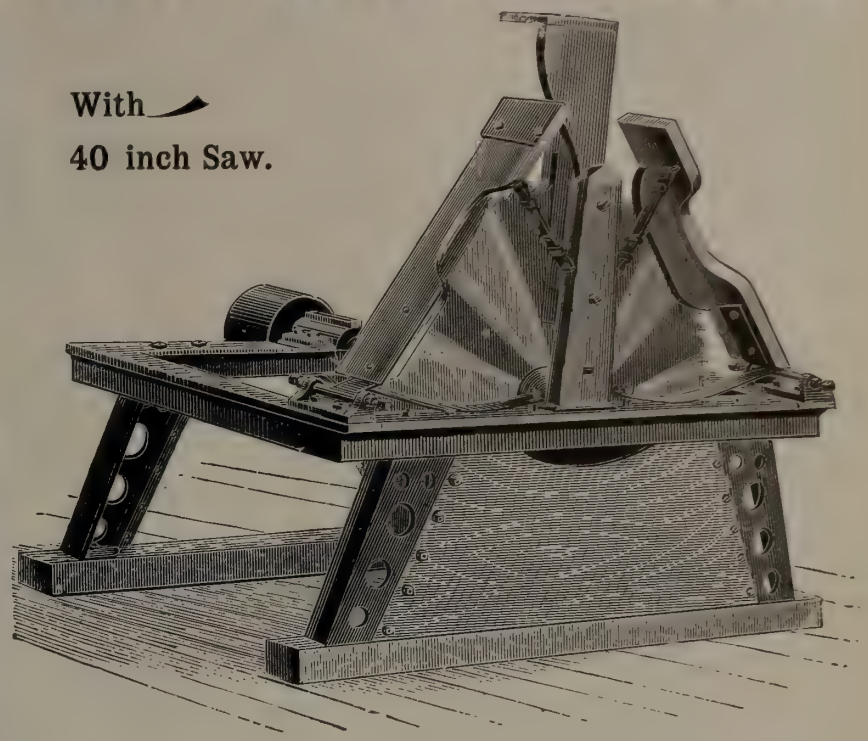
With 40 inch Saw.

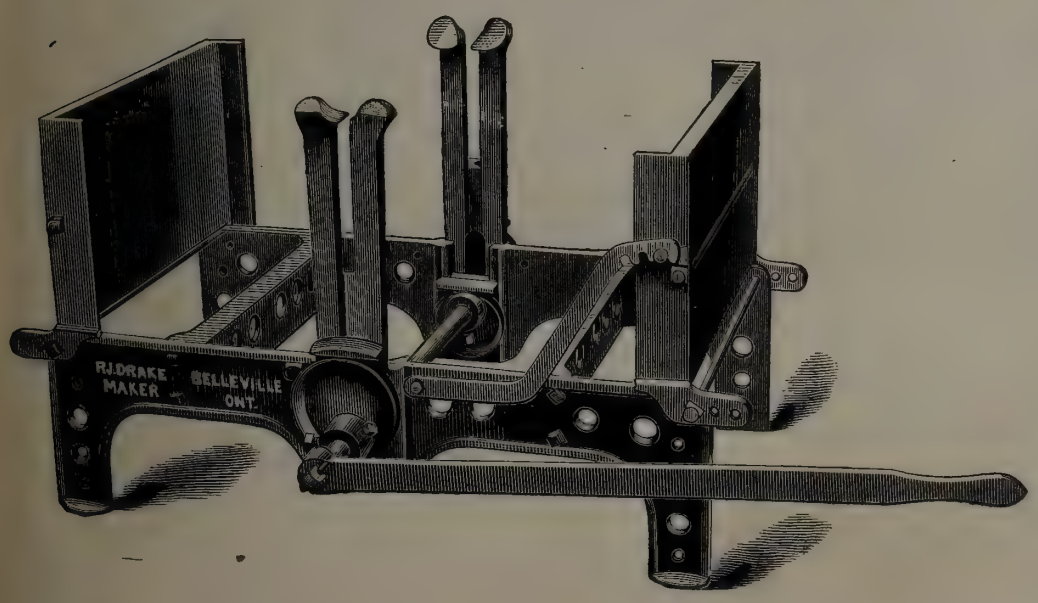


Will make more No. 1 Shingles from the same quantity of timber than any Wheel Jointer in existence.

It has a heavy iron frame made for two operators, two inch steel saw arbor, with extra long bearings; driving pulley 8 inches diameter, 7 inches face; saw 40 inches diameter, 16 guage; speed, 1600 per minute.

MILLMEN who have once used this machine will not use any other. For capacity, removing sap-knots, rot or any other imperfections, for making parallel shingles and economy of stock, it is superior to any other.

XXX SHINGLE PACKER



The Frame is constructed of iron—double bolted and braced. A Steel Shaft with Four Eccentrics presses the shingles tightly together from both top and bottom of bunch by single movement of Lever or Handle.

They are the strongest packer made, and will pack tighter than any other—both using same length of lever.

They are "self-locking"—when the bunch is pressed the lever will retain its position without being held there.

They can be raised on legs to any desired height. Bolt holes are drilled in the frame for this purpose.

They have less joints to rack loose than any other, and if they ever do get loose can be tightened up easier.

They can be used to pack in from either end, and the bunch of shingles can be removed from either end.

They are adjustable for 16 or 18 in. shingles, and can be easily changed to make five different lengths and work equally as well with one size as the other.

They are made 20 in. wide for 25 courses; 22½ wide for 22 courses; and 25 in. wide for 20 courses. I keep the 20 in. ones always in stock and make other sizes to order.

These Machines are shipped all complete ready for work. When ordering give plain directions for shipping.

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cannot afford to run old-time friction feed works

READ THE FOLLOWING

Wm. Young, Wiarton, Ont., writes 21st December, 1893: "Re Steam Feed, Prescott Direct Acting, I purchased from you last September, it is giving me entire satisfaction. I find that it does not require any more steam than the friction rope feed and it has increased the capacity of our mill 20%, and the sawyer has entire control of feed. My boiler is 56 x 14, with 60 2½" tubes, engine 13 x 21, 85lbs. pressure."

Seaman & Newman, Wiarton, Ont., write June 1st, 1894: "In regard to the Prescott Direct Acting Steam Feed bought of you, would say we are well pleased with it. We have a 60 x 12 ft. boiler and a 14 x 22 engine and we cut from 3,000 to 4,000 ft. more per day than we did with the old friction feed."

3,000 to 4,000 feet more of lumber per day, with the same cost for labor is an easy profit of $3.00 per day. This should pay cost of change in one season.—100%.

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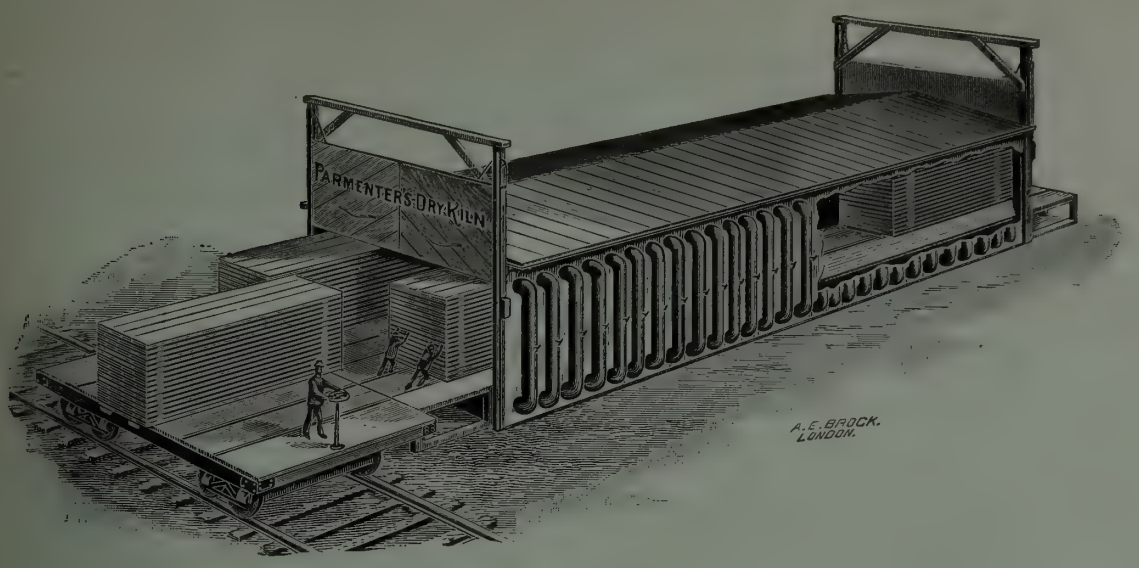

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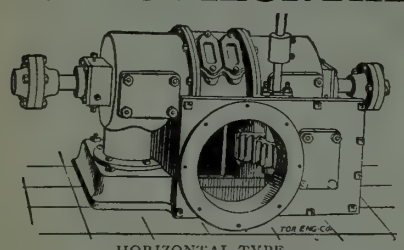

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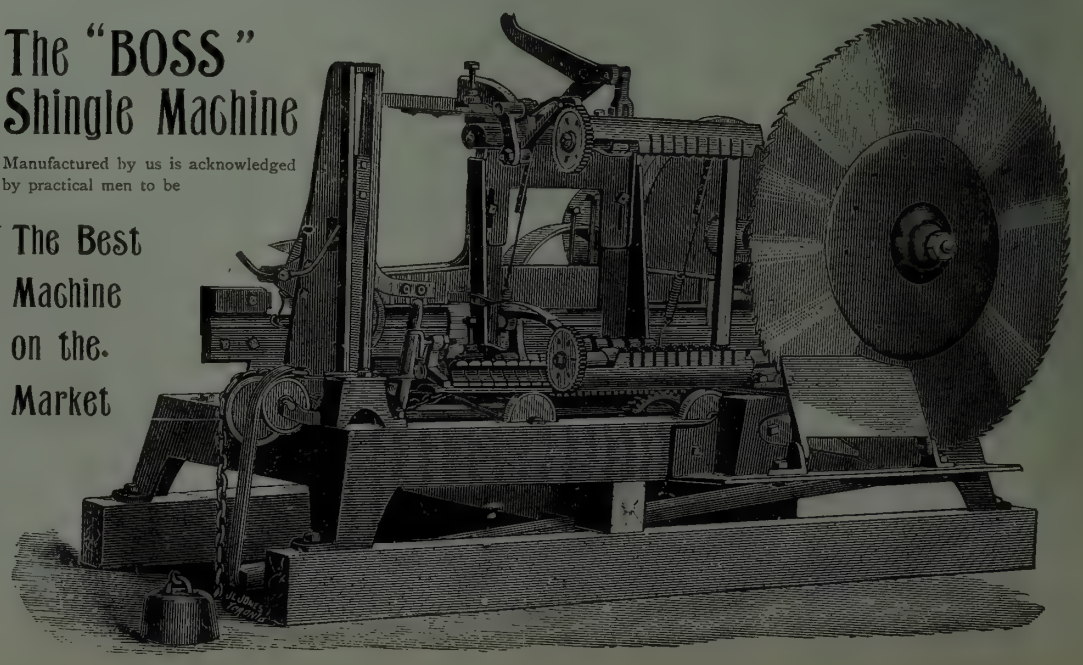

THE CANADA LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XV. NUMBER 8 | TORONTO, ONT., AUGUST, 1894 | TERMS, 1.00 PER YEAR SINGLE COPIES, 10 CENTS

For Governor of New York

COL. ALEXANDER S. BACON

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All friends of good government should vote for him. Can you not serve your Country and support him in turning the rascals out? Smash the rings!!

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"The Morse" is the only machine in the market that will reface Steam Valves in position.

3,000 MACHINES IN USE.

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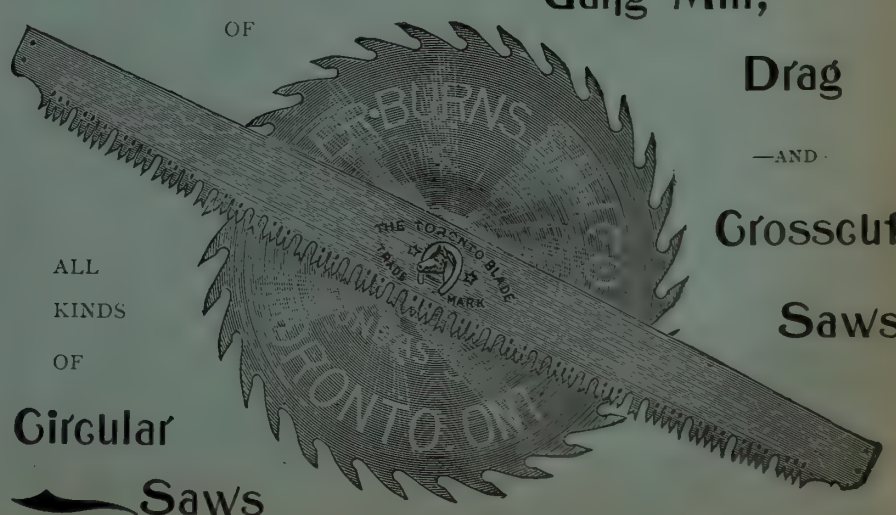

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THE PRESCOTT
Band Saw Mill

THE PRESCOTT BAND SAW MILL

in different sizes

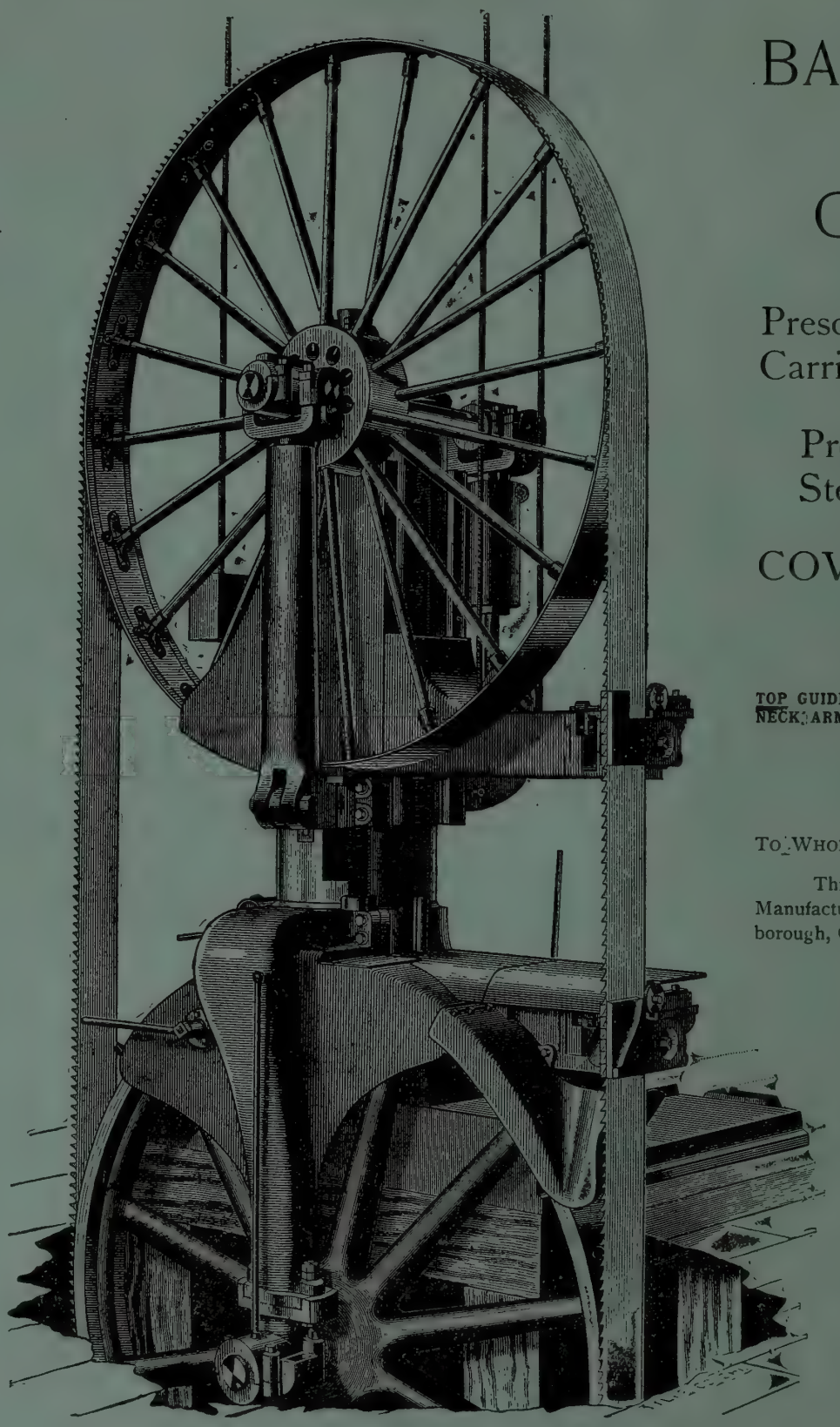
Ottawa, Can.,
July 5th, 1892.

Dear Sirs:

It may interest you to know that on June 30th last, in eleven hours, the Band Mill—driven entirely by water—which we got from you, sawed

4,047	feet	1-inch
85	"	1¼ "
11,723	"	1½ "
5,726	"	2 "
85,038	"	3 "
106,619	feet.	

Yours truly,
PERLEY & PATTEE



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TOP GUIDE NOW MADE WITH GOOSE NECK ARM

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This is to certify that the Wm. Hamilton Manufacturing Company, Limited, of Peterborough, Ontario, have been licensed to manufacture and sell throughout the Dominion of Canada, the Band Saw Mill known and called the "Prescott Patent Band Mill," also the device for Saw Mill Carriage known as the "Prescott Patent Offsetting Mechanism," and by virtue of said license the said Wm. Hamilton Manufacturing Company possess the exclusive right to build and sell said machines for Canada, the plans for said machines being furnished or approved by the undersigned.

(Signed)

D. CLINT PRESCOTT,

[COPY] Patentee.

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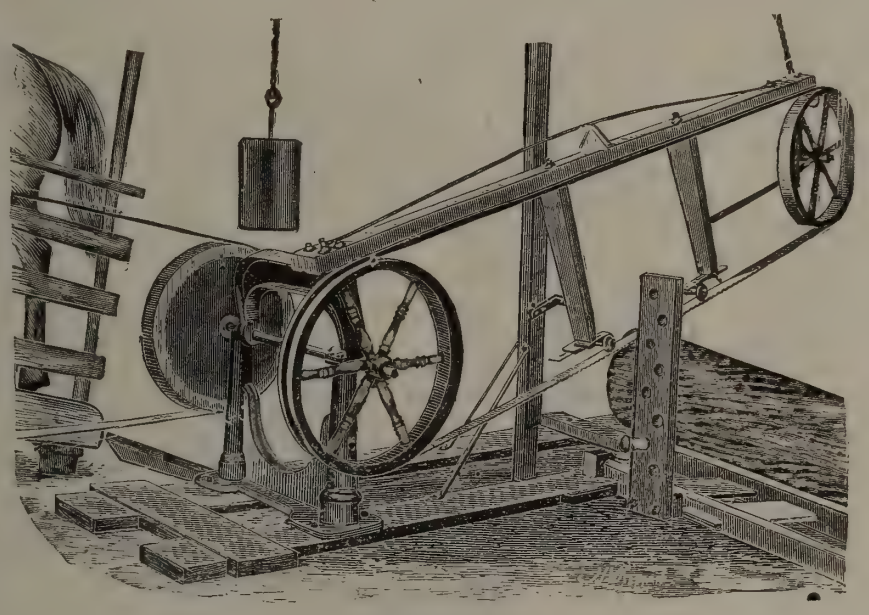
THE CANADA LUMBERMAN

VOLUME XV. NUMBER 8 — TORONTO, ONT., AUGUST, 1894 — TERMS, 1.00 PER YEAR SINGLE COPIES, 10 CENTS

CROSS-CUT BAND SAWS.

THE cross-cut band saw is designed to take the place of the drag and circular saws for cross cutting. As is shown by accompanying cut, the saw passes over the pulleys, A A, as in ordinary band saw rigs. At the points B B are rotary guides made similar to a small circular saw arbor. The tooth edge is turned down, the back passing between these collars on guide, giving the saw a quarter twist from the band wheel to the first guide, and between the two guides the teeth are turned down at right angles to the blade when it passes over the pulley again. After passing the second guide it twists back again to pass over the driving pulley.

At the point C is a guide that prevents the frame from moving out of a perpendicular line while moving up and down. The frame D is pivoted at the point E, and is balanced by the weight F, so it will remain in any position, and is easily moved up and down by the operator. The makers claim for this cross-cut band saw rig that, it will cut double the amount of any drag saw rig, with half the power, the saw scafe being only 1-16 inch. It is easily set up—requiring no foundations—runs perfectly still, no shaking or jerking. They claim that it cuts the block smoother than can possibly be done by either drag or circular saws; that it requires less filing than a drag saw to do the same work, as the plate is so very thin (21 gauge); and lastly, that it is a pleasure for a mechanic to operate it, it does its work so nicely. This saw is manufactured by the Eastman Lumber Co., Eastman, Que.



CROSS-CUT BAND SAW.

ELECTRICITY AND WATER-WHEELS.

THERE is no doubt that the growing use of electricity will, in the end, says the American Machinist, materially help the trade in water wheels that has been rather hardly pushed by the steam engine. Water powers are being, and will be, turned to account that would remain dormant but for electrical distribution of power. Where mills and factories can not be well located the energy of the falling water may be taken by electricity to convenient positions, and to some extent this is being and will be done. This will, however, cut but a small figure in the manufacture and sale of steam engines—probably not enough of a figure ever to be noticeable. It will in some instances provide for locating shops and factories that would not otherwise be built, and provide for the lighting of places that would otherwise grovel in the darkness of gas, or oil lamps. Electricity will help the water wheel without, to any appreciable extent, injuring the steam engine.

THE STEAM GAGE.

IN placing the gage on boilers, says Power, it should be so connected as to take steam from a part which will be as free from vibrations of pressure as possible, that is, away from the outlet to the engine, and a siphon should never be omitted. It is also necessary that the gage shall not be placed at or near the lower level of a connecting pipe which has a drop of any extent, which will create an excess of pressure on the dial by the weight of water on the column. In a battery of boilers there should be a gage on each boiler and not one gage for the whole.

Too much tension tends to destroy the elasticity of a belt, and when its tension is gone the belt is useless. Then, too, useless tension makes useless friction, and friction wears out journals and boxes, while it consumes more power.

BY THE WAY.

TIME works many changes. It is hardly safe for a man to be too dogmatic in these days of quick living and thinking. The fancy of to-day may be the fact of to-morrow. A suggestion to establish schools of forestry would, not far back in the present decade, have been laughed out of court by every lumber journal in the country. To-day, however, we find the lumber press and lumbermen seriously considering the question of establishing chairs of forestry in our universities, and of giving the subject a place upon our school curriculum.

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In other lines of commerce there is nothing very new in the technical school or academy for the special training of men and women in the trades that they may be following. One of the most conservative trades to take hold of work in this line has been that of flour-milling. Without getting out of the realm of level-headed business practice, why should we not have schools of forestry? And where better might they be established than on this continent, where the lumber trades occupy a foremost place? We suppose it is because of the immense quantities of timber that exist in Canada and the United States that attention has not been paid to the subject before. There has not appeared the necessity of preserving our forests, much less to adopt educational methods in training experts in the study.

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A study of forestry has a practical side in its application to the care, cultivation and extension of forest products. Work along these lines has been pursued with all their native energy and thoroughness by the Germans, and on another occasion there had been given in these columns an account of methods of German forestry. There is also what might be termed the academic view of the subject, which would consist in following the study of the trees of the forest on the lines that the botanist studies plants and flowers. It can hardly be said that this is too esthetic a view of the question for hard-headed lumbermen. Will the lumberman be any the less keen as a trader in lumber for commercial purposes because he can tell somewhat minutely of the origin, constitution and character of the trees that he fells.

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The question has come suggestively to the front in the United States through a little pamphlet, giving an account of the treatment and results of the year's work on the Biltmore forest in North Carolina. This forest is the property of Mr. Geo. W. Vanderbilt, and his purpose is to treat the Biltmore forest systematically on the lines of forest management. The experiment so far may be said to have been fairly successful and with perseverance along that line something practical is likely to be attained. In remarks, suggested by Mr. Vanderbilt's experiment, a writer in the Lumber Trade Journal, of New York, expresses the opinion that there is an opportunity, owing to the similarity in many of the forests in the United States and Canada, for the effecting of an arrangement for a system of forestry schools suitable to the wants of either country. Such schools might be established at the east on the dividing line between Canada and the United States, where common teaching might be had for young men from either country, who were desirous of learning forestry.

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Our cotemporary, the Northwestern Lumberman, of Chicago, who does not usually throw much sentiment into his views of lumber matters, speaks out in an article a week ago, saying that nothing is plainer than that the American people must be educated up to the importance of forestry, and thinks it would be an excellent idea for the teachers in our public schools to give their pupils a little talk whenever they could handily do so on the beauty and importance of trees. $50,000 is granted by the Washington authorities for the maintenance of the forestry division of the United States government, a sum which the Northwestern Lumberman does not hesitate to say is paltry and insignificant in contrast with the importance of the subject. Harper's Weekly of late date strongly advocates the giving of needed attention to the question of forestry. Prof. E. G. Houston, of New York, has just delivered a lecture on forestry, in which he advocates making elementary forestry a study in the lower schools, and is of the view that the tree planting practice, common now both in the schools of the United States and Canada, furnish an excellent opportunity for the inculcation of thousands on the subject.

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Where does Canada stand on the subject? In the person of the late forestry commissioner Phipps, no country had a more enthusiastic and intelligent student of this question, and he never lost an opportunity to keep the matter to the front. It is to be hoped that his successor, the Hon. C. F. Fraser, will see his way to, probably, further develop work on these lines, and devise plans, possibly, that will bring the question in more practical shape into our public schools. We are ourselves no sentimentalists on the question, but the necessity for greater care to the forests of Canada is becoming growingly noticeable to all who give unprejudiced thought to the question. We shall be glad to know what LUMBERMAN readers think of the subject.

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ONE of the most enterprising American firms owning limits in Canada is J. W. Howry & Sons, Michigan. Though severe depression has existed with lumbermen in the States, and things here have been sympathetically slow, this firm is showing very little restriction in business operations. Their mill at Fenelon Falls is now in operation, and they are already engaging men to start fresh camps at once. They will run two camps on the north shore of Georgian Bay and several near their mills at Fenelon Falls. What stock will be cut in Georgian Bay waters will be towed to Saginaw.

TALKS WITH WOOD-WORKERS.

A PAPER of some length, but of more than ordinary interest, on progress in the art of woodworking, has recently come under my notice. The writer, Mr. C. R. Tompkins, M. E., will be known, no doubt, to many readers, as a frequent and always able contributor to the trade press. The art of woodworking is believed to have been one of the earliest practiced by men, and its importance is shown by the fact of its continuing to exist under conditions of constant development.

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Previous to the introduction of the saw mill, the cutting of lumber into boards or planks, both in America and England, was performed by hand by the process known as pit-sawing. The log was placed upon a pair of saw-horses high enough to allow one man to stand beneath the log, while the other stood upon it, the two working a saw of sufficient length. Improved machines and appliances in woodworking have had to run the gauntlet of strong opposition, as has been the case with every new invention. When the first attempt was made to introduce the saw mill in England, the hand sawyers by their opposition practically placed a veto upon it. It is stated that in 1663 an enterprising company employed a Dutchman to erect a new saw mill in London, but that the enterprise had to be abandoned on account of the opposition of the hand sawyers. In 1767 a saw mill was erected and operated by a windmill at Limehouse, Eng., but it was soon destroyed by a mob. Another erected in the south of Scotland about the same time shared the same fate. Time, however, overcame prejudice, until to-day in England or America the saw mill is a feature of the age, until something better comes along.

* * * *

Next to the saw mill the most important machine that has been introduced, and one that has had more effect upon the progress of building than any other, is the planing machine, which dates from the invention of William Woodworth in 1826. Not only did the work of the planing machine of itself give a great impetus to the art of woodworking, but its introduction demonstrated that lumber could be dressed rapidly by the action of rotary cutters, leaving the inventors to apply the same principle to machines for other purposes.

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When the planing machine was introduced among British workmen the same spirit of opposition was manifested as against the saw mill. Excitement with journeymen carpenters ran high. They claimed that if machines of that kind were allowed to come into general use they would soon be thrown out of employment and their families would suffer for the necessaries of life. In some cities they refused to lay flooring that was planed and matched by machinery. But again time overcame prejudice.

* * * *

The moulding machine with its modern improvements has had much to do with progress in woodworking. Before the invention of this useful machine all mouldings were worked by hand, and only the plainest and simplest style of mouldings were used, but the demand for more artistic woodwork has brought the improved moulding machine into general use. But still the demand for artistic woodwork continued, and it has led to the invention of many other complicated and useful machines. Not only intricate carved work, but irregular-shape mouldings of the most elaborate kind, which were formerly worked only by hand, are now produced by special machines, which perform their work more accurately and in less time and more cheaply than hand labor. This change has demanded not only more accurate and skilfully-constructed woodworking machines, but a more skilful and intelligent class of woodworkers to operate them. In machine-stuck mouldings especially there is a great change as compared with those stuck at the present time and those of a few years ago. Architects and builders are more exacting than they were formerly. Once they were satisfied with mouldings provided they were of the correct shape and an even thickness, and if the surface required smoothing down by the liberal use of sandpaper, or sometimes the moderate use of a hand plane, no objection was heard. Even with the imperfect state of the art, the moulding machine was far preferable to the hand.

Probably no other branch of the art of woodworking has made more rapid advances than the manufacture of furniture by the use of machinery. It does not require a very old man to remember when most of the furniture was manufactured by hand, and the village cabinet maker, who was also an undertaker, was an important personage. When a young couple were married, the cabinet maker was called upon to furnish the necessary furniture for housekeeping; when baby was born, none but the cabinetmaker could furnish him with a suitable crib; and when death invaded the domicile, his services were again called into requisition to furnish a suitable casket and assist in consigning the body to its last resting-place. But the rapid progress in the art of woodworking has wrought a complete change. The village cabinet-shop has changed to the furniture store, and undertaking has become a distinct branch of business, the supplies in both cases being obtained from the factories, where machinery performs the work more cheaply and accurately than hand labor. It is within comparatively recent years that the makers of woodworking machinery have turned their attention to the construction of machinery specially adapted to the manufacture of furniture. Formerly it was thought that the same class of machines used in planing mills and sash and door factories were also adapted to the manufacture of furniture. The use of such machinery tended to reduce materially the cost of production, but the pressure of competition in the furniture trade created a demand for better facilities in order to increase the output, while reducing the cost of production.

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The whole history of woodworking machinery goes to illustrate very strongly the advancements of invention in mechanical lines. I suppose that a study of progress in invention in many other departments would show equal advances, but this much is sure, that the woodworking trades have been the means of drawing forth some of the cleverest inventive spirits of the age.

JAS.

BAND SAWS.

SAWS may be divided into four general classes—reciprocating, circular, cylindrical, and band or ribbon. The office of a saw is to sever by removing or wasting material, hence the thinner a saw can be had the more economy of power and materials. There is a certain limit of thinness beyond which a Mulay saw cannot go without bending, as long as it has a thrust instead of a pulling cut. The sash (or gang) saw can be made thinner than a thrust-cut Mulay, on account of being strained from both ends. The circular saw commences to limber out and wave at too high velocities, and (except for veneer cutting) must be thinner at the centre than at the circumference, to give clearance and to prevent binding and heating. Some economy of kerf and power is gained by the "double circular" mill, when two small circulars running in opposite directions, one cutting from the top and the other from the bottom of the log, in the same plane, are used instead of one large one. Something partly answering the purpose of straining is gained by the "side guides" of the circular saw, but still they waste stuff and power. As the cylinder saw never comes into competition with the Mulay, sash, circular or band saw, it may be left out of the present consideration.

The band saw has the advantage which the sash saw has over the Mulay, in being strained; and that which the circular has over both the Mulay and frame saw, in having a continuous instead of a reversing motion. The latter property makes it steady, running like the circular, and the former permits of its being thinner than the circular, and making, in consequence, less kerf, and taking less power to run it. It has the additional advantage over the circular, that it will cut other than in straight lines or flat planes.

The circular should not be used for work thicker than one-third the saw diameter. A 20in. square cant hence necessitates a 60in. circular, with a thickness of ¼in., and a kerf of 5-16; or two 30in. saws, 3-16in. thick, cutting out a ¼in. kerf. If we are cutting 1in. stuff with single saw we need nearly 21-16in. of wood to make a 16-16 board, which looks very much like 5-16=thirty-one and a quarter per cent. kerf, compared with the board, or 5·21=23 8 per cent. of the entire square cant wasted.

Using the double mill and thinner saws, we find about 5-4in. of wood necessary to the production of a 4-4in. board, being 25ft. of kerf for every 100ft. of board, or twenty per cent of the log turned into sawdust.

A band saw to effect this same work need be but 1-16 in. thick, and cut a kerf of but 3-32in. This means that an inch (32-32in.) board takes but 35-32in. of wood to cut it, being 3-32 as much kerf as board, and 3-35 in., or 8½ per cent. of the log wasted in sawdust. In other words, the band saw cuts 3-32in. kerf to the single circular's 10-32in., which looks as though it made 10-3, or 333⅓ per cent. as much in kerf as the band (and consequently in power). A 20in. cant which is 320-16in. thick, will cut about 320-21=fifteen 1 in. boards if a circular be used, but if a band saw be used it would cut about 640-35 or eighteen 1in. boards. The band saw is hence 3-15=twenty per cent. more economical as regards products. If the same saws were set to cut ½in. stuff out of a 20in. squared log, the circular would take 8-16+5-15=13-16=26-32 of wood to cut a ½in. board, and the band would take 16-32+3-32=19-32 of stuff to cut out the same. The circular would hence take 26-19 as much stuff for a given product as the band, its excess of stuff required being 5-18 or 26.3 per cent.; 20in. square cant would cut 320-13 or about twenty-four ½in. boards with the circular, while with the band it would cut about 63-19=thirty-three. Producing ½in. stuff the band would turn out 33-24=129 per cent. as much stuff as the circular.

It will be seen that in re-sawing the band presents special advantages in economy of stuff and power. As regards quality the band saw should scratch less stuff than the circular. The band offers for some timber cutting the best advantages of the circular in smooth and continuous action, and that of the scroll (or "jig") in capacity to saw at an angle, curve or bevel.—Polytechnische Revue.

HIGH SPEED ENGINES.

WE are very apt to think only of our own particular branch of engineering, says the Tradesman, when discussing any problem pertaining to it and this seems particularly so in the case of the high speed stationary engine. In stationary practice we see in first class engine rooms the high speed engines guarded with particular care and the room as free from dust and dirt as it can be made, so as to give all the bearings as little grit or foreign matter as possible. And on a 12×18in. high speed engine for sample, running perhaps 300 revolutions per minute, we think it wonderful that it runs and keeps cool, think the piston speed enormous, and hardly dare breathe while near it for fear of a hot box. Yet in locomotive practice we have speeds exceeding this in many instances, and have the engine without any foundation, so to speak, the main boxes never in line (going up and down over the frogs and crossings) and Jersey sand blowing around the engine until the running parts are almost white as snow, yet the engine runs, and gives comparatively little trouble. So that it seems foolish to brag so much about our high speed stationaries, when if run under the same conditions as the locomotives, they would be apt to give unending trouble.

On the other hand, it is very probable that if a locomotive was pinned down to a foundation it would do little better, as the freedom of motion to all its parts must be in a measure responsible for their running at all, the swinging and shaking absorbing jars which might be noticed materially if on a solid foundation.

THE GEAR BUSINESS.

THE gear business has grown to be quite extensive, so much so that one of the firms in this line has decided to secure a patent on bevel gears with plain surfaces for the flanks of the gear teeth. It may be that this firm has a special curve of their own to run with a straight flank tooth, but if they will look into the theory of the matter they will find that there is only one form that will work properly with a straight flank, and that form is determined by the flanks themselves, without any discovery being needed from any source.—Journal of Commerce.

VIEWS AND INTERVIEWS.

A Destructive Insect.

A report that has recently been issued gives some valuable particulars of the so-called spruce-destroying insect, which has done great damage to the spruce trees in the Adirondack region. Upon cutting down one of the infected trees for examination, longtitudinal furrows were found, varying from 1 in. to 6 in. in length under the bark, each occupied by one or two insects. The eggs are deposited along both sides of the upper part of the furrow. They lie close to each other, almost or quite in contact. When the larvæ emerge from the eggs they begin to feed upon the soft cambium, and to work their way under the bark at right angles to the main furrow. At first they are so minute, and work so close together, that they make no distinct furrows, but seem rather to devour entirely a very thin layer of the cambium. As they increase in size they gradually begin to form distinct furrows, and to take directions more divergent from each other, and from their original course. In this way colonies from contiguous furrows at length run together, and in time the whole trunk is surrounded by multitudinous pathways, and the death of the tree is accomplished. It is considered pretty evident that the trees are attacked all along during the months of June and July, and possibly as late as August. It is also suspected that the parent insect, after having established a colony in one place, may emerge from her furrow to repeat the operation in another place, either in the same trunk or another one; but this point could not be ascertained definitely.

Hints to Sawyers.

The following practical suggestions to sawyers are made by one who writes as though he knew his business:—First, acquire sufficient knowledge of machinery to keep a mill in good repair. Secondly, see that the machinery and saws are kept in good order. Thirdly, it does not follow that because one saw will work well, another will do the same on the same mandrel, or that even two saws will hang alike on the same mandrel. No two saws can be made that will run alike. Fourthly it is not well to file all the teeth of circular saws from the same side of the saw, especially if each alternate tooth is bent for the set; but file one-half the teeth from each side of the saw, and of the teeth that are bent from you, so as to leave them on a slight bevel and the outer corner a little the longest. Fifthly, never file any saw to too sharp or acute angles under the teeth, but on circular lines, as all saws are liable to crack from any sharp corners. Sixthly, keep your saw round so that each tooth will do its proportional part of the work, or if a reciprocating saw, keep the cutting points jointed on a straight line. Seventhly, the teeth of all saws wear narrowest at the extreme points; consequently they must be kept spread, so that they will be widest at the very points of the teeth, otherwise saws will not work successfully. Eighthly, teeth of all saws should be kept as near a uniform shape and distance apart as possible, in order to keep a circular saw in balance and in condition for business.

Getting Out Mahogany.

Mahogany, we are told by a writer in the London, Eng., Carpenter and Builder, though a very valuable wood is hard to get out of the forest where it grows. The way to go about the work of getting out mahogany logs is, first, to get a concession from the Nicaraguan Government. You must stand in, as the saying goes, if you get a concession; but an enterprising citizen from any country can go there and establish himself in the favor of the officials, and if he has a good record at home as a man able to attend to business, they grant him a privilege. But that is only the beginning of the trouble one has in cutting and exporting the wood. You then proceed to make bargains with the natives to cut and haul logs out of the forests. If you treat them kindly they will work for you—for a time at least. The best Indian labour costs about 2s. per day. It is often hard, however, to get them to work, as they live on fruits, and can sustain themselves without labour of any trying kind. Half of the year is called the rainy season, and it rains from May to October. It is then so wet, that one finds it impossible to get out any timber, and no one will work during the wet season. When the dry season opens they commence operations if you can get enough labour. You have to be careful with them, as they become easily misled, and often think you are taking some advantage of them. When they become convinced that something is wrong, whether they have cause to believe that such is the case or not, they get angry, and the feeling spreads among all the tribes. The woods are so dense and the work so trying on men brought there from other countries that they cannot stand it, and there is no profit in paying them what they require to risk their lives among the snakes and in the swamps where the mahogany grows. When the timber is cut they haul it, one log at a time, on a two-wheeled ox-cart especially made for the purpose. It is a very slow process, but it is the only practicable way to get the timber out. There are 400 and 500 logs to the acre, and the price of the wood is so high, partly because the timber is so hard to obtain. The average price for a good mahogany log is £25. The trade market for mahogany is in France. The price paid there is better than in the United States, where some logs are shipped and the money is paid as soon as the logs arrive in port. There are not so many fortunes in mahogany as some people imagine, as the wood is difficult to draw from the tangled forests of Nicaragua. When a man from the North goes to Nicaragua he stands the climate very well for a year and is very energetic, and wonders at the spirit of laziness that prevails among all the people. But after awhile he is overcome by the climatic conditions, and gets lazy, and is unable to work three good hours a day—if he does'nt die in the meantime.

A CASE OF DEFECTIVE RIVETING.

THE driving of rivets, says The Locomotive, is such a comparatively simple operation that it might be supposed that it would be almost always well done. This is far from being the fact, and bad riveting is one of the commonest defects reported by our inspectors. The rivets may be too short, or too long, or too small;

SOME DEFECTIVE RIVETS.

they may have heads that are too flat, or they may have projecting "fins," or they may not fill the holes, or the holes may not come "fair" with one another. There are many ways in which riveting may be bad. A case that recently came to notice seems to deserve special mention. The rivets in question were in a vertical pulp-digester, 10 feet in diameter and 30 feet high, which was to be so constructed as to be safe under a pressure of 90 pounds to the square inch. The plates were of steel, ⅝-inch thick, united by lap joints which were triple-riveted on the straight joints and double-riveted on the girth joints. The pitch of the rivets in each case was 3½ inches, and the distance between the parallel rows was 2 inches. The rivets were ¾-inch in diameter. Before the digester was accepted, we were called upon to inspect it and pronounce upon its safety. The inspector found the rivets "driven very low," that is, the heads were entirely too flat, as shown in the accompanying cuts, which are made directly from photographs of the rivets. He had a number of these taken out and found that the holes in the two sheets did not come opposite one another fairly. This defect is a common one, and it is very serious, both because it reduces the shearing area of the rivet, and beeause it greatly increases the difficulty of making the rivets fill the holes perfectly. A shop that turns out work of this kind is particularly censurable, not only because the work itself is poor and weak, but also because the defect is not easy to discover, after the rivets are in place, and the owner of the boiler is therefore likely to be deceived by a fair external appearance and to carry more pressure than the boiler can safely withstand. The inspector also found that the heads were not driven evenly over the holes, the centres of the heads often lying well towards the side of the rivet. This defect, although not so dangerous as the unfairness of the holes, would not be tolerated in a good shop having any pretentions to turning out first class work. It is very easily detected, even by one who has little experience in inspecting, and there is no excuse for it, whatever. The rivet holes were not countersunk, as they should be in all good work, and, taking everything into consideration, we think this case presented the finest example of notoriously bad work that we have seen in some time. The only thing that could be done to it, in the way of improvement, would be to cut out all the rivets, ream out the holes until they should be true, and rivet them up again with larger rivets. The most reprehensible thing about the job, perhaps, is that the builder used rivets that he knew to be *too short*. At least, we presume he knew them to be so, for any one who had the smallest idea about the business would know it. A boiler ten feet in diameter, to carry 90 pounds of steam, and with five or six men working about it, cannot be built too carefully; and any such reckless performance as putting in rivets that are too short and too small comes very near being criminal negligence. The joint used in this digester is far from being beyond criticism. To begin with, a *lap* joint should not be used at all; a *butt* joint would be much safer and better in every way. Taking the tensile strength of the plate at 60,000 pounds per square inch, and the shearing strength of the rivets at 38,000 pounds per square inch, a little calculation will show that in the joint that was actually used the rivet area is far too small, so that with ¾-inch rivets and a factor of safety of 5 the safe working pressure is only about 56 pounds. If a triple-riveted lap joint were used at all, the rivets should be an inch in diameter (holes 1 1-16 inch), and the pitch should be about 3¾ inches. This joint gives an efficiency of 72 per cent. and a safe working pressure (with a factor of 5) of just 90 pounds per square inch. But a double-welt butt joint is the proper thing for this case.

TRANSMITTING POWER.

IT is generally known that a shaft will transmit power in proportion to its running velocity, and therefore, the faster the shaft runs the lighter it should be within reasonable limit. The use of extremely heavy shafting is not advisable under any circumstances, unless actually needed to perform the work required. Some imagine that a large shaft, affording a very strong margin of safety, is the most economical and tenable mechanical position, unless tempered with sound judgment and much wisdom, sufficient of both to select properly. That there should be an ample margin of strength no one will attempt to deny, but shafting multiplies in strength so rapidly as sizes increase that the unenlightened are apt to make the selections much too large when aiming at only ample strength margin.

THE COMMON-SENSE WAY.

THE common-sense way of preventing the slipping is really the only one object to which we ought to direct our attention; there is the relation of the pulley to the belt, the method of placing a belt on a pulley, the question of speed, tightness of belts, all of which, with other points, require careful consideration. Oak tanned leather belts are best for general use. Cotton belts are best for dry places. It is economy to put on a wider belt rather than a narrow one too tight. Vertical belts should only be moderately tight.

THE CANADA LUMBERMAN
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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

EXPORT LUMBER FIELDS.

WITH lumber holding a position as one of the richest of our natural resources, it is well that we should consider all possible fields of outlet for this product. We state a very simple truism, when we say that the main market for Canadian lumber is to be found abroad, and not at home. Already large quantities of lumber from this country find their way, not only to the United States and Great Britain, but to Australia, South America, China, Japan, the West Indies and other points. But with the wealth that we possess in this direction and the high character of our forest products, there is no reason why our field of exports should in any way be "cabin'd, cribb'd or confin'd" to any particular territory.

A recent publication issued by the State Department of the United States shows to what a wide extent the lumber of North America is valued by the peoples of almost all parts of the world. We are told that nearly all the building lumber imported by Africa comes from North America; that Japan buys it, and that no other lumber enters South American ports. In Samoa 4c. a foot is paid for real Oregon pine and California red wood. Australia buys $1,000,000 worth every year, and would, it is said, take as much more if it could be bought readily. The great difficulty is one of transportation.

This pamphlet points out that the principal rivals of the United States in the world's lumber trade are Canada and Norway, excepting England, where Russia and Germany are competitors and in Austria, which is supplied by countries on the Mediterranean.

This information indicates very clearly that there is hardly a point where, all other things being equal, Canadian lumber may not find a market. So far as white pine is concerned, it is known by everyone, who has studied the question, that Ontario possesses the most desirable white pine to be found in any country. When a reference is made to Oregon pine, or to the redwoods of California, it has been demonstrated beyond any question that in British Columbia we have parallel woods to these, in Douglas fir and red cedar, which have a preference even by experts in the United States, over their own timber.

The entry of Canadian woods into foreign countries will be helped in so far as satisfactory commercial treaties may be made with foreign nations. Whilst some prejudice has existed in France against Canadian and United States woods, it is known that from the lower provinces considerable quantities of pine, spruce and oak are exported to France, and with the new treaty just consummated between Canada and that country an impetus ought to be given to the lumber trade with France.

The completion of the Nicaragua canal will, in point of transportation, be a great help to the export lumber trade of British Columbia.

The figures given in the official paper of the United States, to which we have here referred, do not fairly represent the division of lumber products from North America as between Canada and the United States, and the error is one that is sometimes repeated by our own press. We refer to the fact, pointed out in these columns only two months ago, that many shipments of lumber, as well as other exports from Canada to foreign markets, sent in bond through the United States, are credited altogether to the latter country. Our government cannot too speedily see that this error is rectified.

TARIFF CONDITIONS OF THE MONTH.

NO new developments in tariff matters, as affecting lumber, have shown themselves since our review of the situation a month ago. Senators at Washington continue to wrangle over the Wilson Bill, and the developments of the past week would indicate that legislation has reached a dead-lock, extrication from which may not be easy, and will possibly lead to the complete destruction of the Wilson Bill. The Senate and the House of Congress can find no common ground of cleavage. The sugar question would seem to be the serious bone of contention, but out of it grow issues touching other phases of the tariff. A House and Senate favorable to free trade were supposed to have been elected a year ago, but it looks as though Democratic free traders were just as thoroughly saturated with protection principles as could possibly be the most straight-out Republican. Self interest is evidently the governing motive with the majority of these legislators, and it is the old story of each one being influenced according as whether it is his own ox or his neighbor's ox, that will be gored. The most hopeful feature of the case, viewing the question from the point of view of free trade, and it is here that lumbermen are most interested, is found in the resolute stand taken by President Cleveland, and reflected in a letter to Mr. Wilson on the dead-lock. His intimation is clear that unless some reasonable attempt is made to stand by the election pledges of the Presidential year he will veto any bill that is too absurdly inconsistent. While legislators are making uncertain the future course of the lumber trade, lumbermen in different parts of the country are discussing the outlook. Southern lumbermen are opposing free lumber in any shape with the utmost energy. Saw-mill and planing-mill men in the east appear to have made up their minds to accept free lumber so far as rough lumber is concerned, but the voice of other sections is expressed in the resolution of the Buffalo Lumber Exchange in placing themselves on record as opposed to the free admission from Canada of dressed lumber. It is not alone, however, United States lumbermen who fear that their interests may be injured by free lumber. From what we have to say elsewhere it will be noted that British Columbia lumbermen are not so sure that free lumber will be a good thing for them. A boom is on in the Rainy Lake section of Minnesota, and a local journal there points out what a benefit it will be to that territory to receive all the Canadian cut timber free of any duty. There is also this feature of the case when we consider the possibility of Michigan lumbermen establishing mills on the Canadian side. Some of these say, and with a good deal of force, that even though they are American citizens they have invested their capital in timber in Canada and if the plan seems the most practicable, why should they not saw this timber near their own limits in place of rafting it many miles with all the attendant risks?

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EDITORIAL NOTES.

A CRITICAL time with men of commerce is when their business is developing rapidly. Few things are more difficult than for a man to hold in the reins when he seems to see an opportunity to expand his business. The trouble just here is that in this expansion so many men bite off more than they can chew. We have seen abundant illustration of this in the past year or two of financial depression, when the record has proven that it is the big concerns that have been doing the risky business and little concerns the safest business, and paying their bills the quickest.

THE destruction by fire of Mr. J. R. Booth's large mill at Ottawa has created a blank in Canadian sawmilling, that cannot easily be filled. The hope is that Mr. Booth, who is known to be a man of enterprise and courage, will see his way to rebuild, but from what is stated by our Ottawa correspondent, it seems to be among the possibilities that this step may not be taken. The loss in the meantime is a serious one from whatever point of view we consider the recent disaster. It is computed that directly, as between the total loss and the full amount of insurance, Mr. Booth will suffer to the extent of not less than $100,000. This, however, is but one small part of the loss. A large season's cut was before him and the profits on this must necessarily be sacrificed now. About 1000 workmen are thrown out of employment. Then come the lumber jobbing firms, who had placed their orders with Mr. Booth for supplies with which to fill their orders this season. These in turn are going to suffer a loss. That the valuable water power that has operated the Booth mills can long remain idle is hardly to be expected, but the universal wish and hope is that none other than Mr. Booth himself will utilize this.

RAFTING operations in the vicinity of French River are being carried on with not a little activity this season, despite the depression in the lumber market. It is given out, that there are 8,000,000 ft. of logs in the different drives, on the way down. These in the main are as follows: Moore Lumber Co., Bay City, Mich., three rafts; Hardy Lumber Co., Alpena, Mich., four or five rafts; Beck Lumber Co., Penetanguishene, Ont., four rafts, Ontario Lumber Co., French River, 5,000,000 ft; A. T. Bliss & Co., Saginaw, Mich., one raft; Emery & Holland Lumber Co., Tawas and Bay City, Mich., have a jam of 14 miles on the Wahnapitae, which will make ten rafts; in all about 14 rafts. Rafts representing, probably, 60,000,000 ft. have already left the north shore this season for Michigan. The high water in the district has been favorable to the taking out of logs and it is not anticipated that there will be any logs "tied up." Lumber in considerable quantities is to be found at various piling grounds along the north shore waiting a market. The Ontario Lumber Co., have, it is said, in its French river yard 18,000,000 ft. in good condition. Operations are to some extent effected by the delay in the final passing of the Wilson Bill.

THE London Timber Trades Journal is puzzled over a statement printed in a recent sale catalogue describing some oak by steamer, as being "from Quebec via New Orleans." The Southern Lumberman says, that in this country we would easily get over such slips by putting the blame on the proof reader or "the intelligent compositor," and tells the story of an agricultural association, that went for the publisher of their annual catalogue, because it reported them as offering a large premium of the "best bushel of cats," when they meant "oats," but the publisher's attorney had no difficulty in convincing the jury that it was simply a mistake made by an irresponsible printer. The "poor printer" is certainly made the scape-goat for a good many queer blunders; but with our friend John Bull, when it is a geographical mistake, we are not so sure that it is the "intelligent compositor" who has mixed things. Even authorities like the London Times and the Saturday Review have marked up against them some very wild blunders made, when occasion has required them to speak of this country geographically. They seem to forget that America covers rather more ground than "the tight little island" across the sea. We are a country of great distances, and distance counts.

BRITISH COLUMBIA SHINGLES.

PRESENT CONDITION OF THE TRADE.—CAUSE OF THE DEPRESSION.—OUTLOOK FOR THE FUTURE.—WHAT A LEADING MANUFACTURER SAYS.

WITHIN a few years the manufacture of red cedar shingles in British Columbia has developed in a degree to make the subject one of importance to every intelligent lumberman. Though it is within comparatively a few years, that any large share of attention has been given to the lumber interests of this most westerly province of the Dominion, yet in the compass of this period these have taken a foremost place in the lumber world. There can be no mistaking the fact, just as Ontario has become famed, especially for its white pine, so British Columbia has made a place for itself as the home of the red cedar and Douglas fir.

Not more, perhaps, than ten years ago the manufacture of red cedar shingles began to engage the attention of lumbermen. It is no disparagement to the white pine shingle to say that the red cedar shingle posesses features of durability and character that are specially its own. The mistake was made there, probably, that is too often made when a country commences to show strength in some particular line, of too many rushing into the field at once and over-production becoming the result. This was the case in that near neighbor of British Columbia, Washington Territory, where similar woods find their native home. Shingle manufacturing was entered into in the Puget Sound district on the boom line. Just as speculators rush into building operations when a real estate boom is on, so all sorts and conditions of men thought they saw a quick fortune in the manufacture of red cedar shingles. Like some of the men who had entered building operations in Winnipeg at the time of its unfortunate boom, and not unlike a similar class of people who pursued this calling in Toronto a few years ago, it did not occur to them, whether they knew anything of the business or not. Money was to be so easily made, they thought, that any novice might be sure of striking good luck.

But business does not run for any time simply on luck and the Puget Sound people have discovered this to-day. A result is that they find it was a terrible mistake to run up their strength of shingle manufacturing from 75 to 300 mills in hardly two years. A policy of cutting prices has been the natural sequence, and the effect of this has been to react on our British Columbia shingle manufacturers.

On this question the LUMBERMAN has had a good deal to say from time to time. Something is known of the various efforts made in the Puget Sound district by the level-headed men of the trade to form an organization and prevent this policy of cutting prices. But the competition of unprincipled men has been too severe, and combinations were formed only to be quickly broken again. Prices, it was said at one time, had got down so low in Puget Sound, and shingles had become so plentiful, that they were made to pass as current coin on the church plates of that Territory. However that may be, it is well known that prices were cut beyond possible cost of manufacture. The British Columbia manufacturers for some time had been selling shingles, if not at a loss, practically without a profit, and in the effort to help over this trouble an association was organized within the past year. It unfortunately could not hold together for reasons that were explained in an interview in the LUMBERMAN last month with Mr. F. N. Tennant, who has been doing a large trade in British Columbia shingles. Prices were again broken. On top of this has come the liklihood of free lumber, and with it competition in the eastern markets of Canada, between British Columbia and Puget Sound shingle manufacturers. The situation altogether suggested many questions of importance to the trade and it has been with the idea of placing before our readers as clear a statement of the case as possible, that a month ago we set on foot an enquiry concerning this matter.

Following these remarks we are in this issue of the LUMBERMAN, enabled to present a comprehensive account of the conditions that govern the manufacture, sale and shipment of red cedar shingles in Canada. In our letter of enquiry we asked certain leading questions and we think our readers will grant that Mr. Spicer has answered these both fully and in an exceedingly frank manner.

MR. H. H. SPICER'S VIEW.

Mr. H. H. Spicer, of Vancouver, B. C., in answer to a letter of enquiry sent out by the LUMBERMAN has this to say: If the Puget Sound shingle manufacturers can continue for any considerable time longer, to sell their product at the prices they have been selling at this year, this branch of business in Canada will become altogether unprofitable, when the Canadian Government responds to the Wilson Bill by putting shingles on the free list. I firmly believe, however, that this year will see the end for some time to come of the Puget Sound manufacturers selling their shingles at such ruinously low prices. Without assuming the role of a prophet I will venture to say that those parties on the Sound who have been selling their shingle this year as low as $1.10 per M will not be in the business another year, unless they have been, and continue stealing their timber, and not paying their labor. Without separately mentioning the value of timber, and the cost of manufacturing, it is a well-known fact (amongst those manufacturers who have figured with any degree of care) that it costs $1.30 per M to produce shingles 16 inches long, 6 butts measuring two inches after being kiln dried. There are possibly 10 to 15% of the mills in Washington situated along the lines of railway in the woods that get their timber cheap enough so they can produce at a cost of $1.20 to $1.25 per M. These are, however, only small mills with a capacity of 30 to 60 M per day, and mostly of a temporary nature, with very inferior and out-of-date dry kilns, whereby they lose about as much on account of excessive freights, as they gain through getting their timber cheaper than their competitors. This matter of overweights to points as far east as Ontario is a most important one, since an excess of 2½ lbs. to the bundle makes a loss of 7½c. per M on the present all rail rate to Ontario, which is a very considerable amount in the face of the over production and consequent price of cutting that has been the rule so far this year.

COST OF MANUFACTURING AND SHIPPING.

As to whether the Puget Sound manufacturers can afford to sell a 6 to 2 × 16in. clear shingle at $2.35 delivered at the different railway points in Ontario should our Government take the duty off, when the Wilson Bill is made effective, a few calculations will show. We will assume that all the mills on the Sound, both large and small, can produce a 6 to 2 × 16 shingle for $1.20 per M. We will also give them the benefit of the lowest possible weight for a 6 to 2 shingle, namely 160 lbs. per M. Now as to rates. During the season of navigation on the lakes the Sound mills, and also those in B. C., can reach the lake ports, such as Sarnia, Windsor, St. Catharines and Toronto, on a 60 cent rate. The average rate to interior points in Ontario is not less than 10c. per 100 lbs. This rate on a weight of 160 lbs. to the M makes the freight $1.12 per M shingles. The usual terms being 60 days from shipment, the cost of discounting bills must be considered, which is about 3c. per M. We now have cost of production $1.20, freight $1.12, discount 3c., making a thousand 6 to 2in. shingles cost $2.35 delivered in Ontario. In connection with freight rates it must be remembered that the season of lake navigation only lasts about five months in the year, and that during the balance of the year an all rail rate of 75c. per 100 lbs. has to be paid, which makes the freight $1.20 instead of $1.12. Reverting again to the cost of production, I have no hesitation in saying that a large proportion of the shingle manufacturers on the coast really don't know how much it is costing them to produce their shingles, which makes them as long as they last dangerous competitors.

B. C. AND PUGET SOUND SHINGLES COMPARED.

In answer to your question as to whether the B. C. manufacturers are able to meet Puget Sound prices of $2.35 delivered in Ontario, we know they cannot; and as to whether the Sound manufacturers can afford to sell at that price, we have shown that they are unable to do so. As to the comparative value of B. C. and Puget Sound shingles, it is a well-known and acknowledged fact by disinterested persons from the Sound that our shingles are much superior to theirs.

We believe when the time comes that we will have to compete with our neighbors on the Sound, that the lumber dealers in Ontario will give from 15 to 25c. per M more for our shingles. Possibly the greatest superiority in B. C. shingles is that they are manufactured from bolts taken from the largest and best trees, whereas the most of the shingles on the Sound are made direct from the log, the best part of which is first sawn into lumber, and the balance of the rough and coarse portion is put into shingles. This fact as to the superiority of the timber the B. C. mills put into their shingles as compared with those on the Sound has been pointed out to the writer by wholesale dealers in Buffalo and Boston.

When free trade in lumber and shingles finally becomes law in Canada and the U. S., it will be found that the B. C. shingle manufacturers will hold the largest proportion of their trade in the Northwest and Ontario, and at the same time secure considerably more new trade in the U. S. than the Puget Sound manufacturers have taken from them in Canada. I will give 3 reasons for this claim: 1st, it is, as has been shown, a financial impossibility for the Sound manufacturers to continue much longer at present prices; 2nd, the superior quality of our shingles; 3rd, our ability to make more prompt shipments to Northwest and Ontario points—having one continuous line of railway, whereas Puget Sound shingles are handled by two and sometimes three different lines.

REASONS FOR PRESENT DEMORALIZATION.

The question will naturally be asked what has brought about the demoralized condition of the shingle business. This can be about fully answered—so far as the Sound mills are concerned—in one word, viz: Overproduction. There have been other contributing causes, such as the general stagnation of business which has prevailed in the U. S. and Canada during the last 18 months, and also the tie-up of the transcontintental railways on account of the floods and strikes.

It may not be generally known in the East, especially in Ontario, that a perfect craze took place during the spring of 1892 in Washington and Oregon to manufacture red cedar shingles. The excitement was kept at fever heat through 1892-3, until the number of mills in those two states had increased from about 75 to 300. During the shingle craze all sorts and conditions of men embarked in the business, and all thinking, I presume, they had discovered the way to wealth and prosperity. It is safe to say that the largest percentage of these men had very little or no capital to work on, and a great many more had no experience, and the balance acted as though they had not much common sense; and judging from the present condition of the shingle business in Washington and Oregon, one is warranted in saying that a large proportion of them were lacking in these three prime requisites of success in any line.

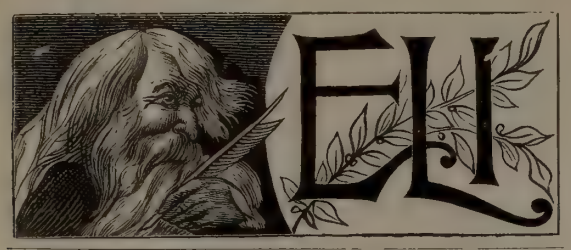
In the light of these facts is it any wonder that the shingle business on the Sound is in such a demoralized condition to-day? There has been, however, a weeding out process going on for the last eight months, and it is reasonable to expect that by next spring the business will be much more in the hands of legitimate manufacturers.

A HEALTHY REVIVAL COMING.

While the present condition of the lumber and shingle business on the coast is unsatisfactory, there are more reasons than one for expecting a healthy revival by next spring. It is generally thought, I believe, that the business depression cannot last much longer, and that at the furthest the beginning of next year will see a great change for the better. During this long stagnation of business the lumber dealers in the territory reached by Pacific Coast manufacturers have let their stocks run down until it would take a number of their lumber yards bunched together to make an ordinary sized yard.

A greatly increased trade is expected for Pacific Coast shingles and lumber upon the completion of coast extension of the Chicago, Burlington & Quincy Railway, which will take place by the last of this year.

It is said that this road will deliver Pacific Coast lumber and shingles in nine different states on a transcontinental rate, without any local rates added. In fact, it is expected that the Burlington Road will do more to open up new territory for Pacific Coast lumber products than any other excepting the Northern Pacific.



ONE of the manufacturers of the province, who keeps himself in close touch with lumbering operations, and who is an old-timer in his visits to the lumber regions of almost every part of the Dominion, is Mr. Shurly, of the extensive saw manufacturing firm of Shurly & Dietrich, of Galt. I had the pleasure of meeting Mr. Shurly a few days ago, on his return from the east. I asked him how he found lumber in the vicinity of Ottawa, and his reply was, that trade was somewhat quiet. He told me that McLachlin & Co., of Arnprior, had sold their season's cut, principally to United States buyers, but they were still holding it, waiting orders for shipment. This meant that their piling grounds were being crowded a little more than they care for. Mr. Shurly has been a close observer for years of the methods of lumbering adopted in the various sections of the Dominion. Some time ago he visited British Columbia and was much interested in methods of lumbering on the Pacific Coast in contrast with methods in Ontario. For example, he tells me, that they do not pile their lumber there as we do here. The lumbermen have placed in their hands orders for export shipment and the large timbers are taken direct to, and loaded on, the vessels. The principal export trade in that province is with South America, China, Japan and Australia, countries where a large business is done, when depression and internal troubles do not upset things generally. "The felling", said Mr. Shurly, "of the large timbers that grow in British Columbia is a sight full of interest to anyone who has a knowledge of lumbering operations. Douglas fir, for example, grows to a great size and height and the trees are cut some feet up from the ground. The woodmen cut into the tree, so that they manage to get room for working; then they get their saws going, and it is a sight to see these men cutting into the heart and through these big trees, which will run five or six feet in diameter. There is a large amount of resinous matter in Douglas fir and the saw has to be constantly oiled in order that the work may be done with any speed. When the tree is pretty well cut through the men insert a wedge so as to cant it over to the side where it is intended to fall. I tell you when one of those big fellows go there is a crash, and a noise as of thunder. One day I went into the woods with Mr. R. H. Alexander, manager of the Hastings Lumber Co., to study shanty life in British Columbia. We sometimes take our fun out of the shantymen, whose fare is pork and beans, with ginger bread for dessert, but there is nothing of that kind on the Pacific Coast. I have seldom sat down to a better meal than was furnished that day to the shantymen on Mr. Alexander's limits; and it was only the ordinary meal, no extras because there happened to be a visitor there. The best of roast beef was served up, with well browned potatoes and all the extras of modern day living. The cook was a Chinaman, and everything was as clean and nice as you could get in your own home. I said to Mr. Alexander, this is pretty good fair for shantymen. His reply was, 'it pays us.' Lumbering here is different to what it is in Ontario, and we cannot give too much attention to the physical condition of our men, otherwise they could not do the work. In contrast to this I was reminded of a visit I paid to the Georgian Bay lumber district one time. The men were being well loaded up with gingerbread and I remarked to the foreman that this would spoil their meal. 'Oh!' he said, 'this is just what we want; gingerbread fills them up and they have not so much appetite for their regular meal.'" In answer to my enquiry as to the condition of business among the saw mill and planing mill men, whom Mr. Shurly meets frequently, he said, trade was fair, but there was room for improvement. He had met a prominent Michigan lumberman who owns large limits in Canada, and his belief is that when lumber becomes free, there will be an extension of the saw mill business in this country.

The early history of that portion of our province lying back from the St. Lawrence, and which is now largely covered by the counties of Carleton and Russell necessarily includes many interesting reminiscences of lumbering and lumbermen. Back in the early days of the century, along about 1825 the larger part of that district was marked by a dismal swamp, "but", as one who has written on the subject has said, "swamps form no obstacle to winter lumbering and if the streams could float the lumber or logs the wealth of the timber crop could be secured. Lumbermen noted the higher portions of the land and kept them in view for the future." One of the residents of that section of the province, who afterwards became famous in Ontario history, was the Hon. John Sanfield McDonald, a former premier of the province. He hailed from Glengarry, and if not a lumberman himself, the country was well stocked with McDonell's and McDonald's, and suveyor McDonald made the Pettie Nation and the Castor the field of his lumbering operations for some time. He drove a span of horses down the Nation and up the Castor on the ice to the plane of his habitation where his offspring still reside in peace and plenty. His were the first pair of horses in the province, as he was the first settler there. In 1829 Robt. Grant became a resident of that section. Peter McLaren, than whom there have been few lumbermen in Ontario better known and more highly respected, came to where Kenmore now is about 1830. Lumbermen sailed by the Nation to the great river with their rafts in cribs or loose as they could. They knew nothing of the upper Ottawa. They went to mill on the Nation only when they must go from necessity. They were not aware that the canal was building until it was over. They heard no blasting of logs in the distance or if they did they mistook it for thunder, isolated completely on the banks of their river high-way with their magnificent stocks of fishes, fowels and fur-bearing animals. They had not even heard of the birth of the little hamlet that was to be the great future capital of this vast Dominion, nor heard the whir of the machinery that was to saw the lumber to build the future cities of this vast continent. They made timber, cut wood, enjoyed life in their shanties, raised a pig or two, made their own butter, knit, spun, wove and made most of their clothing and moccasins. The good ice served them as a fine clear road in winter away round about to the front, even to the mill at Long Sault in the St. Lawrence the first and second winters after that, to the station. Dickinson's Landing now seems a long way to the mill, but they went. Then Chrysler's mill was comparatively close by when it was built. Then Peter McLaren built a grist mill on the Castor at Kenmore, 1835. Hugh McKenna and James Telford used to tell a good story of a grand discovery they made once. Each was rich enough to own a good steer: the two made a working yoke of oxen. In the summer they strayed out on the road newly cut to the Johnson-Fenton settlement; then held a high feast in the forest leaves till they were missed and the owners gave chase. In following their tracks on the road and in the bush they, after a long run on the track not by scent, came to where they found other tracks, and when about despairing they came at length to the clearing of Col. McDonell where they found them with his cattle. Glad and astonished to find their new neighbors, their stay led Mr. McDonell to gather his friends and four or five families and they cut a road to meet the one described, and hence their first road from Osgoode to Bytown, for their winter driving.

* * * *

"The lumber and timber trade of Quebec," says Mr. Th. J. Boulanger of that city, "has been very dull, although prices for good stock are maintained fairly good. Purchasers, however, are only buying what they actually require for immediate shipments. I was told a few days ago by a lumberman, who had been down in New Brunswick, that a good many of the mills there are going to close down for the present, as the prices they are getting are altogether too low. They say they are loosing money."

* * * *

This makes the 50th year of the lumbering operations of Mr. William Mackey, of Ottawa. "I have taken rafts," he says in answer to a question, "down past Ottawa for the last fifty years—ever since 1844; some years only one raft and other years three and four, besides taking out sawlogs several years." Mr. Mackey is the only lumberman in Canada continuously in the square timber business for half a century. In reply to a question, Mr. Mackey said he came to Ottawa in 1838 and joined the volunteers and was billeted on Barracks Hill where the library now stands and his captain was Capt. G. P. Bake, who was afterwards first postmaster of Ottawa. In 1841 Mr. Mackey went shantying with the late Hon. James Skead on the Bonnechere river. "I made my first raft of red pine during the winter of 1844-45 on the Madawaska river, there being no demand for white pine in these days," said Mr. Mackey. "I have held the license and paid the ground rent on the limit on which I made my first raft for nearly fifty years." "Was it difficult getting timber to market when you commenced!" "Yes, at that time the rivers were not improved and there were no slides or booms as there are now." "You must have seen many changes in your long business experiences." "Yes, prices for timber and supply have varied much. When I commenced first I paid as high as 25 per cent. interest on money advanced to purchase supplies, etc. The average wages for men were from $10 to $14 per month. Hewers got $20 per month and these were the highest priced men. There was far more square timber taken out then than now, for this was long before the era of sawlogs. I have known of 100 rafts passing here in one season. This year ten rafts will be the limit." "Are there many men in the trade who commenced when you did?" "I know of no one alive who was in the lumber business when I commenced except Mr. N. V. Noel, now manager of the Quebec Bank here who worked on the Madawaska river at that time, and Richard McConnell of the Aylmer road, but I think I am the only one who has continuously made square timber for that length of time. Prices have varied very much. I have sold timber as low as four pence per foot and as high as 36 cents per foot for no better timber. The raft that has just passed Ottawa" concluded Mr Kackey, "is as good a raft as ever I took to market both in manufacture and quality." This raft was taken out in the Amable du Fore river, a branch of the Mattawa river.

* * * *

Replying to certain articles and correspondence, that have appeared in the daily press on the value of Ontario lumber, Mr Quinn, of Saginaw, Mich., whose lumbering operations bring him frequently to this country, says that any practical lumberman, who understands his business knows that it costs from $3.00 to $4.00 for a 1000 feet of lumber in Canada more than it does in Michigan or Wisconsin. "I will venture to say," says he, "that the logs delivered at Ottawa from any of the streams now in Canada will cost not less than $7.00 a 1000 feet, $3.00 to saw lumber, $1.00 for profit and loss, and I will ask anyone of ten lumbermen if the average price will be $12.50 mill run, mill culls out, and then see what they say. This is what they call big profit. The risk to any individual is from 10% to 15% a year, and the larger the owner the more risk he has to run. There is also about 5% of risk from windfalls. Let these men who do so much writing about the lumber business go into the woods and see the disadvantages that lumbermen have to contend with now, and let them get some timber at the price the government sells them for. If the fortunes are so easy made they ought to be in the business."

* * * *

A curiosity in tree growth in Georgia is attracting some attention with students of forestry. It is a tree which bears persimmons on one side and wild crab-apples upon the other. Of course, as a matter of fact, there are two trees, but it takes a very close examination to convince a person that there are. They have grown so closely that each has lost his identity, so far as appearance is concerned, and the people in the neighborhood insist that it is but one tree. The persimmon side is the most fruitful and produces a fairly good yield of fruit, which is not in the least affected by the presence of the crab-apples. The other side does not bear very well, and it is only an occasional year that there is a yield of crab-apples, but both sides have been known to bear good crops in the same year. The roots have never been examined, so far as I know.

The Muskoka Mill and Lumber Co.

OF TORONTO

are offering for sale by Auction on the 27th inst., at Barrie, Ont., five of their Timber Berths in the Townships of Gibson and Medora.

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

TO a measurable extent, at least, all lumbermen live in anxious dread of an outbreak of fire. There is so much material of an inflammable character about a saw mill that only the very greatest precaution prevents many more serious conflagrations than even now take place. It is seldom, however, that in Canada we are called upon to chronicle the destruction of so large an amount of valuable saw mill property, as was the cuse in the burning of Mr. J. R. Booth's great mill on the Chaudiere, just a week after I had written you my last letter. The mill was known the lumber world over as the largest saw mill on this continent, and undoubtedly one of the most perfectly equipped mills in the world. There does not seem to be ny explanation of how the fire occurred; the one unfortunate fact stares its owner and the people of Ottawa in the face, that at least, $250,000 of property has been destroyed. The mill is a complete wreck. The loss is covered by insurance to the extent of $143,500, leaving, it is carefully estimated, a net loss over the insurance to be borne by Mr. Booth of at least $100,000. We in Ottawa, from a citizen's point of view, are hoping that it will not be the case, but it is very much feared that Mr. Booth will not rebuild the mill. About 1000 hands, all told, were employed in connection with this enterprise, representing at least, families of 3,000 persons. No comment is necessary to show how seriously will such a loss of labor fall upon Ottawa. Great disappointment and loss will also come upon many shippers who were depending upon the cut of this mill to enable them to fill their export orders for the United States, South America and other points. The loss too, of the season's cut, will be to Mr. Booth a severe blow.

INDIFFERENT LENGTHS.

A protest has been served by Mr. Frank Stafford on the executors of the estate of James McCready against the sale of timber birth, lot No. 7, range 1, block A, lake expanse, which is advertised with other properties for sale by auction at Peter Ryan's big sale in August next. Mr. Stafford claims he is entitled to one-half interest in the profits of this limit under a deed to him from the late James McCready, and that the sale is sought to be made without any intimation to him or to the public of his interests.

John Major, a shantyman from Greenvile, while wandering in his sleep some nights ago in his boarding house, fell from a first storey window, some 18 feet, to the sidewalk. He has suffered severe bruises but will likely recover.

Mr. E. C. Whitney, of Minneapolis, and Mr. E. N. Briggs, of Saginaw, two well-known lumber capitalists, have been in the city. They are reported to represent the advance guard of a monied concern, who purpose erecting a huge mill on the Ottawa and Parry Sound road in the vicinity of Eganville.

The amount of lumber being shipped this yeear to the United States is falling far short of the shipments of a year ago.

Logs coming down the Gatineau are making slow speed, and the mills which depend upon these for supply may have to close down for want of sufficient logs.

The Railway Committee room of the House of Commons was the scene of a lively discussion a fortnight ago over the bill which proposes to incorporate the French River Boom Co. Proposed incorporators are: Messrs. H. H. Cook, John Waldie, H. W. Welsh and E. B. Ryckman, of Toronto, and F. W. Geoffrey, of Midland. Capital stock is named at $50,000, and Toronto is to be headquarters of the company. The privileges asked are to do a general boom business, rafting, towing, shafting and transmitting all lumber, timber and saw logs in the French and Wahnapitae and its tributaries and in Le Boueuf Lake, and to levy and collect reasonable toll dues and charges therefore. The bill was opposed chiefly by Michigan lumbermen, who were represented by Mr. W. R. White, Q. C., of Pembroke. After full argument the committee decided to grant the charter of incorporation, but with certain modifications in order to meet the views of the objectors.

OTTAWA, Can., July 20, 1894.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN.]

LUMBER exports trom St. John for the month of June are placed at $367,837. The chief items are: Long lumber and lath, $325,286; shingles, $22,650; birch timber, $7,100; pine timber, $1,725; piling, $3,789; tan bark, $2,758.

Shipments to Great Britain are running somewhat light, and it is also the case with shipments to the United States.

The new mill of G. T. Prescott, at West River, is about ready to commence work.

A pest of flies has compelled the engineering party who started out to survey Muskoka Co. limits at the head of the Restigouche to postpone their work until September.

Kinney & Co., of Albert county, have assigned, with liabilities of $4,000. The trouble has been caused through inability to get their logs out.

A small saw mill of E. B. Betts, of Wentworth, has been burned. Loss about $1,000, insurance $200.

ST. JOHN, N. B., July 15, 1894.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

AT this late day I do not need to say how much suffering and difficulty to everyone has occurred through the terrible floods that visited us a short time since. It will not be easily estimated what has been the loss to the lumber industry, and it becomes a serious question what it will mean to lumbering in this province if there should be a repetition of a water deluge anything approaching the scale of this one. One of the greatest sufferers among the lumbermen by the late flood is Knight Bros., of Popcome, who had logs, lumber, shingle bolts and several cords of excelsior wood carried away.

COAST CHIPS.

The Burrard Inlet Red Cedar Lumber Co. are using band saws in their sawing, turning out good work.

A recent addition to the plant of the Brunette Saw Mill Co. is a timber planer capable of dressing a stick of timber 30x16 inches on all four sides by once passing through.

William Munsey, of the Shawnigan Lake River Co., has gone to Japan for a trip.

The Hastings Mill Co. is buying up large quantities of logs, which have already run into several millions of feet, in the Puget Sound district.

Among the last arrivals at B. C. ports is the ship Drammen, 1,347 tons, from Honolulu, and will load at Hastings mill for Queenstown, U. K. The British ship, Verejean, 1824 tons, from Shanghai, is under charter to load at Hastings mill for Alexandria, Egypt. Among other vessels loading lumber at these ports for foreign points are: At Moodyville mill—Am. schr. Wm. Bowden, 727 tons, for Sydney; Ital. bark Elisa, 915 tons, for Valparaiso; Br. ship Borrowdale, 1,197 tons, for Valparaiso for orders. At Hastings mill—Br. schr. Grace Harwar, 1,750 tons, for Queenstown for orders; Am. bark Olympic, 1,412, for Callao direct; Nic. bark Don Carlos, 694 tons, for Noumea, New Caledonia; Br. bark Villalta, 866 tons, for Adelaide. Am. bark Southern Chief, 1,219 tons, for Santa Rosalia. At Sayward mill, Victoria—Br. ship Benmore, 1,460 tons, for Adelaide. At Vesuvius Bay—Am. ship Guardian, 1,073 tons, for Santa Rosalia.

NEW WESTMINSTER, B. C., July 17, 1894.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

WHAT branch of trade has not felt the hurtful effects of the great railway tie-up? Here in Michigan the yard trade on the river has had much to contend against on this account. Fortunately, perhaps, in one way, trade has not been so rushing that lumbermen felt that they had lost a great deal, and so they take the matter philosophically. At the same time the annoyance is provoking, and even though shipping business is small, there is a loss.

We have reached the end of the first six months of the year and we must go back a good many years to find a period that for downright dullness will compare with it. To borrow an expression from a contemporary, trading has been practically little better than in wheelbarrow lots, and the man who was so fortunate as to sell an occasional car lot has had to put about a dozen different grades in each car. We have all talked so long about nearing the end of this kind of thing and been fooled, that for my part I am disposed to go out of the prophecy business.

BITS OF LUMBER.

$100,000 was the sum paid not long since by Sibley & Bearinger for a tract of timber in Minnesota, which they have since sold for $180,000. Who says there is not money even to-day in lumber?

It is believed that Mr. R. G. Peters, of Manistee, who suffered financial embarrassment lately, will be able to pull through, pay everybody, and have a surplus.

A committee consisting of S. O. Fisher, A. M. Switzer and S. Eddy, is to visit Washington with a view of influencing legislation against the final passing of the Wilson Bill, making dressed lumber free. It is not thought by many that the mission will be a success.

Large quantities of Canadian logs are coming across to this side, the weather being quite favorable for rafting. A raft from Georgian Bay, making the fifth this season, and containing 4,000,000 logs, has reached Alpena. Shipments of lumber from Alpena up to July 1st, show a falling off of 3,154,000 feet, compared with the same period of 1893.

During June there was shipped from Cheboygan 13,088,103 feet of lumber, 1,301,300 lath, 1,500,000 shingles, 47,500 cedar ties and 26,790 posts. There was received 6,700,385 ft. of Canadian logs.

SAGINAW, Mich., July 18, 1894.

"BOTTLING UP STEAM."

ANOTHER matter revealed frequently by the recording-gauge chart is the practice indulged in by many attendants, of "bottling up steam." Its time of most frequent occurrence is a few moments before starting time in the morning and at noon, and in some cases just before clearing fires. Of course it is the simple outgrowth of ignorance concerning the limited amount of steam in quantity they can so bottle up, and the very small service it can render, compared with the injury which the practice, when persisted in, ultimately does the boiler. Aside from this objection, the habit is exceedingly pernicious, because only a few moments, neglect would cause the pressure to accumulate to the point at which the safety-valve is supposed to open; and then, if it happens to be inoperative, an accident is almost certain to follow. No excuse should be taken in any shape, under any kind of reasoning, for "bottling up steam." If the generating capacity of the boiler is not equal to the current demand, it cannot be helped by simply bottling it up: in fact, it has been my experience that where the recorded line has been extremely crooked upon the first introduction of the recorder, the effect of such introduction has been to cause a much more uniform line from day to day, until the nearest approach to uniformity had been reached, consistent with the vicissitudes of the demands for steam. A steam-user once apologized for the appearance of his record, saying that the steam was drawn from the boiler at irregular periods by persons in the mill, and consequently the firemen could not carry any very regular line; that this use of steam was different from that in most places, etc. Noticing, apparently, my incredulity, he asked if I disagreed with him. My reply was: "Do you suppose that the steam necessarily falls as low as this record indicates?" In other words I called his attention to the fact, that, where a fireman is on the keen lookout for his boiler pressure and water level, he will readily detect the pointer-hand of his gauge the moment it begins to rise or fall, and govern himself accordingly. For instance, if he sees the hand indicating that the pressure is falling he will avail himself of the opportunity to slow down his feed, and perhaps open his damper wider, and if his fires are in prime condition, withold fresh coal for a few moments; then when the onslaught upon his boiler has ceased, and the hand of his gauge is stationary, or starts to move upward, he will at once set about to replenish his coal and water, and so have his conditions favorable in a few moments for another attack upon his steam supply. When his steam is raising, he can afford to feed and to fire, and his thought should be to have everything in prime condition while he had surplus power and opportunity. Then he will not be caught so badly when these extreme attacks were made upon him. These extreme fluctuations, then, are largely due to the fact of his being unprepared to meet such emergencies; becoming alarmed when his steam has fallen 20 or 30 pounds, he attempts to get up by replenishing his needy fire with coal, which only tends for the time being to reduce the pressure still more, until it has become capable of delivering its gases, ready for combustion.

After this little explanation the proprietor shook his head, and said he had never thought of it in that light, and that he would have to call John to him and have a talk with him. Now, the result of this was, that from that time on, the man's record never fluctuated in the same manner again, and the average steam line maintained was one which showed constant firing frequently in small quantities, and keeping himself in shape to meet these emergencies. Undoubtedly the man had to work a little harder at first, but afterwards it was easier when he properly understood the matter and manipulated his fires accordingly. The suggestion from the proprietor was exceedingly valuable. It resulted in teaching his man, and in mutual regard between them afterwards, because it showed that the man was capable of being taught, and willing to be, and that the proprietor had evidence of resulting fidelity. The dissemination of knowledge among firemen can certainly do no harm.

TRADE REVIEW.

Office of CANADA LUMBERMAN,
July 25, 1894.

THE GENERAL SURVEY.

ATTENTION among business men in this country has naturally been directed during the month to the railway tie-up in the United States. Sufficient of our lumber is shipped to the other side to cause us to feel quite seriously a disturbance, as large as has arisen out of the Pullman trouble. Those who had made considerable sales of lumber to United States dealers, have been obliged in the meantime to hold shipments. The trouble is now supposed to be ended and supplies will commence to move, though it is to be expected that the outcome of lumber will be affected by the discontent and unsettledness of trade, that will be a certain aftermath of the big strike. Immediate shipments of Canadian lumber to the States are also being affected by tariff legislation in that country. We learn of large sales that have been closed, but the instructions are to hold lumber in the meantime.

It is fitting to draw attention in this column to something we have to say on the editorial page concerning foreign export fields for Canadian lumber. It may be that a consideration of the matter is not going to put money in the lumbermen's pockets to-day, but there can be little doubt that a study of the conditions named in the article in question will bear good fruit in the future, and the time need not be very distant.

The drives in most parts of the country are coming along with less trouble this year than is usually the case. Reports from certain points along the north shore show that there will be few, if any, logs hung up in that district. To a good extent the same is the case in the Ottawa district. Just yet we cannot say how the volume of cut, as indicated by the logs that come along, will compare with other years. But it seems quite certain that the cut will be smaller than a year ago. Already preparations, which is something unusual so early in the season, are being made for operations in the woods, a circumstance that tells of strong confidence in lumber, and is a hopeful outlook for the future. It is to be remarked that these operations are principally by American owners of Canadian limits, and would appear to be indicative of the belief that free lumber is becoming daily a greater certainty.

The depression in the American market is having an effect on the New Brunswick mills, and several of these are closed down. Dealers in different parts of the province are careless as to making sales, believing that prices will advance shortly. It is an impression with New Brunswick lumbermen that the British lumber market is improved, though it must be confessed that other advices do not give strong encouragement in that direction.

Prices of lumber have been reduced in Winnipeg by $1.00 per 1000 feet. Competition from Minnesota lumber is given as the cause for this step. Lumber trade, generally, in the Northwest is slow. And the same is to be said of British Columbia.

Nothing cheery can be written of local lumber trade. Business, both in the country districts and the city, is slow enough.

UNITED STATES.

Trade this year has been going altogether in the wrong direction to give any necessity for such a disaster as has come to the United States during the past month in the shape of a great railway strike. Dull as business has been the strike has intensified the dullness. At many of the leading centres it has simply been impossible to make shipments. Then the disturbance has had a discouraging influence on those who were disposed to enter into building this summer, and with midsummer reached, it is a question whether operations that had been planned a month ago, will go on now, before fall at any rate. With prices as low in June as many believed they would reach for some time, considerable sales of lumber have been made, but these have been held, because of the strike, and if dealers find the anticipated demand shrinking it will be another case where commerce has suffered from the strike. In the planing mills of Minnesota, Wisconsin and Michigan, we are told that operations have been practically stopped and thousands of employees thrown out of work. The Puget Sound and Washington territory have suffered through the strike from the fact that it was impossible for them to get supplies through to destination. Thus the matter stands to-day and it will require a few weeks of breathing, now that the strike is seemingly ended, before lumbermen will know just how bad things are with them. It is believed, with the season as far advanced as at present, that it is quite clear that there will be a decided shortage in the output of white pine logs. The curtailment in cut that was freely predicted at the time is apparently going to be realized. Prices, it is expected, will benefit by the situation.

FOREIGN.

The second three months of the lumber trade in Great Britain did not keep pace with an encouraging movement that showed itself during January, February, and March. The consumption then improved, but to quote the Denny, Mott & Dickson circular: "The first half of the year closed with weak markets all round. Values being so low, there seems little room for a fall; but needy holders may be forced to realize and notwithstanding cheap money, there is little temptation for the stronger ones to 'hold the baby,' should large parcels be forced on the market." The London Timber Trades Journal attributes the unsatisfactory conditions of the Canadian market business to the bad feeling brought on by the utter collapse of the freight markets for parcels. "Sellers who had purchased early in the year, probably having calculated their prices on the basis of a 40s. freight, are naturally dissatisfied with how the things have gone. But who could have foreseen when the selling season was on that in June parcels of deals could be brought forward at fully 10s. per standard under these rates." This same journal expresses the opinion that the destruction by fire of Booth's mill at Ottawa, will probably mean a loss of 12,000 Petersburg standards or more to the British market should much stock have been burnt. Farnworth & Jardine, of Liverpool, in their wood circular report that imports, with few exceptions, have been heavy, and that a want of confidence continues to be displayed. The South America market holds in very fair condition, and there is a slight improvement in conditions in Australia.

HARDWOODS.

Attention is being drawn to the fact, that at present, at least, there is not very much encouragement for exporters of hardwood. Our Chicago cotemporary, Hardwood, says, it is simply absurd for any reasonable person to make promiscuous shipments of lumber to any foreign market, for to do so is about equivalent to giving away the stock. The market reports prove very conclusively that stock is simply sacrificed for the freight and accumulated charges, and that in many cases, so far from obtaining a fair return for his lumber, the consignor gets nothing for it at all. A late issue of the Timber Trades Journal, of London, confirms this view. It says: "We have more than once alluded to what appeared the impolicy of holders pressing their stocks upon a weak market, while there seemed a chance of better times to come: but we think now, from the results, that those who adopt these tactics are acting wisely in their generation by selling before the market is crowded out by new invasions, equally impatient of a moment's delay in competing for the ready penny. First come, first served, that is the system of trade, and the big importers, no doubt, are fully alive to the fact that whatever proportions the coming supplies may reach, they will be more than enough to prevent prices from advancing." C. Leary Co., of London, in their monthly circular of present date, say there is little prospect of any market revival in consumption, though they add, the tone is steady and the additional supplies that may be expected this year should be readily absorbed.

TORONTO, ONT.

Toronto, July 25, 1894.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch	2 50	2 60
XX shingles 16 inch	1 50	1 60
Lath, No. 1		2 15
Lath, No. 2	1 80	1 85

YARD QUOTATIONS.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	13 00
stocks	16 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	15 00
" " " 20 ft	16 00
" " " 22 ft	17 00
" " " 24 ft	19 00
" " " 26 ft	20 00
" " " 28 ft	22 00
" " " 30 ft	24 00
" " " 32 ft	27 00
" " " 34 ft	29 50
	23 50
" " " 36 ft	31 00
" " " 38 ft	33 00
" " 40 to 44 ft	37 00
Cutting up planks, 1 and thicker, dry	25 00 28 00
" board	18 00 24 00
Dressing blocks	16 00 20 00
Picks Am. inspection.	30 00

F. M.		
1 1-2 in. flooring, dres'd	26 00	30 00
" " rough	18 00	22 00
" " dres'd	25 00	28 00
1 1-4 in. flooring, undressed, B.M.	16 00	18 00
1 1-4 in. flooring, dres'd	18 00	20 00
" " undres'd	12 00	15 00
Beaded sheeting, dressed	20 00	35 00
Clapboarding, dres'd		12 00
XXX sawn shingles per M.	2 60	2 70
Sawn lath		2 60
Red Oak	30 00	40 00
White "	37 00	45 00
Basswood, No. 1 and 2	28 00	30 00
Cherry, No. 1 and 2	70 00	90 00
White ash, 1 and 2	24 00	35 00
Black ask, 1 and 2	20 00	30 00

HARDWOODS—PER M. FEET CAR LOTS.

Ash, white, 1 to 2 in.			$18 00	$20 00	Elm, soft	1	" 1½	$11 00	$12 00
" " 2½ to 4			20 00	24 00	" "	2	" 3	12 00	13 00
" black,	1	" 1½	16 00	18 00	" rock	1	" 1¼	14 00	16 00
Birch, sq.,	1	" 4	17 00	20 00	" "	1½	" 3	15 00	18 00
" "	4x4	" 8x8	20 00	22 00	Hickory	1½	" 2	28 00	30 00
" red	x	" ½	20 00	22 00	Maple	1	" 1½	16 00	17 00
" "	2	" 4	22 00	25 00	"	2	" 4	17 00	18 00
" yellow	1	" 4	14 00	15 00	Oak, red, p'n t		" 1½	28 00	30 00
Basswood	1	" 1¼	15 00	16 00	" "	2	" 4	30 00	32 00
"	1½	" 2	16 00	18 00	" white	1	" 1½	28 00	30 00
Butternut	1	" 1½	23 00	25 00	" "	2	" 4	30 00	35 00
"	2	" 3	25 00	28 00	" quart'd	1	" 2	48 00	52 00
Chestnut	1	" 2	2 00	25 00	Walnut	1	" 3	85 00	100 00
Cherry	1	" 1½	50 00	60 00	Whitewood	1	" 2	32 00	36 00
"	2	" 4	60 00	65 00					

OTTAWA, ONT.

Ottawa, July 25, 1894.

Pine, good sidings, per M feet, b.m	$32 00 40 00
Pine, good strips, " " "	27 00 35 00
Pine, good shorts, " " "	20 00 27 00
Pine, 2nd quality sidings, per M feet, b.m.	20 00 25 00
Pine, 2nd quality strips, " " "	18 00 22 00
Pine, 2nd quality shorts, " " "	15 00 18 00
Pine, shipping cull stock, " " "	14 00 16 00
Pine, box cull stock, " " "	11 00 13 00
Pine, s.c. strips and sidings " " "	11 00 14 00
Pine, mill cull	8 00 10 00
Lath, per M	1 60 1 90

QUEBEC, QUE.

Quebec, July 25, 1894.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	14 @	18
For fair average quality, according to average, etc., measured off.	16	20
For good and good fair average, " " " " "	23	27
For superior " " " " "	28	30
In shipping order " " " " "	29	35
Waney board, 18 to 19 inch " " " " "	30	36
Waney board, 19 to 21 inch " " " " "	37	40

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	45	51

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	30	34

BIRCH.

16 inch average, according to average and quality	20	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $37 to $42 for 3rd quality.

Bright spruce, according to mill specification, $40 to $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality.

NEW YORK CITY.

New York, July 25.—Little new business is being done in this market. Certain contract orders are being filled, but even these are of a limited kind. We hear of a fair amount of West India business being done from this point.

WHITE PINE—WESTERN GRADES.

Uppers, 1 in	$44 00	@45 00	Coffin boards	20 00 22 00
1¼, 1½ and 2 in	46 00	47 00	Box, in	$17 00	@17 50
3 and 4 in	55 00	58 00	Thicker	17 50 18 50
Selects, 1 in	40 00	41 00	Ccil'g, base, fig. No. 1	40 00 42 00
1 in., all wide	41 00	43 00	No. 2	35 00 37 00
1¼, 1½ and 2 in	43 00	44 00	No. 3	24 00 26 00
3 and 4 in	52 00	53 00	Shelving, No. 1	30 00 32 00
Fine common, 1 in	36 00	37 00	No. 2	25 00 27 00
1¼, 1½ and 2 in	38 00	40 00	Molding, No. 1	36 00 37 00
3 and 4 in	46 00	48 00	No. 2	34 00 36 00
Cutting up, 1 in. No. 1	28 00	30 00	Bevel sid'g, clear	22 50 23 00
No. 2	21 00	23 00	No. 1	22 00 22 50
Thick, No, 1	29 00	32 00	No. 2	20 00 20 50
No. 2	24 00	26 00	No. 3	16 00 17 00
Common, No. 1, 10 and 12 in	22 00	23 00	Norway, c'l, and No. 1	23 00 25 00
No. 2	20 00	21 00	No. 2	20 00 22 00
No. 3	17 00	18 00	Common	18 00 19 00

SAGINAW, MICH.

SAGINAW, MICH., July 25.—The one story of unusual dullness has been written of this market for some months, and the recent strike has pretty well paralyzed business altogether. During the month very little business has been done and it naturally shows up unfavorably compared with a corresponding period in other years.

FINISHING LUMBER—ROUGH.

Uppers, 1, 1¼ and 1½	45 00	Fine common, 1 in	35 00
2 in	46 00	1¼ and 1½ in	36 00
Selects, 1 in	40 00	2 in	37 00
1¼ and 1½	40 00	C, 7, 8 and 9 in	30 00
2 in	40 00		

SIDING.

Clear, ½ in	24 00	C, ½ in	19 00
⅞ in	48 00	⅞ in	34 00
Select, ½ in	21 00	No. 1, ½ in	13 00
⅞ in	40 00	⅞ in	23 00

TIMBER, JOIST AND SCANTLING.

2x4 to 10x10, 12, 14 and 16 ft.	$11 00	20 ft	14 00
18 ft	13 00	22 and 24 ft	15 00

For each additional 2 ft. add $1; 12 in. plank and timber $1 extra; extra for sizes above 12 in.

SHINGLES.

XXX 18 in. Climax	3 65	18 in. X (cull)	1 00
XXX Saginaw	3 40	XXX shorts	2 25
XX Climax	2 25	XX	1 50
18 in. 4 in. c. b.	1 25		

LATH.

Lath, No 1, white pine	2 00	Lath, No. 2, W. pine, Norway	1 65

BOX.

1x10 and 12 in. (No 3 out)	14 00	Narrow	13 00@14 00
1x6 and 8 in (No. 3 out)	13 50	1¼ in	15 00 18 00
1x13 and wider	15 00 17 00	1½ in	15 00 18 00
		2 in	15 00 18 00

SHINGLES.

18 in. XXX, clear	3 85 4 00	16 in., *A extra	2 60 2 70
18 in. XX, 6 in. clear.	2 85	16 in. clear butts	2 10

LATH.

No. 1, 4 ft.	2 50 2 60	No. 1, 3 ft.	1 10
No. 2, 4 ft.	1 95		

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N. Y., July 25.— A comparison of trade this year with that of a year ago does not cast much sunshine into lumber offices. Hardly any sales are being made, and those who show a disposition to buy have been aptly termed "bargain hunters." Similar things may be written of the Buffalo market. The Buffalo Lumber Exchange has put itself on record during the month as being unalterably opposed to free lumber.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in	$46 00 48 00	Shelving, No. 1, 13 in and up, 1 in	31 00@33 00
2½ and 3 in	52 00 55 00	Dressing, 1¼ in	25 00 26 00
4 in	58 00 60 00	1¼x10 and 12	26 00
Selects, 1 in.	38 00 39 00	1½ in	24 00 25 00
1¼ to 2 in	42 00	2 in	26 50 28 00
2½ and 3 in	47 00 50 00	Mold st'ps, 1 to 2 in	33 00 35 00
4 in	52 00	Barn, No. 1, 10 and 12 in	21 00 23 00
Fine common, 1 in	35 00 38 00	6 and 8 in	20 50 22 00
1¼ and 1½ in	37 00 38 00	No. 2, 10 and 12 in.	18 00 19 00
2 in	39 00 40 00	6 and 8 in	18 00 19 00
3 in.	45 00	No. 3, 10 and 12 in.	14 00 16 00
4 in	45 00	6 and 8 in	13 50 15 50
Cut'g up, No. 1, 1 in.	27 00 29 00	Common, 1 in	16 00 18 00
1¼ to 2 in	33 00 34 00	1¼ and 1½ in	18 00 20 00
No. 2, 1 in	17 00 18 00	2 in	19 00 22 00
No. 2, 1¼ to 2 in	23 00 24 00		
No. 3, 1¼ to 2 in	18 00 19 00		

BOSTON, MASS.

BOSTON, MASS., July 25.—The yards report fair activity in business, but the discouraging feature is the prices at which lumber is being sold. The unsatisfactory condition of spruce that was noted here last month continues. Very little spruce is arriving from the St. John river, a place from which usually comes good supplies for Boston. Quotations all around are of a nominal character.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$12 00	¾ inch	$ 9 25 9 75
Coarse No. 5	16 00	11-16 inch	9 00
Refuse	12 00 12 50	⅝ inch	8 50
Outs	9 00 10 00	Clapboards, sap ext.	50 00 55 00
Boxboards, 1 inch	10 75 11 00	Sap clear	45 00 50 00
⅞ inch	9 75 10 00	Sap, 2nd clear	40 00
		No. 1	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in	$50 00@51 00	Fine com., 3 and 4 in	42 00 46 00
1¼, 1½ and 2 in	52 00 55 00	No. 2, 1 in. Fine com.	28 00 30 00
3 and 4 in	60 00	1¼, 1½ and 2 in	29 00 31 00
Selects, 1 in	43 00 45 00	No. 1 strips, 4 to 6 in.	43 00 44 00
1¼, 1½ and 2 in	48 00 50 00	No. 2	36 00 37 00
3 and 4 in	51 00	No. 3	28 00 30 00
Moulding boards, 7 to 11 in. clear	36 00 38 00	Cut ups, 1 to 2 in	24 00 32 00
60 per cent. clear	34 00 36 00	Coffin boards	21 00 23 00
Fine common, 1 in	38 00 40 00	Common all widths	22 00 26 00
1¼, 1½ and 2 in	42 00	Shipping culls, 1 in	15 00 15 50
		do 1¼ in.	15 50 16 50

SPRUCE—BY CARGO.

Scantling and plank, random cargoes	14 00@15 00	Coarse, rough	12 00@14 00
Yard orders, ordinary sizes	15 00 16 00	Hemlock bds., rough	12 00 13 00
Yard orders, extra sizes	16 00 18 00	" " dressed	12 00 14 00
Clear floor boards	19 00 20 00	Clapbds., extra, 4 ft.	29 00 30 00
No. 2	16 00 17 00	Clear, 4 ft.	30 00 31 00
		Second clear	23 00 24 00
		No. 1	12 00 16 00

LATH.

Spruce by cargo	2 50@2 75

SHINGLES.

Eastern sawed cedar, extra	$3 00 $3 25	Eastern shaved sawed cedar, 1st quality	5 00
clear	2 30 2 75	2nd quality	4 75
2nd's	2 00 2 35	3rd "	3 85 4 00
extra No. 1	1 50 1 75	4th "	3 00 3 25
		Spruce No. 1	1 50

OSWEGO, N.Y.

OSWEGO, N. Y., July 25.—Though trade is dull a better feeling prevails than for a little while past. Prices, however, are not just as firm as formerly.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$47 00@48 00
Pickings, " "	39 00 40 00
No. 1, cutting up, " "	34 00 35 00
No. 2, cutting up, " "	24 00 25 00
In strips, 4 to 8 wide, selected for moulding strips, 14 to 16 ft.	32 00 34 00

SIDING.

1 in siding, cutting up picks and uppers	32 00@39 00	1¼ in selected	38 00@43 00
1 in dressing	19 00 21 00	1¼ in dressing	20 00 22 00
1 in No. 1 culls	14 00 15 00	1¼ in No. 1 culls	15 00 17 00
1 in No. 2 culls	13 00 14 00	1¼ in No. 2 culls	14 00 15 00
		1 in. No 3 culls	11 00 12 00

1X12 INCH.

12 and 16 feet, mill run	21 00 24 00
12 and 16 feet, No. 1 and 2, barn boards	19 00 20 00
12 and 16 feet, dressing and better	27 00 31 00
12 and 16 feet, No. 2 culls	15 00 16 00

1X10 INCH.

12 and 13 feet, mill run, mill culls out	21 00 23 00
12 and 13 feet, dressing and better	26 00 28 00
1x10, 14 to 16 barn boards	18 00 19 00
12 and 13 feet, No. 1 culls	16 00 17 00
12 and 13 feet, No. 2 culls	15 00 16 00
14 to 16 feet, mill run mill culls out	21 00 23 00
14 to 16 feet, dressing and better	26 00 28 00
14 to 16 feet, No. 1 culls	17 00 18 00
14 to 16 feet, No. 2 culls	15 00 16 00
10 to 13 feet, No. 3 culls	11 00 12 00

1¼X10 INCHES.

Mill run, mill culls out.	$22 00@25 00	No. 1 culls	17 00 18 00
Dressing and better	27 00 35 00	No. 2 culls	15 00 16 00

1X4 INCHES.

Mill run, mill culls out	17 00 21 00	No. 1 culls	14 00 15 00
Dressing and better	24 00 30 00	No. 2 culls	13 00 14 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20 00 25 00	6, 7 or 8, No. 1 culls	16 00 17 00
6, 7 or 8, drsg and better	25 00 30 00	6, 7 or 8, No. 2 culls	14 00 15 00

SHINGLES.

XXX, 18 in pine	3 70 3 90	XXX, 18 in. cedar	3 50 3 70
Clear butts, pine, 18 in.	2 70 2 90	Clear butt, 18 in. cedar	2 50 2 70
XXX, 16 in. pine	3 00 3 20	XX, 18 in. cedar	1 90 2 00
Stock cedars, 5 or 6 in.	4 50 5 00		

LATH.

No. 1, 1¼	2 30	No. 2, 1¼	2 25
No. 1, 1 in.	1 80		

ALBANY, N.Y.

ALBANY, N. Y., July 25.—The circumstance can be taken as a hopeful one, that dealers here are receiving good quantities of lumber from the mills, believing that the present has been a favorable time to buy at close figures, and freight rates have also been favorable.

PINE.

2½ in. and up, good	$56 $60	10-in. common	$15 $16
Fourths	58	12-in. dressing and better	28 34
Selects	50	Common	15 17
Pickings	45	1¼-in. siding, selected, 13 ft.	40 45
1¼ to 2-in. good	52 55	Common	15 17
Fourths	47 50	1-in. siding, selected	38 42
Selects	42 45	Common	15 17
Pickings	37 40	Norway, clear	22 25
1-in. good	52 55	Dressing	16 18
Fourths	47 50	Common	11 15
Selects	42 45	10-in. plank, 13 ft., dressing and better, each	c. c. 42 55
Pickings	37 40	10-in. plank, 13-ft. culls, each	23 25
Cutting-up	22 27	10-in. boards, 13 ft., dressing and better, each	28 32
Bracket plank	30 35	10-in. boards, 13-ft. culls	17 21
Shelving boards, 12-in. up	30 32		
Dressing boards, narrow	19 21		

LATH.

Pine	$2 40	Spruce	$2 30 $2 40

SHINGLES.

Sawed Pine, ex. xxxx	$4 40 $4 50	Bound butts, 6x18	$5 90 $6 00
Clear butts	3 15 3 25	Hemlock	2 15 2 30
Smooth, 6x18	5 50 5 60	Spruce	2 20 2 30

ECONOMY OF SUPERHEATED STEAM.

THE economical advantages of superheated steam in small motors were shown by tests of a Serpollet motor conducted by M. Seguin. The motor had a horizontal cylinder, 5.1 inches in diameter by 5.1 inches stroke. The cut-off was fixed at 66 per cent. of the stroke; the admission pressure was 58 pounds per sq. inch, and the revolutions 284 per minute. The brake horse-power on a four hours' trial averaged 4.57 horse-power, and the steam consumption was but 29.87 pounds per brake horse-power per hour. Comparing this result with those obtained with somewhat similar sized motors at the Plymouth trials of the Royal Agricultural Society, it will be found that the best engine there, a compound one, took 35.75 pounds of steam per indicated horse-power, while the best of the single cylinder engines took 57.75 pounds of steam per indicated horse-power. Practically the whole of the advantage shown by the Serpollet motor must, says Engineering, be credited to the boiler, which supplies superheated steam. This boiler consists of a stout tube flattened so as to deform the passage through into a narrow slit. This tube is coiled and has one end connected with a feed pump, and the other with the engine to be driven. The boiler used in the above tests had a heating surface of 26.8 square feet, and the grate area was 2.9 square feet. The steam, though showing on the gauge a pressure of 58 pounds per square inch only, had a temperature of 1009° F. on issuing from the coil, which had fallen to 571° F. at the steam chest. The temperature of saturated steam at 58 pounds pressure is about 306° F., so as used in the engine the steam was superheated by some 266°. The output of steam was just 4.9 pounds per square foot of heating surface per hour. The fuel used was briquettes having a heating value as tested in the calorimeter of 8.28 pounds of water evaporated from and at 212° F. per pound of fuel, and as used in the boiler the efficiency was 67.3 per cent.

PULP MANUFACTURE IN CANADA.

A LATE number of Printer and Publisher comes out with a vigorous plea for greater protection to the pulp mills of Canada. It states that whilst out of 39 pulp mills in Canada 5 years ago, representing a capital of over $2,000,000, 22 were engaged in manufacturing for export, 17 of these are now idle. This change has taken place because of the terms of the McKinley Bill, which imposes a $2.50 import duty on every ton of wood pulp taken into the United States, and $6.00 on chemical, and $7.00 on bleached chemical, whilst spruce under the same measure is exported to this country free. To-day Michigan and Wisconsin mills are buying spruce in large quantities in Ontario and towing logs across the lakes to the American mills, there to manufacture them into pulp. In answer to the question how much spruce goes to the United States each year to be made into pulp, our cotemporary says 2000 cords daily. The LUMBERMAN has drawn attention to this question on several occasions and pointed out that invidious clause which allows the export of spruce logs free, whilst taxing heavily wood pulp, and also taxing spruce lumber $2.00, where pine lumber is only $1.00 per 1000. The Wilson bill, if such a measure ever materializes, will remedy the tax on lumber, but it will not provide the needed relief to the pulp manufacturers.

A QUERY.

SOMEONE has asked the question, why is it, that a man, as assignee, will successfully manage a manufacturing plant, who never distinguished himself as a manager until he was placed in a position where he was forced to account for every penny? Is not the simple answer this, that certain and lasting success can only come to a manufacturer when he critically watches the expenditure of every cent of outlay? It is another case of showing how much importance needs to be attached to details of any business. The leakages that ruin business never exist when the paying out of every penny is carefully watched. In the present day, and certainly with the manufacturer of lumber, the utmost necessity exists for watching the pennies.

PUBLICATIONS.

The editor of Review of Reviews reports in his July number an interesting conversation with Mr. Samuel Gompers, President of the American Federation of Labor, on several questions of the hour, including the coal strike, arbitration as a remedy for strikes, free silver, and the income tax, and short hours.

Midsummer literature of the scientific kind must be tempting, indeed, to hold the mind of the average reader. In the August number of Cassier's Magazine, however, there is more than sufficient to overcome warm-weather lethargy, and one lays it down reluctantly before having gone through it from cover to cover.

TRADE NOTE.

The Ottawa Lumber Co. are sending out a novel advertisement in the shape of a shingle on which was mounted a thermometer, with the name and address of the company at top and bottom. The idea is very appropriate to the present season when everybody is more or less interested and astonished to see how high the mercury can climb in what some people have designated a frozen country.

The CANADA LUMBERMAN, $1.00 per year. Subscribe.

THE NEWS.

—J. E. & R. S. Lawson, saw mill, Stanley, N. B., have assigned.

—Mr. W. G. Parish has closed down his mill at Arden, Ont., for the season.

—Wm. Busby has taken over the lumber business of Horne & Co., Reston, Man.

—H. Elderkin & Co., lumber, Port Greville, N. S., have dissolved partnership.

—A tow of 150,000 logs recently broke loose in Lake Winnipeg, but was saved.

—The Vancouver Sash and Door Co., Vancouver, B. C., has started a planing mill.

—Lumbering operations in the vicinity of Little Current, Ont., are reported as brisk.

—A large drive of logs reached Mr. John A. Christie's mill at Brandon, Man., on June 22nd.

—The village of Humberstone, Ont., is desirous of securing the erection of a planing mill.

—The firm of McLachlan & Wilson, lumber merchants, St. John, N.B., has been dissolved.

—J. Walter, of Edmonton, Alberta, is getting out lumber for the erection of a larger saw mill.

—The lumber business of the late Peter Atkins, Morden, Man., has been offered for sale by tender.

—Messrs. J. R. & J. Giles have disposed of their mills and property at White Lake to Messrs. Box & Slater.

—It is said that the firm of E. Davison & Sons have 9,000,000 feet of lumber in their booms at Bridgewater, N.S.

—A correspondent from Hartland, N. B., states that the village requires a saw mill and a wood-working establishment.

—Mr. Angus McKay is building a large saw mill at Dorset on Lake of Bays, and expects to have it running in a short time.

—The Muskoka Mill and Lumber Company are reported to have secured 360 square miles of fine lumber district in New Brunswick.

—The saw mill at Stewarttown, Ont., had a narrow escape from destruction by fire recently, but was saved by the prompt action of the employees.

—Major Bellasis' planing mill at Lakefield, Ont., has been purchased by Lillicrap & Moore. The new firm will no doubt secure a satisfactory business.

—The saw mill operated by Peter King at Buctouche, N.B., resumed operations recently, and the outlook for that section is reported as being somewhat bright.

—It is stated that Mr. J. R. Booth will not re-build his large saw mill recently destroyed by fire, but will replace it with a mill of much less capacity.

—Two large Canadian steamers recently carried 700,000 feet of white pine from Ontonogan, Mich., to Quebec, for George McBurney, from whence it goes to England.

—As a result of the probable abolition of the duty on raw and dressed lumber, local lumber dealers in Winnipeg are reported to have reduced the price of lumber $2 per thousand.

—Young Bros'. mill at Halfway River, near Amherst, N.S., will cut about five million feet this season. This will be the largest cut yet made by their mill in one season.

—R. Richardson & Son, Bedford, N.S., whose saw mills were destroyed by fire recently, are re-building, and have placed orders for a quantity of modern machinery.

—Sawdust shoals in the Ottawa river are becoming dangerous to navigation. New shoals are presenting themselves every summer, caused by the water in the river going down very quickly.

—James S. Hickman, the lumber king of Amherst, N.S., is making large shipments of lumber to the old country. For one week recently the shipments amounted to the value of $32,000.

—The saw mill of John Geary in London township was entered by thieves a few days ago. Their booty consisted of a large driving belt, a steam gauge, and a pair of blankets, valued at $40.

—The Burrard Inlet Red Cedar Company, of Port Moody, B. C., have secured a contract to supply 120,000 feet of lumber to the purchasers of the steamer Delaware, who are building extensive dredging machinery.

—The steam saw mill of C. F. and F. R. Eaton, at Eatonville, N. S., is said to be one of the best gang mills in the country. Recently, in one day, the cut averaged 65,000 feet of lumber. The mill is now sawing on the fourth million feet for this season.

—McLaren's saw mill at Cobden, Ont., is to be run by electricity, generated over a mile distant at a water power made by damming up a small stream. The dam is made of solid masonry 25 feet high and very thick.

—By the destruction of Hamilton & Co.'s lumber mills at St. John, N. B., last month, noted in our July issue, about $50,000 worth of lumber and machinery were ruined and 60 hands thrown out of employment. The mill will be rebuilt.

—The Flewelling Manufacturing Company have recently put in their mill at Hampton, N. B., a new "Allis" band mill. A test of the mill was made recently which proved very satisfactory, the toughest spruce being cut as smoothly as the clear pine.

—W. D. Elliot, C. W. Robertson, A. M. Jackson, and G. E. Denison, managers for the lumbering firm of Thompson, Smith and Sons, Cheboygan, have left for the large limit recently purchased from Jas. Walsh & Co., and will build and equip two camps for this winter's operations.

—The Department of Crown Lands will hold an examination of candidates for licenses as cullers of saw-logs at Callendar in Muskoka, on Tuesday, August 14. The examiners will be Messrs. E. Garrow, of Webbwood, John Kennedy, of Pembroke, and Thomas B. Tait, of Burke's Falls.

—At Vivian Burrell's saw mill at Mitchell Station, near Carmel, Que., recently, the cut by one circular saw for 10½ hours was 48,079 feet, all one inch boards, the cut for 15½ hours being 70,446 feet. This is claimed to be the largest day's sawing done in that section of the country by one circular saw.

—The British Columbia Commercial Journal gives the following quotations for Douglas fir lumber in cargo lots for foreign shipment :

Rough merchantable, ordinary sizes, in lengths to 40 feet, per M feet	$ 8 90
Deck plank, rough, average length 35 feet, per M	19 00
Dressed T. and G. flooring, per M	15 00
Pickets, rough, per M	8 00
Laths, 4 feet 6 inches, per M	1 90

—An Ottawa paper states that considerable square timber from the upper Ottawa, is being brought down from Arnprior and Pembroke by the Canadian Pacific railway this year to escape the expense which is involved in running the government slides and towage in other parts of the river. The timber is as a rule taken direct to Quebec, where it is ready for shipment to the English market.

—The engine in use in Hamilton's steam saw mill, at St. John, N.B., recently destroyed by fire, is said to be one of the first, if not the first engine, brought to St. John. The mill was put into operation July 29, 1782, being the first steam saw mill started here, and the engine was built by the firm of Boulten & Watt, Birmingham, England, of which the famous engineer and inventor, James Watt, was the founder about the year 1775.

—It has been generally conceded that the lumber mills of Marysville, New Brunswick, the home of Canada's timber "king," surpass in cutting any other mills on this continent for the same kind of lumber. One gang has shown its ability to cut over one thousand feet in six minutes, the exact amount in one hour being 10,100 feet board measure. A day's work has been done of 144,000 feet for ten hours, one gang, and on Friday last the smallest gang of the five cut 680 logs in the ten hours, or more than one log a minute. Putting these logs at twelve to the thousand, this means something over fifty-six thousand feet for the day.—St. John Record.

—We learn from the Fredericton, N. B., Gleaner that Mr. Flisha Gilpatrich and other American gentlemen contemplate erecting a large saw mill somewhere along the line of the Canada Eastern railway. In the mill it is proposed to make use of hemlock logs. These logs will be sawn into boards, the boards will then be planed and dried, and shipped by rail to the United States market. The drying process will occupy about six weeks, and after they have been dried for that length of time the weight will be much less, and the expense of shipping will decrease accordingly. The capacity of the mill will be about 4,000,000 feet per year. The undertaking is in charge of Mr. Alex Gibson, the lumbering king of Nashwaak.

FIRES AND CASUALTIES.

FIRES.

—The saw mill of E. B. Betts, at Wentworth, N. S., has been burned. Loss $1,000 ; insurance $200.

—J. Stirrett's saw mill on the 11th line, Enniskillen, Ont., destroyed by fire. Loss, $1,500 ; no insurance.

—McKinnon's saw mill, near Guelph, Ont., has been burned. Two engines and a chopper were also destroyed.

—James Bower's sash and door factory at Orangeville, Ont., was consumed by fire on the 3rd July. The loss is estimated at $8,000 and the insurance $2,000.

—The large sash and door factory at Weston, Ont., owned by Mr. Edwin Shuttleworth, with lumber and machinery, was totally destroyed by fire recently.

—News has reached us of the destruction by fire, about the end of June, of Mr. Brook's saw mill at Golden Valley, Ont. 100,000 feet of lumber were burned. Small insurance.

—Fire in the lumber piles of J. R. Booth & Co., on the Rideau Canal, near Ottawa, destroyed 70,300 feet of lumber valued at $12,000. The loss is almost wholly covered by insurance.

—On the afternoon of July 5th, a fire broke out in Robert Thomson's lumber yard in Stewart street west, Hamilton. The lumber piled in the yard was saved, but the mill was completely destroyed. The estimated loss is $1,000.

—Byram & Murphy's saw mill at Sandison Station, Ont., was consumed by fire a fortnight ago, with all the unfinished stock of lumber, etc. The loss on the stock, on which there was no insurance, was $4,000. The mill building was valued al $9,500 and was insured for $2,875.

—Fire broke out in the large stave mills in Romney township owned by Sutherland, Innes & Co., of Chatham, on the 20th July. The mill, dry kiln, several tram cars, and a quantity of logs were destroyed. One hundred men will be thrown out of employment. The loss will probably reach $20,000.

CASUALTIES.

—A young man named John Smart had the fingers of his left hand badly torn and cut while running a machine in J. C. Scott's planing mill on River Street, Toronto.

—John Kitchen, of Hepworth, Ont., while working in Davidson Hay's saw mill at Tache Bay, had his right foot lacerated by a saw. He was taken to the General Hospital in Toronto.

—Richard Langlois, who is a married man 50 years of age, and was recently employed at Fletcher's planing mill on Yonge Street, Toronto, had the misfortune, a fortnight ago, to have his left arm so severely crushed in a pulley as to necessitate amputation. His right leg was also badly crushed.

—A boiler in the saw mill of John Stevenson, at Cayuga Station, Ont., exploded on the 28th of June, killing the engineer, John Commer, and fatally injuring a sawyer named Franks, whose scull was fractured. Two others were badly scalded. The mill is a total wreck.

—One of the saddest occurrences which we have been called upon to chronicle, took place at Paris, Ont., on the 12th of July. James Crawford, a carpenter, working at a steam sawing machine, was placing a plank on the table which feeds the saw when he was caught by the belt and hurled across the saw, which severed his head from his body, at the same time cutting one of his legs and an arm off.

PERSONAL.

—Mr. Hugh Monroe, crown timber agent, has returned to Port Arthur with his bride, having been married at Rat Portage.

Mr. Fred Moore, a popular lumberman of Woodstock, N.B., it is announced will be a candidate for the legislature in Carlton County.

Mr. Harvey Francis, lumberman, of Parkenham, Ont., was married recently in California, and accompanied by his bride, is at present on a visit to Europe.

—Mr. E. B. Eddy, the well-known lumberman of Hull, was married last month to Miss Shiriff, daughter of Mr. John Shiriff, High Sheriff of Northumberland County, N. B.

Mr. Eugene Rouillard, of the Quebec Crown Lands Department, has recently been on a visit of inspection to the lands agencies for the Chicoutimi and Saguenay districts.

A VALUABLE BOOK ON BAND SAWS.

THE Eastman Lumber Co., Eastman, Que., who recently obtained from THE LUMBERMAN a copy of the book entitled "Why Band Saws Break," write us their opinion of the book as follows: "We have found it a great help to us. Some of the reasons we have found out, but others we were not sure of, and in these cases did not know how to prevent breaking of saws. We can recommend this book to anyone using a band saw, and every man who has charge of band saws should have a copy of it."

The advantages of electrical transmission of power are largely those of the relation of the position of the machinery with the motive power of the establishment. Each room is entirely independent from other rooms, and any motor is always ready for service as long as the machinery from which it derives its electricity is in operation.

CABLE-WAYS FOR LOGGING.

THE work of hauling logs, as an important part of lumbering, has called forth some of the best engineering skill of the country. We have already described in these columns the piece of engineering enterprise put into operation within the past few months by Gilmour & Co., of Trenton, so that they might bring the logs from their Nipissing limits with the greatest ease and least expense. In this case the distance from the limits to the mill is somewhat over 200 miles, and there is at times a log haul of over 300ft. long and about 40ft. lift. Those who have personally inspected the Gilmour experiment say that it has worked charmingly.

Logging by cable is another method that has received a good deal of consideration from engineers. In a late number of the Northwestern Lumberman, Mr. Met L. Saley, in his chatty chapter, "Salmagundi," tells of what is known as Kelliher's system of moving logs by cable. Kelliher, it appears, is a Maine man, who has lost two or three fingers in his battles with logs, and this fact, combined with a considerable experience, no doubt, has set his mind thinking along these lines. It is not chronicled, however, that he has yet brought his cable system to a very high degree of perfection. It is described as being somewhat sluggish in its movements, and to quote Saley's description, "The cable was heavy, and when you tried to do it up in a coil so that it could be hauled away to another field of action, was the time when the men would become tired on short notice." Then there is a Glover & Chandler's steam logger, which made its debut in Northern Michigan about six months ago, but so far it has only met with indifferent success.

A cable-way on a more elaborate scale than anything that has yet been attempted proved the subject of a paper at the recent annual convention of the American Society of Civil Engineers at Niagara Falls in June last. The author of the paper is Mr. Richard Lamb, an associate member of the society. What he has to say we will let him tell in his own words, thus :

"The problem that confronted the writer was to design a cable-way that could be operated at least half a mile, and with the power placed upon a boat or car located at a navigable point. It should gather in the logs for at least 500 feet on either side of the cable-way proper, and by its means bring the logs to navigation at a reasonable cost for operation. It was necessary that such a system should be easily and cheaply moved from place to place as the total area of forest to be cleared at any one setting would not require much time. Trees had to be used as supports, as they are the only practicable foundation to be found in the swamp. It was evident that any steam system would have to be worked in practically a straight line. To attempt to find trees in a straight line would be difficult if the distance apart was not great, but after running a number of lines it was found that in a forest of ordinary density a practically straight line could be gotten with trees at from 100 to 225 feet apart. The writer's system was designed for long spans in consequence.

"Iron brackets in the shape of a T are used for passing by the trees and for supporting the cable. The T iron bar straddles a 1½ × ½ inch iron pipe driven into the tree at a height of about 13 feet from the ground. Dogs on the ends of the arms attached to the T iron bar are driven into the tree on either side, and a chain wrapped around the arms and held from slipping by upset knobs keeps the arms from spreading. The chain also serves to hold an iron snatch-block.

"A swinging sheave is hung from the end of the T iron bar on which is an iron band curved rearwardly and downwardly, which acts as a fender and also replaces the hauling cable should it become disengaged from the hanging sheave. The steel saddle at the end of the T bar is provided with boiler steel U plate. Two wedges pass through the U plate and saddle in opposite directions to each other. By means of these wedges the U plate clamps the main gable rigidly to the saddle. On the head tree two sheaves are placed, on either side, and on the tail tree a 2-foot steel sheave is chained.

"The endless ½-inch pulling cable, made of nineteen strands of steel wire, is passed through the sheaves on the head tree and on the brackets and around the large sheaves on the tail tree. Two turns are made around a two-foot elliptical grooved sheave, run by a twenty-five H. P. reversible engine for a ½-mile line. After the ½-inch cable is out, the main cable is hauled into the swamp by steam power by means of the hauling cable.

"The cars are made with a hanging frame supported by a horizontal axle passing between the wheels. By this arrangement the hanging frame can remain vertical even when the car is climbing the steep grade of the catenary on approaching the saddles and when passing over them. The hauling cable is attached rigidly to the swinging frame at a point located so as to clear the swinging sheave, and the hauling cable is practically parallel with the bearing cable at all parts of the line.

"It became necessary, however, to design a system that practically would not be limited as to the distance it could be operated. To this end an electric cable-way was built. As economy and ease in moving depended being able to use few supports, or, in other words, long spans in the forest, it was evident that no system of traction was available. The direction of the force should be parallel to the bearing cable. This suggested the use a ½-inch cable, made fast at both ends, to be supported at the tree brackets by a narrow saddle, so designed as to enable the cable to change its course and not to become disengaged when the car passed over it.

"The motor is made with the car like the steam cable-way, with a hanging frame having attached to it an elliptically grooved sheave which is revolved by means of a newly patented worm or wedge gearing, driven by a 5-kilowatt electric motor with vertical shaft, all attached to the swinging frame of the car. By taking a couple of turns of the ½-inch cable around the elliptical grooved sheave, when the motor revolves the gearing, the sheave winds up, and at the same time plays out on the ½-inch cable, thus pulling along the car.

"When it reaches the bracket, the small cable is lifted from the saddle momentarily, and the car can take a new course. Hence we are not limited to running in a straight line. The main cable is used as the conductor. It is insulated at the brackets by micanite placed between the saddle and the iron T bar, and the current is prevented from passing down the frame of the motor by a micanite insulator at the point on the frame where the axle-box joins the frame proper. The points of the insulator are each provided in their construction with hoods to shed water.

"The worm or wedge gear deserves special mention. It was invented in 1891 by a Mr. Welsh, of the Glen Cove Machine Company. It differs from an ordinary worm gear in that it has 25 per cent. more contact surface, moves two teeth of the gear wheel at each revolution of the worm, and works on the principle of a wedge rather than an incline plane. The worm gear especially made for this electric motor is designed to work both ways, and has ball-bearings at either end of the worm, to lessen the friction and thrust. The gear wheel, worm and ball-bearings are encased in a jacket filled with oil. Thus the minimum loss in power is effected between the electric motor and the elliptical grooved wheel. The electric motor is run at 1,340 revolutions per minute, giving a speed to the motor proper, with the gearing, of six miles per hour, which is the desirable speed for logging purposes. The current is taken from the main cable through the wheels, thence through the axle to the axle-box of the hanging frame. Here an insulated copper wire connects it with the rheostat. The return current is passed through the axle of the elliptical grooved wheel; thence on the ½-inch wire to the brackets; thence on a wire down the trees to the ground.

"In the system now built 220 volts are used. The trial was made at the works of the Trenton Iron Co., Trenton, N. J., along the banks of the Deleware and Hudson Canal. It was found that the heavy logs could be pulled from a distance up to the cable, by the same method as employed in the steam system. When two motors are used, the empty cars are switched off the cable and motors are exchanged, the motor which hauled the empties taking back the loaded ones, and vice versa. This system of electrical cable-way can be used for an endless variety of purposes."

THE MANUFACTURE OF LUMBER.

WITH all the progress that has been made in methods of manufacture of goods from other natural products, in the judgment of Hardwood, we are yet a long way behind in the matter of transmuting the trees of the forest into a product for merchandizing. The saws of the ancients, our co-temporary goes on to say, were blades of metal with serrated edges, the points of which were sharpened in the same way as now. There has been a certain amount of improvement in the blade by changing the shape of the teeth and making it thinner and of more uniform thickness, and perhaps of better temper. It is even problematical if these are not rather a return to an age of lost arts preceding an era of barbarism which held sway for a few centuries.

The up-and-down saw mill of to-day is built on precisely the same principles as the pioneer mill of Gottlieb Muller, erected on the banks of the river Rhine in the 13th century, though instead of one saw it carries two or more in a gang. The only new principle that has been applied to the gate saw mill is the oscillating movement in the gang. There have been great improvements in the application of power, and the gang edger and trimmer have been added. But these are all in the interest of speed and increased output rather than in the real manner of making the lumber or improving the quality of its manufacture.

The question is raised whether there are half a dozen lumber manufacturers in the country who can tell, or even give an intelligent guess, as to the number of thousands of feet of their annual cut that is reduced by bad manufacturing. The only persons who have any adequate knowledge of this subject are the expert lumber inspectors who do actual grading by quantities, and many of them, while they know that it is considerable, have not given the subject sufficient thought to be able to say what the percentage really amounts to. The good judges assert that it is not less than 5%, and there are those who firmly declare it is more. Call it 5% of the entire cut of the country and think of the enormous amount this is.

OAK TANNED BELTING
TORONTO
20 FRONT ST EAST
TELEPHONE 475
THE J.C.McLAREN BELTING Co MONTREAL

SWEDISH SAW MILLS.

IN this wooden country we certainly have attained to a high art in saw mill building. The Timber Trades Journal, of London, Eng., makes some statements, however, in regard to the magnitude of saw mills in Sweden, that are likely to be surprising to some on this side of the water. One institution, the Skutskar Company, manufactures and exports annually nearly 120,000,000 feet board measure; and there are several mills that ship 40,000 to 50,000 St. Petersburg standards per annum. A St. Petersburg standard—or standard hundred, as it is more properly called—contains 1,980 feet; so that the export of 40,000 standard means 79,200,000 feet board measure.

Attention is called to the fact that these outputs are produced from small timber, not often exceeding 8 to 9 inches in diameter, and frequently as low as 6 or even 5 inches, making the result still more remarkable in comparison with the industries of the United States and Canada. The large saw mills in Sweden have sometimes upwards of 20 frames. Two are mentioned that are fitted with 24 frames. In Norway the largest concern is Saugbrugsforeningen, that controls 21 frames and a large plant of planing machinery that enables them in certain years to produce nearly 30,000 standards, the great part of which is "prepared," or worked in the planing mill. The biggest individual shipper in the old world is said to be A. Ahlstrom, of Bjorneborg, who, it is said, owns about 15 frames, capable of sawing upwards of 30,000 standards. The largest individual shipis P. Vikstrom, Jr., of Stockholm, who ships more than Mr. Ahlstrom, but does not exclusively own the different mills that turn out his product.

Lumberman

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a line of Nagasaki just suitable for Camps and prices RIGHT. Drop us a post card for sample. : : : : :

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THE ONLY SAW MANUFACTURERS IN THE WORLD WHO EXPORT SAWS IN LARGE QUANTITIES TO THE UNITED STATES

SOLE PROPRIETORS OF THE SECRET CHEMICAL PROCESS OF TEMPERING : : Our Silver Steel Saws are Unequalled

Pumps & HYDRAULIC MACHINERY

DUPLEX AND SINGLE STEAM AND POWER

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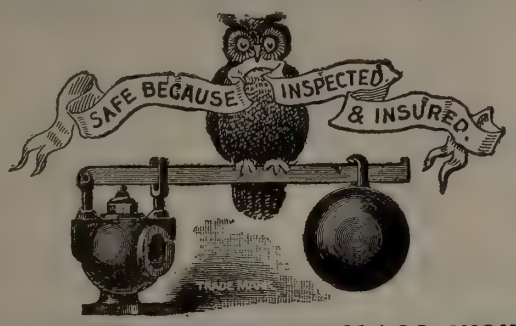
Our Steam Boiler Policy covers all loss or damage to the Boilers, also to property of every kind on the premises or elsewhere, whether it is the property of the assured or of others for which the assured would be liable in case of explosion.

SUBSCRIBED CAPITAL, $200,000



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REAMER LUMBER CO. LTD.

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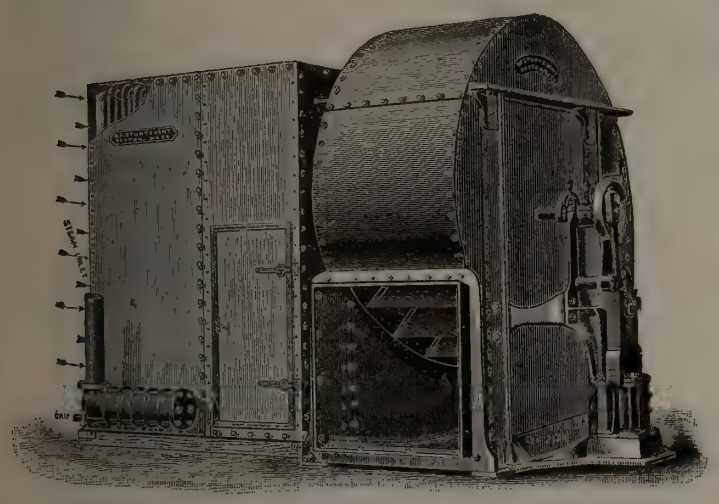

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Very latest improved machinery in all these lines . . . . . .

Saw Mill Machinery
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Representative Lumber Manufacturers and Dealers

TOWN	Railway, Express, or nearest Shipping Point	NAME	BUSINESS	Power, Style and Daily Capacity
Ottawa, Ont.	Ottawa	**Booth, J. R.**	Lumber, Wholesale and Retail	Steam, Circular and Band Mill
Ottawa, Ont.	Ottawa	**Bronson & Weston Lumber Co.**	2 Sawmills, White and Red Pine, Wholesale	Water, Gang and Band, 450m
Parry Sound, Ont.	Utterson	**Conger Lumber Co.**	Lumber, Wholesale and Retail	
Parry Sound, Ont.	Parry Sound	**Parry Sound Lumber Co.**	Saw, Shingle and Lath Mills, Pine, Wholesale	Water, Gang, Circular, Saw 90m, Shingles 70m, Lath 30m
Muskoka Mills, Ont.	Midland	**Muskoka Mill and Lumber Co.**, Head Office, Arcade, 24 King st. w., Toronto	W. Pine Lumber, Lath and Bill Stuff, all lengths.	2 Mills, Water, 1 Band, 2 Gangs and 3 Circulars.
Alexandria, Ont.	Alexandria	**McPherson, Schell & Co.**	Cheese Box Factory, Pine, Spruce, Cedar	
Almonte, Ont.	Almonte	**Caldwell, A. & Son**	Sawmill, Pine, Lumber, Hemlock, Hardwoods	Circular, 3m
Barrie, Ont.	Barrie	**Dyment & Mickle**	Sawmill, Pine, Spruce, Cedar, Hardwoods	Steam, Circular, 40m
Barrow Bay, Ont.	Wiarton	**Barrow Bay Lumber Co., Limited**	Saw, Shingle and Heading Mill, Pine, Cedar Oak, Oak Railway Ties, Paving Blocks	Steam, Circular, 16m
Blind River, Ont.	Blind River	**Blind River Lumber Co.**	2 Saw, Sh. and Lath Mls., Pine, Hem., Bl. Birch	Stm., Band, Cir., S. 75m, Sh. 60m
Bobcaygeon, Ont.	Fenelon Falls	**Boyd, Mossom & Co.**	Lumber, Wholesale and Retail	
Barrie, Ont.	Barrie	**Burton Bros.**	Lumber, Wholesale and Retail	
Waubaushene, Ont.	Waubaushene	**Georgian Bay Consolid. Lumber Co.** Hd. office arcade 24 King st. w., Toronto	Pine only.	Waubaushene mill, stm., 200m; Pt. Severn mill, water, 120m
Calabogie, Ont.	Calabogie	**Carswell, Thistle & McKay**	Lumber, Wholesale and Retail	
Callander, Ont.	Callander, G.T.R.	**John B. Smith & Sons** Head Office, Strachan Ave., Toronto	White and Red Pine Lumber, Bill Stuff, Lath and Shingles	Steam, 2 Circular, 80m
Collins Inlet, Ont.	Collins Inlet	**Collins Inlet Lumber Co.**	Lumber, Pine, Oak, Ash, Birch, Whol. and Ret.	
Glammis, Ont.	Pinkerton	**McIntyre, N. & A.**	Saw, Shingle and Lath Mill, Timber Lands, Hemlock, Pine, Lumber, Hardwoods	Steam, Cir., Saw 14m, Sh. 20m
Hamilton, Ont.	Hamilton	**BRADLEY, MORRIS & REID CO.**	Lum., Tim., Pine, Hem., Hwds., Whol. and Ret.	
Huntsville, Ont.	Huntsville	**Heath, Tait and Turnbull**	Sawmill, Pine, Spruce, Hemlock, Hardwoods	Steam, Circular, 25m
Hamilton, Ont.	Huntsville and Katrine	**Thomson, Robert & Co.**	Sawmill, Pine, Spruce, Hardwoods	Steam, Circular, 4m
Keewatin, Ont.	Keewatin	**Dick, Banning & Co.**	Sawmill, Pine, Hardwoods, Wholesale	Steam, Circular
Keewatin, Ont.	Keewatin	**Keewatin Lumber & Mfg. Co.**	Saw, Lath, Sh. and Pl. Mill, Moving Posts, Pine	Water, Band and Circular, 100m
Lakefield, Ont.	Lakefield	**Lakefield Lumber Mfg. Co.**	Lumber, Wholesale and Retail	
Little Current, Ont.	Sudbury	**Howry, J. W. & Sons.**	Lumber, Wholesale and Retail	
London, Ont.	London	**Gordon, James**	Exp. and dlr. in Am. Hwds, made to specification	
Longford Mills, Ont.	Longford	**Longford Lumber Co.**	Saw and Plan. Mill, Tim. Lands and Logs, Pine	Steam, Band and Circular, 100m
Norman, Ont.	Norman	**Minnesota & Ontario Lumber Co.**	Lumber, Wholesale and Retail	
Louise, Ont.	Elmwood, G.T.R.	**S. B. Wilson & Son**	Hardwoods, Shingles, Lath, Handles.	Steam, Circular, 20m.
Toronto, Ont.	Warren, C.P.R	**The Imperial Lumber Co., Limited**	Pine	80 M. per day, Stm., 2 Cir. Saws
Toronto, Ont.	Cache Bay, Ont.	**Davidson, Hay & Co.**	W. Pine, Lath, Shingles, Dim. Timber, Car Sills	Stm, 2 Band, Cir. & Gang, 140m
Toronto, Ont., Mill: Stony Lake	Lakefield	**S. J. Wilson & Co.**	Pine and Hardwood, Wholesale	Steam, Circular, 15m.
Toronto, Ont.	Toronto	**F. N. Tennant**	Lumber, Wholesale	
Toronto, Ont.	Toronto	**Donogh & Oliver**	Lumber, Wholesale	Com.
Toronto, Ont.	Toronto	**Victoria Harbor Lumber Co.**	3 Saw, Shingle and Lath Mills, White Pine, Whol.	Stm., Cir., Gang and Band, 140m
Toronto, Ont.	Toronto	**W. N. McEachren & Co**	Lumber, Wholesale	Com.
Toronto, Ont.	Toronto	**James Tennant & Co.**	Lumber, Lath, Shingles, etc., Wholesale	Com.
Toronto	Toronto	**DeLaplante & Bowden**	Pine and Hardwood Lumber, Whol. and Retail.	
Toronto, Ont.	Toronto	**James McBain Reid.**	Ry. and Ship Timber, any required dimensions	
Wiarton, Ont.	Wiarton	**Miller, B. B.**	3 Sawmills, Lumber, Barrel Heads	Stm., Wr., Cir., Port. & Sta., 10m
Montreal, Que.	Montreal	**Dufresne, O. Jr. & Frere**	Sawmill, Pine, Spruce, Hemlock, Hdwds., Whol.	Steam, Circular and Band, 50m
Montreal, Que.	Montreal	**SHEARER & BROWN**	4 Sawmills, Oak, Ash, Elm, Pine, Hem., Dim.	2 Stm., 2 Wat., Band, Cir., 40m
Moodyville, B.C.	New Westminster	**MOODYVILLE SAWMILL CO.**	Sawmills, P. Fin, Spruce, Cedar, Hardwoods	Steam, Circular, 20m
New Westminster, B.C.	New Westminster	**Brunette Sawmill Co.**	Saw and Planing Mills, Sash, Doors and Blinds. Fir, Cedar, Spruce, Hardwoods	Steam, Gang and Circular
Canterbury, N.B.	Canterbury Stn.	**James Morrison & Son**	Sawmill. Pine, Hardwoods	Steam, Circular, 38m
Bridgewater, N.S.	Bridgewater	**DAVIDSON, E. D. & SONS**	5 Saw, Shgle. and Lath Mills, Pine, Spr., Hwds.	Water, Circular and Gang, 200m
South River, Ont.	South River, G.T.R.	**South River Lumber Co., Ltd.**	Pine, Spruce, Birch, Hemlock, Shingles.	Stm., Cir., 40m, Shingles, 35m, Lath, 15m

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The Montreal Car Wheel Co.

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Charcoal Iron Chilled

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FOR SHINGLES IN CAR LOTS WRITE FOR prices. McEACHERN & CARR, Trout Creek P. O., Ont.

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FOR HEMLOCK, DIMENSION LUMBER, hardwood flooring, cedar shingles, pi es, sawdust, etc., write J. E. MURPHY, lumberman, Hepworth Station, Ont.

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BY TWO YOUNG MEN OF NINE YEARS' experience, a contract of sawing lumber in the north country from some responsible firm. Would put in their own machinery. Ready to leave present locality in six weeks. Address:

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FOR SALE

About 25 M Feet 1 inch Dry Ash Lumber, FINE quality.

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LABERGE MILL, WITH WOOD LAND, over 400 acres, near St. Faustin, County of Terrebonne, P. Q., on Montreal and Western Railway, comprising two H. P. boilers, one 65 H. P. engine, and saw mill complete—only one year in use—with clapboard machine and planer and log lathe, shingle machine, Champion planer and matcher, &c.; side track; with or without over 200,000 feet of sawed birch and spruce. Good reduction made on cost price. Address to J. LABERGE, 1511 Notre Dame Street, Montreal.

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Large Matcher and Planer combined, Band Saw, Power Mortiser, Shafter, Jointer and Sandpapeier.

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IN THE

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—ON—

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and all Canadian Territory
To ST. PAUL, DULUTH and Pacific Coast Points.

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RUNAWAYS IMPOSSIBLE.

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This Bit, by an automatic device, closes the horse's nostrils.

HE CANNOT BREATHE, AND MUST STOP.

SAFETY FROM RUNAWAYS ABSOLUTELY GUARANTEED WITH THIS BIT

Any horse is liable to run, and should be driven with it. By its use ladies and children drive horses men could not hold with the old style bits.

Send for illustrated pamphlet containing testimonials from all parts of the world, and earnest and candid expressions about the **BRITT AUTOMATIC SAFETY BIT** and its resistless but harmless and humane power in subduing the most vicious horses and controlling the most **stubborn pullers** and chronic runaways.

The only bit in the world that is endorsed, advocated, used and sold by the Society for the **Prevention of Cruelty to Animals**, ***The Highest Authority.***

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WE MAKE A ... SPECIALTY OF LONG BILL STUFF IN ROCK ELM, PINE, CEDAR AND HEMLOCK

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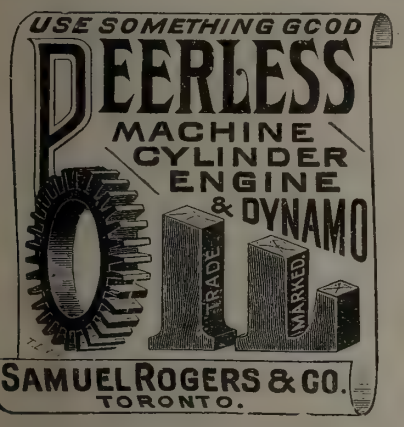

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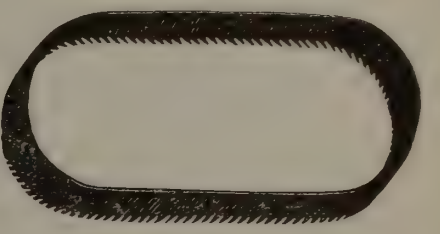
WHY BAND SAWS BREAK

SIXTEEN REASONS, AND HOW TO AVOID THEM



Being instructions to filers on the care of large band saw blades used in the manufacture of lumber.

A book filled with valuable information on the care of band saws. Giving the reasons for breaking; analyzing each reason; giving instructions to dispense with the causes as laid down in each reason; and full details on filing and brazing. The proper styles of hammers to use are illustrated and described, and views of blades showing the blows of the different styles of hammers form an important part of the illustrations. Improper and unequal tension are then treated, and the manner of properly setting irregular teeth is described. In connection with the treatise is a history of the invention, manufacture and use of the saw from its origin to the present time. The work in whole makes an accumulation of information such as has never before been published.

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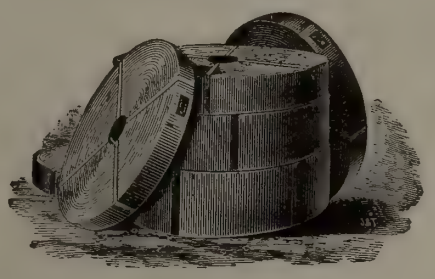

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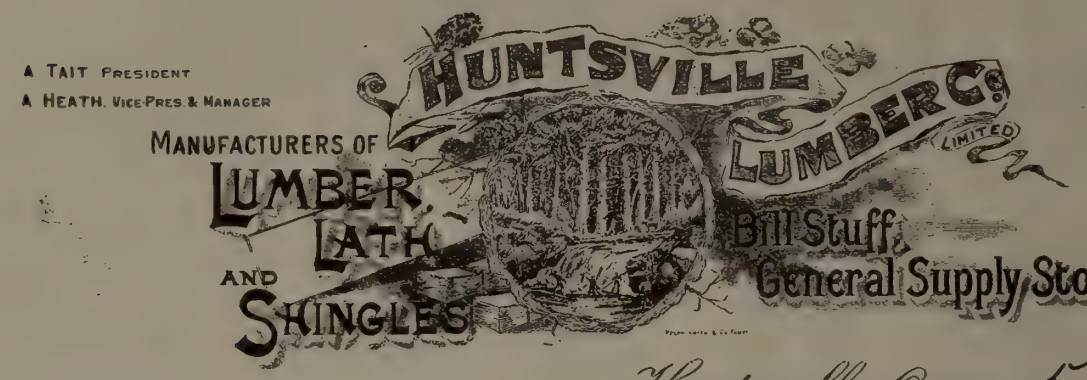

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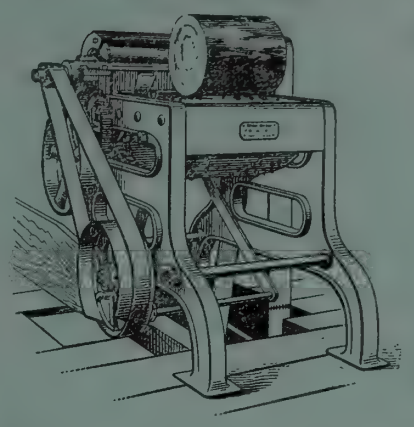

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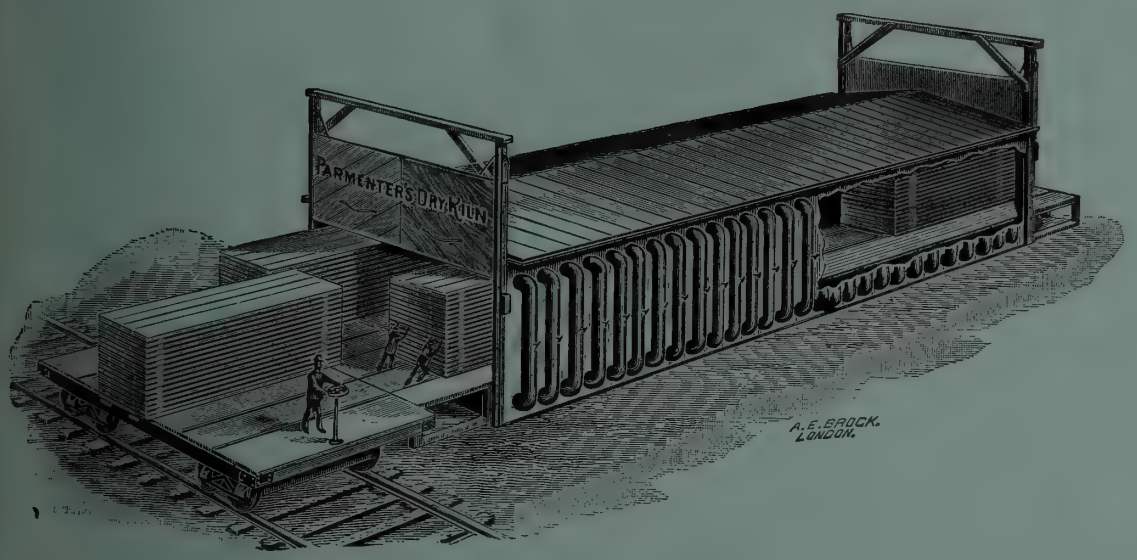

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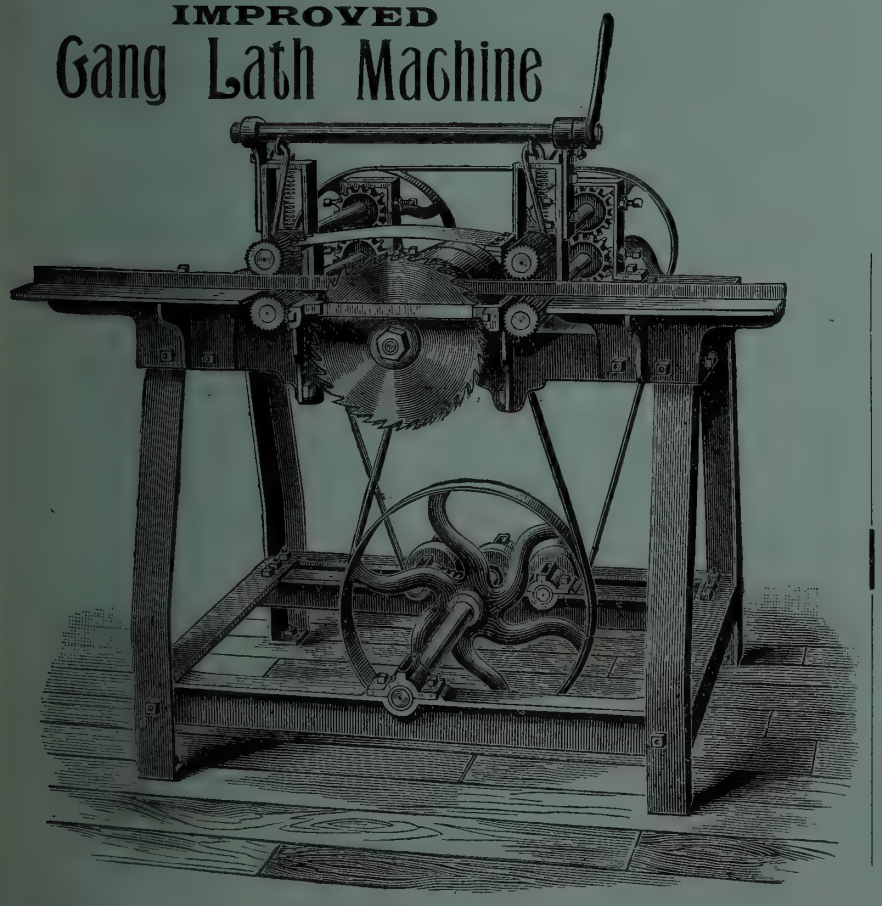

BY means of the hand lever shown at top of machine the feed can be stopped instantly. The machine is provided with supports for the lath between the saws; these supports prevent any short pieces of lath from breaking off and becoming stuck between the saws. This is the principal cause of so many Lath Saws becoming heated and ruined.

This Lath Machine is fitted with four 12 inch saws which should run about 3,000 revolutions per minute and will cut fully as much, if not more, than any other similar machine in the market. Weight, 800 lbs.

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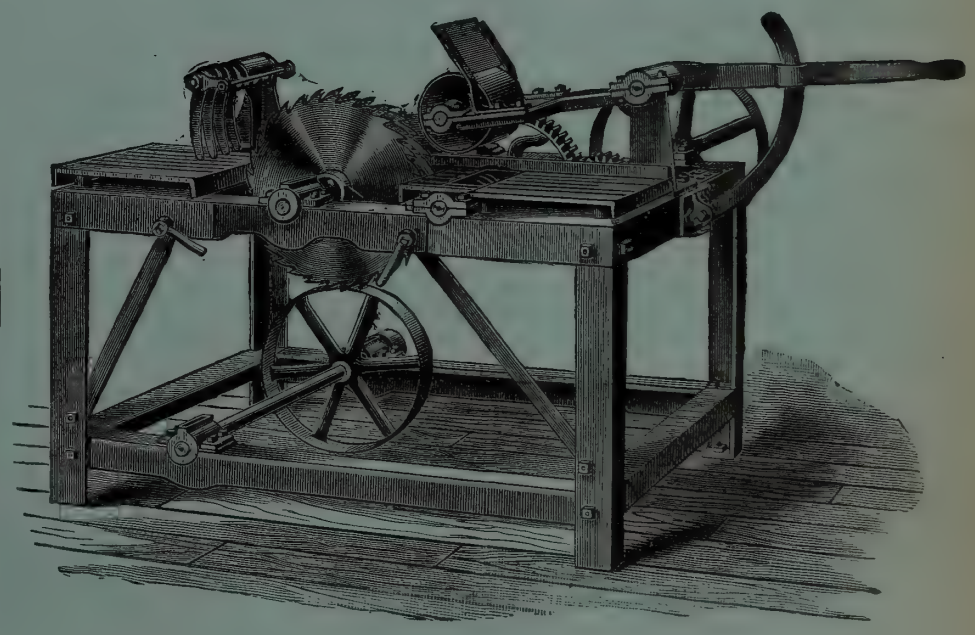

HAS solid iron frame, geared feed roller, and heavy binding roll of large size so it will adapt itself to rough or uneven slabs. Heavy steel saw arbor with three bearings. The outer bearing is made with a slight taper, and the box is easily removed for the purpose of changing saws. The drive pulley is 10 inches diameter, 13 inches face. Weight, 1,200 lbs. Speed of saws, 2,500.

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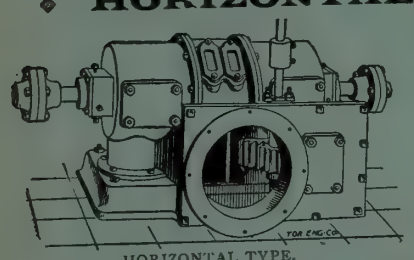

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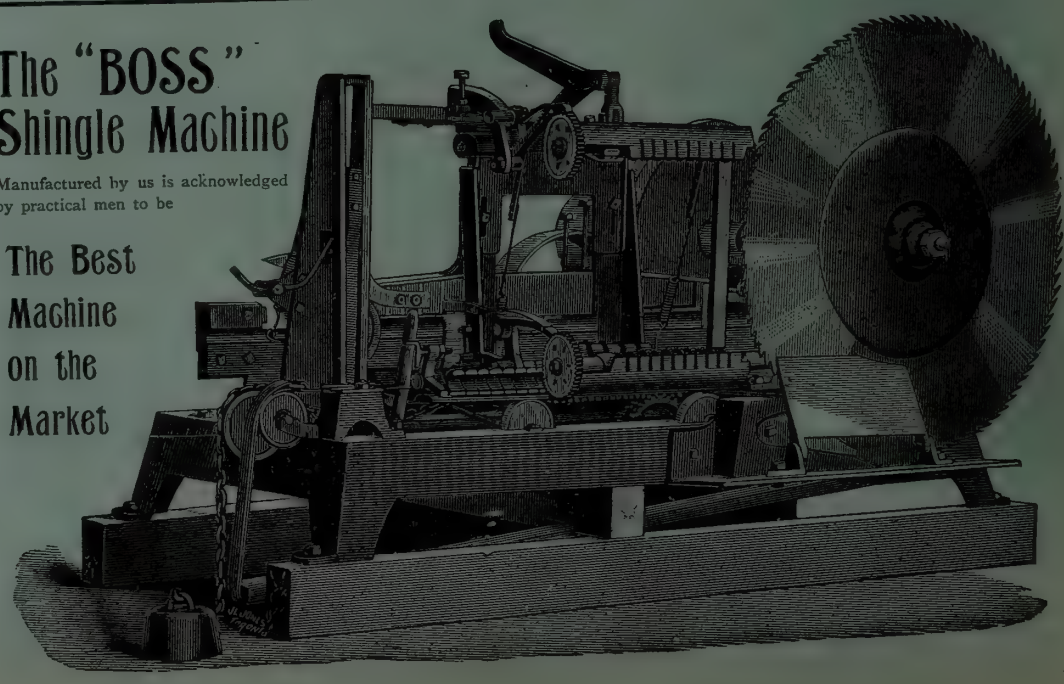

THE CANADA LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

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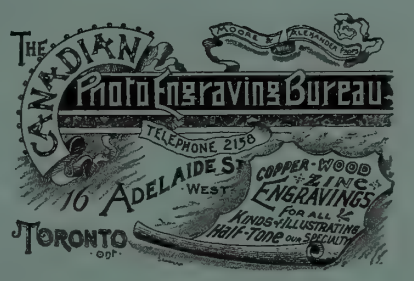

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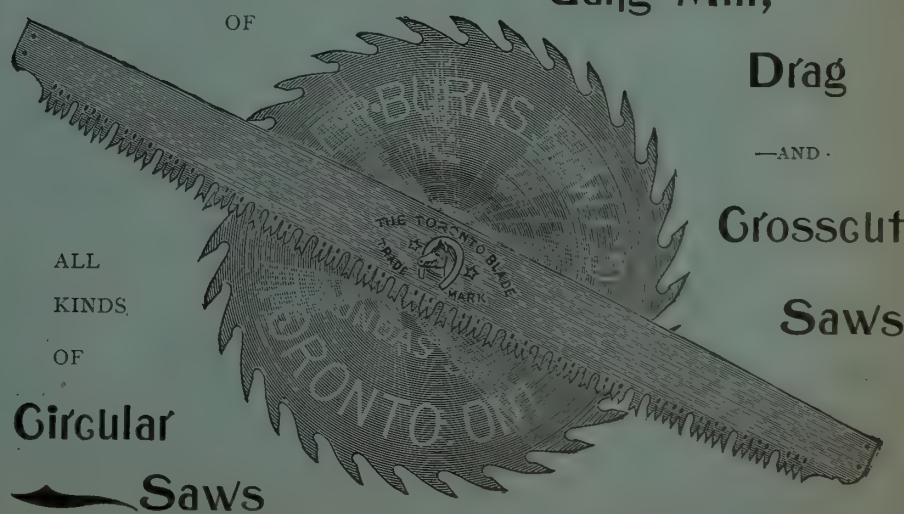

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THE CANADA LUMBERMAN

VOLUME XV. NUMBER 9. | TORONTO, ONT., SEPTEMBER, 1894 | TERMS, 1.00 PER YEAR SINGLE COPIES, 10 CENTS

CHARACTER SKETCH.

ALEX. GIBSON.

LUMBER KING OF NEW BRUNSWICK.

"Love, therefore, labor: if thou should'st not want it for food, thou may'st for physic. It is wholesome to the body, and good for the mind; it prevents the fruit of idleness."—William Penn.

FOR many years Alex. Gibson has occupied a leading position in the front ranks of the business men of Eastern Canada. No man in the three provinces is better known than he, no man is more highly respected and no individual's opinions carry with them more weight than do those of Mr. Gibson. He seldom or never talks about himself or about what he has done. Like all truly great men he is very modest, in fact, he carries his modesty so far that even newspaper reporters have failed in their endeavors to learn more of his life before he became so well known to the general public.

Alex. Gibson is an old man, but the weight of years rests lightly upon him. He is yet strong and active, and as enterprising as he was twenty years ago. He is constantly evolving some new scheme or endeavoring to perfect that which he has been led to consider behind the age. Mr. Gibson is not prepossessing in his personal appearance, although he has a kindly face and one too that could not easily be forgotten. He is not fond of dress and seldom wears other than a plain grey or brown suit. It affords him much pleasure for visitors to call on him to be shown around his mills and factories. If he is not too busily engaged he receives them personally and takes great delight in pointing out and in explaining everything of interest. But when he has done this, the visitor should not remain longer to trespass upon his time. This is the man, now for what he has accomplished.

MARYVILLE, N. B.—THE HOME OF MR. ALEX. GIBSON.

Alex. Gibson began life without any capital other than a sturdy constitution, a strong will, a great capacity for work, and an eminently keen and practical mind. We first find him in Charlotte county, along the banks of the St. Croix, where with his axe he labored for the ordinary woodman's wage. Not long, however, did he remain an ordinary laborer. He soon removed to Milltown, where he worked for a short time in the lumber mills at that place. Very soon after this we find him launched out in business on his own account. A very few years later we find him at Lepreaux. The mill at this place had never paid its owners, but Mr. Gibson not only made it pay, but he made it pay well—he acquired a small fortune there. That was over thirty years ago. With a keen business eye he saw that to remain at Lepreaux was to allow himself to become very much handicapped, and instead of adding to his small fortune he should run a great risk of losing what he had made. Mr. Gibson accordingly sold his mill at Lepreaux and removed to the Nashwaak, where he invested all his money in mills and in 7000 acres of timbered land. On taking possession of the river Mr. Gibson at once saw the first requisite, the lack of which had caused all former operators to fail. This was a first class boom, held by a mile or more of piers. The firm of whom Mr. Gibson purchased the property had driven logs nearly all the summer, having had no place in which to hold them. Consequently the river driving, instead of costing them 50 cents per thousand feet, cost $1.50. After Mr. Gibson had got his driving dams there was no further trouble in this direction. Shortly after Mr. Gibson had settled on the Nashwaak river, he purchased several other sections of valuable timber land, so that in a short time he had acquired 170,000 acres of heavily wooded land, the greater number of which were situated along the Nashwaak river. A year or two witnessed a great change along this river. Mr. Gibson felt that he had a sure thing, and with his characteristic enterprise he launched boldly out into a speculation which had cost him more than he was worth. But he had calculated well. His mills soon became too small. Other and larger ones had to be erected and equipped with modern mill machinery, for Mr. Gibson never used second had machines of any kind. These purchases involved the expenditure of large sums of money, but by that time had acquired a reputation among the leading business men in the province, and he could have received plenty of backing if he had required it. He was told to go ahead and he did so in leaps and in bounds.

But it would take too long to give in detail the various moves made by this man. His business grew, and grew rapidly. In the course of a few years he became convinced that a shingle and lath mill would pay. He at once erected both and equipped them thoroughly. At present he has a mill at Blackville along the Canada Eastern railway. It gives employment to 50 men and cuts in the vicinity of 5,000,000 feet every year. Mr. Gibson's saw mill on the Nashwaak gives employment to 90 men, his lath mill 65 men, shingle mill 40 men; at the boom there are between 25 and 30. On the stream every spring he employs about 350. All his mills are equipped with the most modern and labor-saving machinery. In addition to his own cut, which averages about 30,000,000 feet every year, Mr. Gibson is a large purchaser of provincial lumber for shipment to the English market. In connection with this business he has an office in St. John.

But when we speak of Mr. Gibson's business as a lumberman the half has not been told. The fame of Gibson's cotton mill has gone throughout Canada. At present it employs over 500 hands and can provide employment for 1,300 whenever the market of the country becomes large enough to consume the output, as the capacity of the mill is double the present output. This mill was started by Mr. Gibson in 1888. The bricks of which it is constructed were manufactured by him on his own property, and within a stone's throw of the structure. It was completed in 1889 and fitted throughout with the most improved machinery. So keenly is Mr. Gibson on the lookout for new machinery that some of that which was placed in the mill at the first has already been cast aside for later inventions. The mill is lighted at night by electricity from their own dynamos. There is a well equipped machine shop in connection. The mill is protected against fire by hydrants outside, with pipes through the mill supplied by gravitation, with plenty of hose on every floor, and is in every respect a complete and thoroughly equipped establishment. In addition to the cotton mill and lumber mills, the brick yard is still operated and employs from 20 to 30 men during the summer.

When Mr. Gibson settled on the Nashwaak there was but one old mill and not more than half a dozen tumbledown shanties there. Now there is a thrifty little town with its mayor and aldermen. Alex. Gibson, jr., was mayor in 1891, and the younger son, James, served in the council during the same year. Maryville, for this is the name of the town, has all the modern improvements.

The Methodist church was built by Mr. Gibson at a cost of more than $50,000. The interior finish, handsome frescoes, stained glass windows, splendid organ, (the organist, Prof. Cadwallader, is a gifted artist whose salary is paid by Mr. Gibson himself), excite the wonder and admiration of every visitor.

There are four other churches, Episcopal, Baptist, F. C. Baptist and Reformed Baptist, now in course of erection in the town.

There are fine schools, where the children of the town have the best educational facilities.

There is a splendid skating rink, where many interesting sporting events occur in winter.

There is a large public hall over one of the stores, where theatrical companies are afforded facilities for their performances, and where at other times meetings of all kinds may be held.

The town has a brass band of 20 pieces. The uniform of the members is one of the finest in Canada, and they provide splendid music as well as present a fine appearance.

There are lodges of Oddfellows and Foresters and temperance and other organizations in the town.

Mr. Gibson is principal owner of the Canada Eastern railway. He has quite large interests in shipping and owns a small fleet of schooners, woodboats, tugs, etc. His has been a remarkable life. Though past three score years and ten, he is in perfect health, due to his splendid constitution and to the fact that he lives wisely and knows nothing of the excesses of modern living. He is always at his post and will tolerate no neglect of duty on the part of those around him. A man of kindly and generous impulses, many persons and causes have profited by his benevolence without knowing the source. When he has done with life his monument will be the town his genius has called into being, and the record of a life of honorable toil and service to his fellows.

FREE LUMBER THIS TIME.

THE UNITED STATES' TARIFF BILL FINALLY PASSED.—LUMBER ON THE FREE LIST.—CANADIAN AND AMERICAN OPINIONS OF THE CHANGED CONDITIONS.

AFTER many months of Senatorial fighting, in which all the arts of log-rolling known to American politicians, as to no one else, had been brought into operation, the Wilson Bill, or at least something that started out with that label on it, has become law. The bitterest warfare waged against the changes in the bill was that by the sugar trust, and this influence was potential. Outside of the object lesson taught, when that phase of the bill was being put through the house, the people of this country have had no particular interest in sugar. We are not uninterested, however, in a number of the changes that have been made, especially those bearing on the products of the farm, though with these the change has only been a reduction in duties. Lumber is an important addition to the free list. It was early in the contest placed on the free schedule, and though the opposition against the change was very determined in some sections, the general opinion prevailed that if the tariff bill went through at all, lumber would be free. This is now the case.

Southern lumbermen fought loyally in the interests of yellow pine, believing that the introduction of Canadian pine free into the States would affect the sale and prices of that growth of the southern states. Time will show how far these fears of our friends in Tennessee will be realized. A later, and in some respects, more vigorous opposition came from the planing mill men and box manufacturers in Michigan and the Eastern States, when it was resolved that dressed lumber, as well as sawed lumber, should go on the free list. Depending to considerable extent for supplies on the timber of Ontario, the lumber manufacturers of Michigan, Buffalo and Albany, for example, are afraid that they cannot compete with the Canadian lumber manufacturer. We have already intimated in these columns that free lumber would likely lead to the establishment of saw mills and box factories along our north shore by United States owners of Canadian limits. Already some of the saw mill men, to wit, J. W. Howry & Sons, William Peters, and Cutland, Savage & Co., have commenced to operate mills in that district, and now that they can send over the sawed lumber free, as they could before only the logs, no doubt others will commence the erection of mills in Ontario and adopt similar methods.

Business under any conditions is an evolution, and with all the enterprise of this new continent business men move cautiously. It does not seem improbable that the prediction of Mr. Geo. Bertram and other Canadian lumbermen that free lumber will give an unquestioned boom to the manufacture of lumber in this country will materialize, to a measurable extent, in fact. Enabled to place their mills within a stone's throw of the forest product, and with shipping facilities just about as complete for forwarding the manufactured article to its destination, as when in the rough log, it seems reasonable that shrewd business men will avail themselves of these advantages. This much we may accept as sure that if there is an expansion of the saw mill and planing mill business in Canada, as a result of free lumber, the change will take place, because, to use the business parlance of the day, there is money in it.

Already we have given in these columns opinions expressed by United States and Canadian lumbermen when anticipating free lumber. We here follow with various expressions of opinion from representatives of the trade in both countries now that de facto we have free lumber.

THE NEW TARIFF.

The tariff bill, as finally agreed upon by both branches of the United States Congress, and which has now become law, specifies the following free schedule as regards lumber.

Logs, and round timber.

Firewood, handle bolts, heading bolts, stave bolts, and shingle bolts, hop poles, fence posts, railroad ties, ship timbers, and ship planking, not specially provided for in this act.

Timber, hewn and sawed, and timber used for spars and in building wharves.

Timber squared or sided.

Sawed boards, plank, deals, and other lumber rough or dressed.

Hubs for wheels, posts, last blocks, wagon blocks, oar blocks, gun blocks, heading, and all like blocks or sticks, rough, hewn or sawed only.

Pine clapboards.

Spruce clapboards.

Lath.

Pickets and palings.

Shingles.

Staves of wood.

Woods, namely, cedar, lignumvitæ, lancewood, ebony, box, granadilla, mahogany, rosewood, satinwood, and all forms of cabinet woods, in the log, rough or hewn; bamboo and rattan unmanufactured; briar root or briar wood, and similar wood unmanufactured, or not further manufactured than cut into blocks suitable for the articles into which they are intended to be converted; bamboo, reeds, and sticks of partridge, hair wood, pimento, orange, myrtle, and other woods, not otherwise specially provided for in this act, in the rough, or not further manufactured than cut into lengths suitable for sticks for umbrellas, parasols, sun shades, whips or walking canes; and India malacca joints, not further manufactured than cut into suitable lengths for the manufactures into which they are intended to be converted.

The only exception applying to the foregoing schedule as upon the free list is provided for in paragraph 683, in these words: "Provided, that all the articles mentioned in paragraphs 672 to 683 inclusive," [that is, all of the above paragraphs except the last one] "when imported from any country which lays an export duty or imposes discriminating stumpage dues on any of them, shall be subject to the duties existing prior to the passage of this act." In other words, it may sweepingly be stated that the act as finally passed provides for free logs and all kinds of lumber in the ordinary sense, as well as all unmanufactured "cabinet woods" as described in the last paragraph, unless, as is not likely to happen, Canada should levy an export duty or stumpage dues on any of the items enumerated. In that case Canadian lumber would be subject to the provisions of the McKinley bill.

A CANADIAN MILL OWNER SPEAKS.

A representative of the LUMBERMAN talked with Mr. Campbell, of the Muskoka Mill and Lumber Co., a few days ago relative to the results that were likely to come to Canadian lumber interests, seeing that lumber had been made free in the United States tariff. "The change will certainly be a good one for Canada," said Mr. Campbell. "Our lumber interests in every way will be strengthened. As everyone, who has studied the question, is aware it has been next to impossible to do any business—more than a hand-to-mouth business—in lumber during the past year. Nothing else could have been expected, as United States lumbermen were not disposed to invest in either timber limits or lumber in Canada, not knowing what would be the issue of the tariff. Now that that question is settled lumber values in Canada will become firm. We are seeing how this is operating just since the bill has passed the House, as United States land lookers are now inspecting limits throughout the province and prices will stand about as they did two years ago." As large saw-millers themselves I was anxious to obtain Mr. Campbell's views of the likely effect of a change in the tariff on the saw mill and planing mill business in Canada, and my next query was in that direction. "It seems to me quite clear," replied Mr. Campbell, "that there will be a revival of saw mill interests in Ontario. In fact in anticipation of free lumber this has already taken place, and as you know, several United States lumbermen, who own limits in Canada, have already purchased saw mills in this country and will saw a certain portion of their product here. Other changes in this direction will likely follow. We have parties to-day negotiating for the purchase of our Muskoka mill. I apprehend that United States owners of Canadian limits will find it profitable, not only to saw their lumber here, as they now propose to do, but in any section where the shipping facilities are satisfactory, that they will also erect planing mills and box factories and ship dressed lumber into the markets of the eastern states. Our own saw mill men will, no doubt, find it advantageous to add planing mills to their saw mills." As to the effect of the change upon the exporting of logs to the United States, Mr. Campbell did not think that any noticeable change would take place in this direction immediately. A year later one would be able to speak in more positive terms on this point. "The spruce interests of the Dominion" continued Mr. Campbell, "will receive a considerable impetus from the change. As you know the duty on spruce lumber has been $2.00, which at the way prices have been running lately, has been practically a prohibitory tariff to anyone who desired to do trade with a profit. Our firm has confidence enough in the future development of spruce, in New Brunswick, to have become purchasers of about 300 miles of limits. I believe also that the British Columbia lumber interests will be greatly stimulated by free lumber, and we are to-day investing in limits in that province as an earnest of our belief. This gain there may not come immediately, for lumber matters in the Washington territory are terribly demoralized, but time will remove this trouble."

OPINIONS OF A WELL-KNOWN CANADIAN WHOLESALER.

"We are certainly hoping," said Mr. Donogh, of Donogh & Oliver, Toronto, "that the result of free lumber will be that the lumber industry in Canada will show signs of revival. There is indeed much need for it, for the past year has been one of exceptional depression." I asked Mr. Donogh if he anticipated, that in addition to an expansion of business with the United States in sawed lumber, which is pretty generally taken for granted, that there would also be a development in the direction of an enlargement of our planing mills and box factories. "We are hoping that this will be the case," was Mr. Donogh's reply. "Of course it is hard yet to tell how anything will shape." "It is to be remembered," joined in Mr. Oliver, "that at this date the bill has not been actually signed by the president, and I am not so sure he will sign it." "However, taking it for granted that it will go through all right," continued Mr. Donogh. "we have reason to expect that there will be a considerable quantity of dressed lumber shipped from here to the States. It ought to pay our saw mill men to add to their equipment planing mills with the necessary sidings for a shipping business and send forward the dressed lumber direct into the markets of the eastern states. But time will tell all this. My disposition you see is to speak guardedly, for the depression has been severe enough to make it appear likely that a revival can hardly come all with a rush."

WILL NOT DO MILLS GOOD THIS YEAR.

Mr. Geo. Cormack, the well-known lumberman, of Whitby, Ont., says: "By the removal of the duty on lumber I think it will help the lumber industry of Canada and I also think it will have a tendency to stop the exportation of logs to the United States to a certain extent. I expect we will see mills running again that have been closed down and that it will induce Americans to erect new mills here in Canada, which has already been done by some. I also think it will lead to the erection of planing mills and box factories in connection with the mills, but I hardly think the Tonawanda and Michigan people would transfer their planing mills and box factories over into Canada, for the reason that there is no certainty how long the duty will remain off as there may be another change in another election. I do not think the removal of the duty will do us much good this year as it has hung fire so far that it is too late in the season to do much good, but it will help things for next year."

A CANADIAN VIEW.

A prominent Canadian lumberman when spoken to on the question a day or two after the passing of the tariff bill had been reported as an actuality said: "We in the business here have no fear as to the result of the change. There is no prospect of the Dominion Government putting an export duty on saw logs or any other products of the forest. What it really amounts to is that the Canadian lumbermen will get a free market for his logs and for his deals if he wants to do his own cutting."

A BOON TO CANADIAN LUMBERMEN.

John I. Davidson, ex-president of the Toronto Board of Trade, and who is largely interested in the lumbering industry, said: "Free lumber will be a boon to Canadian lumbermen, and should tend to the betterment of the lumbering industry in Canada. He hoped that the owners of timber limits in Ontario would cease exporting their logs when they could be sawn into lumber on the spot and then exported free of duty. Decidedly, he thought the slumbering lumbering industries of Canada should be awakened into full life. The restrictions were entirely removed, and there was nothing to betoken a retraction,"

A GOOD THING FOR CANADA.

"The new tariff bill," said Judge Daniels, in response to an interviewer at Washington, "will become law within the ten days of its passing, unless it is signed before that time by the President. The lumber people of western New York are greatly interested in this, and I have had much correspondence concerning the free lumber clause of the new bill. It is a great slaughter to the lumber industry, and free lumber will prove most injurious to the business along the frontier. When the bill was in conference I endeavored to get them to put an advalorem duty on plain, matched, grooved and tongued lumber, but they did not pay the slightest heed to the arguments showing the necessity for such duty in order to protect our lumber manufacturers from the inroads that will be made upon them by the Canadian people. All manufactured lumber can be made cheaper in Canada than it can be made on this side, as wages stand now. No argument is needed to show the injustice thus done to the lumber trade on the American side. It speaks for itself."

A VIEW FROM THE SOUTH.

Amos Kent, Kentwood, L.A., yellow pine manufacturer, says: "That to place domestic production on an equality with foreign production the rates of duty should be a specific duty of $1.50 per thousand on lumber and $1 per thousand on logs for the following reason: My product, the bulk of it, must be marketed in the states of Illinois, Iowa, and other states north of the Ohio and east of the Mississippi rivers. Without the above duty Canadian lumber, or lumber made in the United States from Canadian logs, can, on account of the less freights and the facilities for rafting and transporting logs to mills, reach the market at $1.50 less, actual cost, than I can place my product there. The Canadian pine and hemlock being much lighter in weight, have great advantages in freight, even where distances to be transported are equal."

WILL INCREASE CANADIAN STUMPAGE.

Mitchell & McClure, Duluth, Minn., lumber manufacturers, state: "The output of our mill in Duluth is 40,000,000 feet each season. We are interested in the Vermillion Lumber Company, operating at Three Rivers, Quebec. Our average wages paid last year were $1.84 per man, running from $5.25 for skilled labor down to $1.50 for common labor. While in Three Rivers last summer I asked the superintendent what were the average wages paid by them in the mill and was informed that they were $1.07 per man. They paid their common labor 90 cents per day. We paid in the woods here this winter about $16 to $20 per month and board. Lumber in this market has declined fully $2 per thousand feet. Every cent of the $1 duty to be taken off of lumber will be added to Canadian stumpage within two years."

A MICHIGAN FIRM SPEAKS.

Briggs & Cooper, of Saginaw, Mich., state: "We manufacture about 8,000,000 feet of lumber annually. Have run full time until last fall and part of the time ran nights. Have also run the last three winters. Shut down the middle of October and will not start until business is better, although we have a full stock of logs. If lumber is imported from Canada, the Saginaw market will be restricted to an amount equal to that imported; and, as the United States can supply the territory reached by Canada, and Canada will go into the Saginaw market, we will have to intrude on ground now covered by other parties in the United States. Our opinion is that prices will not be lowered much, but there will have to be a new adjustment of markets by United States dealers. If an export duty were put on logs by Canada, Michigan men would go there to manufacture and thus injure this state."

A BUFFALO HARDWOOD CONCERN.

The Buffalo Hardwood Lumber Company, of Buffalo, N. Y., state: "We have bought for a number of years more or less stock in Canada. The duty on most of these goods which we buy is $2 per thousand and $1 per thousand on basswood lumber. If this duty is taken off, it is our belief, from talking with parties from whom we have been buying, that the Canadian will expect to advance his price at least $1.50 per thousand feet on all lumber on which the duty is $2, and the wholesale buyer will undoubtedly be able to buy 50 cents per thousand cheaper than he has in the past. The parties who buy through the wholesale houses will perhaps be able to buy and receive 50 cents per thousand benefit on their purchases; and, by the time it reaches the final purchaser, we do not believe that he will get any of the benefit of the reduction in the duty. We do not believe that it would be a benefit to this country to have lumber come in free, and we think we are in a position to judge quite fairly in the matter."

WHAT UNITED STATES LUMBER JOURNALS SAY.

Northwestern Lumberman: No good can come out of whining over the result, and it remains to be seen what the effect will be. If the lumber interests of the country had been as strong in the lobby as those of others less important, the end might have been different. There remains the consolation that the whole tariff question has been disposed of, and the country knowing exactly how it stands in that connection will now buckle to and get down to business again.

The Timberman: The senate bill, which passed the house on Monday, provides in addition to free lumber on general principles, that the former duty shall be reimposed on lumber coming from any country which shall place an export duty on logs. This is as it should be, and we believe has the hearty approval of every business man, regardless of politics; for without this provision, which was omitted in one of the tariff bills drafted, there would be nothing to prevent the Canadian government from reimposing the duty on logs; thus having the advantage of a free import into this country without the competition of American mills being able to cut Canadian logs. If free trade in any or all conditions be desirable, it should be reciprocal in such cases as this; and it is hoped that when the new tariff bill shall become a law it will contain this provision, which is for the safeguard of the interests on this side of the line, and, moreover, accords with what Canadian authorities have insisted upon as an equitable arrangement.

Mississippi Valley Lumberman: At last congress has done something that it should have done over a year ago—passed a tariff bill—and as far as its good effect is concerned, it matters little what is the nature of the bill. It was the uncertainty that killed, and as soon as President Cleveland announces his course in regard to it, the uncertainty may be said to be at an end. Manufacturers can then go ahead and start up their factories and mills, knowing "where they are at." Business may not boom as many of the daily press would make us believe, but it will without doubt be greatly improved and will continue to grow healthier and stronger every day. The lumber trade is already showing some signs of a betterment, and although it was not caused by the tariff legislation, but rather by good crops, it will be helped by some tariff measure becoming a law and this much dreaded feeling of uncertainty put to an end.

The Southern Lumberman, of Nashville, Tenn., is a very mad paper, devoting more than a column and a half to a discussion of the tariff. It asks: "What mysterious Canadian influence with voters on tariff bills in a United States Congress makes this thing possible?" Having quoted at some length from the CANADA LUMBERMAN, it then goes on to say: "On the behalf and in the interest of Canadian lumber manufacturers, it is quite natural that our Toronto lumber trade contemporary should commend President Cleveland in "the resolute stand taken" by him in support of free Canadian lumber, but lumbermen on this side of the lakes would like to know how many electoral votes in the Province of Ontario for a United States president warrants such partiality on the part of the present administration?" and much else in the same line. We thought our Southern friends were good natured sort of fellows, but our Nashville brother is rattled badly this time.

Good pencil cedar is getting so scarce that the great firm of Faber & Company have begun to cultivate forests of cedar in Germany. At Schloss Stein there is a cedar forest which covers thirteen acres, and the head of the firm has, for many years, maintained nurseries and plantations of cedars on his land in Bavaria, grown from seed which he imported from Florida.

ENGINEERS WHO TINKER.

THE American Machinist comes to the rescue of the engineer who knows enough to "tinker" with his engine when it needs it, in these words: "There are men around engines who ought to do 'tinkering,' but they are not engineers. They are men who rattle around for about a dollar and a quarter a day. These be they who never ought to get within a half-mile of an engine with wrench or hammer. No one ever knew a real engineer to do much tinkering. He is just lazy enough not to do useless work, and just enterprising enough to do such tinkering as is required. An engineer who hasn't push enough about him to tinker the pounds and other little ills out of his engine ought to get an easier job without serious delay. He might do well at holding down a chair, or something of that sort, but as an engineer he hasn't just a little chance of success. In the best interest of his employer he ought to get another job before his engine has to go to the machine shop, or the machine shop go to the engine."

COMPARATIVE VALUE OF DIFFERENT BOILERS.

THE comparative value of different boilers has lately been a prominent theme at the meetings of different engineering associations, and much has been said in favor of those of water tube construction. In the advantages claimed for the latter stress is laid on the fact that when the circulation is efficient a rapid current flows through the tubes, producing a tolerably uniform temperature in all parts of the boiler, and there are no serious strains from unequal expansion—the small diameter of the tubes permitting the attainment of excessive strength over any desired ordinary steam pressure even with thin heating surfaces. As such boilers are also made in sections of moderate size they are easily transported and can be conveyed through narrow openings of buildings which would not admit of a fire tube boiler, and they may be fixed in confined spaces. As is well understood, the heating surface of such boilers is measured on the internal diameter of the tube; in a general way, one square foot of heating surface being required for the evaporation of two and one-half pounds of water per hour, and 49 square feet of heating surface for every 100 pounds of water evaporated per hour.

AN INSPECTOR'S EXPERIENCE.

AN inspector writes concerning an experience that recently befell him, as follows: "I had an experience a few weeks ago, which I should be quite reluctant to repeat under the same circumstances, if it could be avoided as well as not. I called to make an inspection at a stone works, where they have two boilers, but use only one at a time. The engineer was working at his two pumps, which he could not get to throw water, and was scolding because he had no steam to run with, although he had plenty only a short time before. The tubes in the boiler I was going to inspect were badly choked, and, in fact, nearly filled with soot from the coal. I thought that might be the trouble with the boiler they were using, so I opened the front of that boiler and looked into the tubes. They were red hot. I looked for the water. It was gone. I looked under the boiler to see the fire, and jets of burning gas were actually spurting out between the rivits on the seams over the fire. And the engineer was still working at his pumps, trying to get some water. I had a queer feeling just at that instant. I got the engineer away from the pumps as soon as possible and had him draw the fire; and I could see the gas burning along the seam while the fire was being drawn. As soon as it was darkened in the arch a little, I could see that the sheet on the bottom of the boiler was red hot for a space of about three feet square. As soon as the boiler cooled down we opened the manhole, and found the inside to be bone dry. The outcome was that the seam next to the bridge wall was badly fire-cracked and sprung, so that a new sheet had to be put in. The tubes had all come out, and all the seams on the fire surface had to be re-calked; which I considered to be a very fortunate escape,"—The Locomotive.

There is wood growing in Mexico, which is purple in color, and is now being cut and shipped to European markets.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

GROWTH IN THE LUMBER TRADES.

WE have asked the question of representative men in the trade, whether it is anticipated that not only will free lumber give an encouraging impetus to the shipment of sawed lumber to the United States, but will it not also mean that we will be able in Canada to manufacture larger quantities of dressed lumber and send supplies in that shape across the border? Some of our correspondents are disposed to speak cautiously on the point, preferring, evidently, to let developments tell their own tale. At the same time the impression is strong with many in the trade, that if not immediately, at least before a great while, this department of lumber will grow, present mills will be enlarged, and planing mills will be erected in conjunction with our saw mills. What does this call for? And what does this mean? One thing is quite clear that with any considerable development in the mauufacturing of dressed lumber there will need to come not a few improvements in the plants of our planing mills. We have a number of planing mills equipped in a very creditable manner and capable of a large output of manufactured product. With others, however, this is not the case and we apprehend that the advantage in the removal of the duty could be easily offset by the draw-backs of manufacturing with machinery that has been supplanted by that of a more modern character. As every manufacturer knows there is not worse economy anywhere than to undertake to manufacture on a liberal scale with a plant that has long since been supplanted by machinery capable of doing the same work not only more perfectly but with greatly increased expedition. The draw-back with many of the small manufacturers to-day in every line of business is the fact that they cannot compete with the larger concerns located in centers of population and equipped with the most improved machinery. Where are our smaller manufacturers of agricultural instruments to-day? They are either struggling along doing simply a small local trade, or they are wiped out of existence, because their plants are out of date, and they have not felt able to bear the expense of a new equipment. The opinion was expressed only a few weeks ago by a well-known flour miller in the province that the small millers were having a hard time of it, because they were finding the competition of the big millers, with their improved facilities and greater opportunities for business, too much for them. It is the early bird catches the worm, so runs the old proverb, and if the changed situation of the month points correctly to an important development and growth in the planing mill business of the country the men who are quick to see the change and to take advantage of it will put themselves in a position to secure the trade now, which later on may not be so readily gotten hold of, or at least it will bear the burden of increased competition and possibly lesser profits.

EDITORIAL NOTES.

AN effort is to be made again to raft logs on the Pacific. Two lumbermen, of San Franciso, are at the head of an enterprise to raft lumber from Oregon to San Franciso, and a cradle, 600 by 50 feet with a capacity of 7,000,000 log measure, decked with 450,000 feet of sawed lumber, has already been started. This is not the first effort to raft logs on the Pacific, but hitherto the success has been of a doubtful character. Lumbermen will be interested in watching the outcome of the present movement.

THE Ontario Government has issued the following regulations to apply in Algonquin National Park, recently set aside for forestry purposes: "All visitors are to furnish the superintendent or ranger with their names and their addresses, and the part of the park they intend to visit, with the duration of their stay; they are forbidden to cut or injure standing timber; hunting, trapping or fishing other than by line is forbidden, and a permit must be obtained from the superintendent for that. And no fish can be taken beyond the park boundaries; fires must be kindled on bare rock; nor more than one firearm may be carried by each party of visitors; no visitors are allowed in the park during the open season for moose and deer, viz., from October 20 to November 15."

MENTION was made in these columns at the time of the breaking of a boom at Tonawanda, N. Y., allowing a huge raft of square timber belonging to the H. M. Loud & Sons Lumber Co. to go over Niagara Falls. For the next two months the shores of Lake Ontario, from Oswego to Hamilton beach, were dotted with sticks of timber that had drifted ashore and some of these managed to land as far as the Humber and the Island. Several of the sticks that came ashore near the Humber were, it is alleged, picked up by Mr. Chas. Nurse, and a Hamilton legal firm have now issued a writ on behalf of the Loud Co. for $200, against Nurse for alleged wrongful conversion of the timber. The trial will bring out the interesting question of the rights of owners to the floatsam and jetsam that comes ashore.

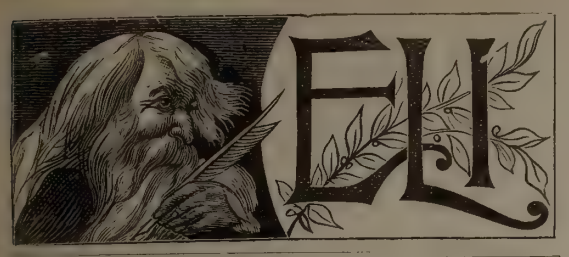
STRIKES and boycotts are in many cases two-edged tools. Whether or not at the time they serve the immediate purpose aimed for, it is often the case afterwards that they cut where least expected. The growth of labor disturbances is such as to make capital exceedingly wary in all its movements. There have been no serious labor difficulties in lumber circles of late, at least with workmen whose duties call them into the woods. But capitalists are commencing to say, "though we have not yet been struck, there is no telling when our turn may come." Doubtless it has been from motives like this that large lumber operators of the northwestern states, have declared it as their intention to insist upon the employees signing an iron-clad contract before entering upon their duties in the woods for the next winter's operations. This is a rebound of the Debs', agitation that would hardly have been forseen at the time it was precipitated.

IT is a recognized law of commerce, for stern practice makes it so, that trade will always move in the direction where prices are the lowest, other conditions being equal. We find an illustration of this in the action of British Columbia mill men, who have lately found it more profitable, owing to the low prices there, to buy logs in the Puget Sound district, than to operate their own camps. Within the past two months over 5,000,000 feet of logs have been shipped from Ballard and other points to Vancouver. An increased activity in the foreign lumber market, however, has caused the Washington territory people to advance the price of fir logs $1.00 per thousand and following the same law of trade, this increase being above the mark, British Columbia lumbermen are not likely to continue buying at the amended figure.

THE supposed soundness of wheat as an asset by whomsoever possessed has long since caused to pass into a proverb the expression "Good as wheat," as indicating the financial strength of any commercial concern. But how the situation has changed; wheat is no longer worth $1.00 to $1.50 a bushel, but it is down to 50c. and hardly any commodity in the market is a greater drug. This condition causes a lumber cotemporary to suggest that the time has come when the old saying "Good as wheat" might be substituted by "Good as lumber." Perhaps in view of conditions as they exist at this moment there will be some to say that the change is not warranted by facts. Is it not? Every day lumber, whether in the shape of the standing tree, or cut and dressed, becomes more valuable, for whilst wheat can be raised every season, should it by chance become scarce, forest products are becoming lessened in quantity every year and it takes not one season, but many seasons, to raise a good crop of trees. And even in this direction, with our knowledge of the continued lessening of the source of lumber supplies, very little effort is made to amend matters.

THE forest fire has again been playing terrible havoc with lumber interests on this continent. Fortunately up to the present time this season Canada has not suffered to any appreciable extent from this cause, but within the past month fires have swept over Wisconsin and Minnesota, greater in extent of loss and suffering than has been the case from any fires, probably, since the fall of 1871. Great loss has been experienced at Phillip, Wis., where the great lumbering plant of the John R. Davis Lumber Co. was located. Out of 700 buildings only 30 have remained standing, Mr. Davis remarking to a friend that he had what he stood in and that was about all. It is supposed that the loss to the Davis' Co. will amount to nearly $1,500,000 and additional to this fully another $500,000 will be needed to cover the loss to the town. Fortunately the insurance runs up into pretty good figures. The distress among the people of the town has been very great, as not only were their homes burnt with all their contents, but they have been left practically shelterless and almost without clothing and provisions. About the same time that the Phillip fire broke out the consuming element had commenced its work at Mason, Wis., Oshkosh, Wis., and Minneapolis, Minn. It is calculated that at least 100,000,000 feet of lumber have been wiped out within the month in this manner.

IN other years, we have been told, there has not been as much lumber piled on the docks at Saginaw and Bay City, Mich., at one time, as at present, the estimated amount being close to 300,000,000 feet. This is one indication only of the extent of the depression in lumber among our neighbors to the south. The hope, however, is strong, with the tariff difficulty settled, that there will be a speedy moving of these immense stocks of lumber, for the wisest heads in lumber circles are holding to the opinion that this depression has only been waiting for a settlement of the tariff matter to bring it to an early end. No doubt much of this lumber that is held could have been disposed of, if the owners were prepared to have sacrificed prices. We have been told by a lumberman, who has recently returned from a visit to Michigan and other American lumber points, that those who have been able to hold their lumber, pending the tariff settlement, have done so, knowing that it is too good an asset to sacrifice in any way. It is perfectly true that there has been some slacking in prices, but these breaks have been usually made by the smaller men, who have been compelled to realize on their lumber to meet immediate obligations. Another good indication of the substantial character of lumber as an asset is to be found in the comparatively small number of failures that have taken place among lumbermen during these months of trying depression.



CONTINUING the discussion on the British Columbia shingle situation, to which considerable attention was given in last month's LUMBERMAN, Mr. J. G. Scott, manager of the Pacific Coast Lumber Co., New Westminster, says: "As to our ability to compete in future with Puget Sound mills, we anticipate that some of the Ontario buyers of red cedar shingles may be induced to try some of their cheap shingles, but we do not think many of the deals will go beyond one car, as the Ontario people know too well what shingles should be. The Washington people cannot afford to sell a good well-made shingle any cheaper than we can, and the B. C. mills are not holding their own on present prices. They have no legitimate advantages over the B. C. makers. They have not as good freight rates to Ontario points, and their timber is much inferior in quality to the B. C. cedar. The average shingles of Washington are not worth within fifty cents per M of the average B. C. article, as anyone will testify who has seen the two makes. Washington and Oregon are suffering much worse from over production than B. C. In those two states there are about four hundred shingle mills, nearly all built within the past three or four years, many being built by parties without means: result, over one half the mills are either idle, run by receivers or run on a plan of co-operation between mill-owners and crews, in a great many cases the money being found by the middle man or dealer or the wholesale grocer taking the product of the mill and furnishing the necessaries of life in exchange. Probably a more rotten state of affairs never existed before in the history of shingle making, almost everywhere the quality of the goods turned out being made a secondary consideration—big day's cut first—hence these cheap, nondescript shingles which are fast ruining the trade. We certainly anticipate that the removal of the duty will enable us to do a trade of the better class with parts of the United States, but on account of the state of affairs in Puget Sound it may take us some little time to get our goods introduced and gain the confidence of the only class of buyers we want to get in line with, namely, those who want a good article in shingles and will pay a legitimate price for them."

* * * *

A few weeks ago Mr. John Donogh, of the lumber firm of Donogh & Oliver, returned from a visit of about two months in Great Britain. "My trip was chiefly on pleasure," said Mr. Donogh. "It was my first trip across the Atlantic, and of course I had the usual experience, perhaps no worse than other people get it when they endeavor to navigate the briny deep, but it was bad enough while it lasted. Our firm do not do, as perhaps you know, any lumber business with the United Kingdom, but I made the acquaintance of several firms in Edinburgh, Glasgow and London with the aim of ascertaining their methods of business and how business was moving. We have been catching it pretty dull in Canada, but I am free to confess that the lumber trade seems as badly in the dumps in the mother land as it does here. In all cases the one story was told me of dull markets, little stuff selling, and prices far from satisfactory. A good deal of the dullness is attributed to labor troubles, of which Great Britain has had her full share during the past few years. These have not all been in connection with the lumber or related trades, but all branches of business are to-day so interwoven one with the other that a disturbance of any volume with any of them affects commerce generally."

* * * *

MR. H. R. Herriman, a well-known lumber operator in the district centering around Little Current, Ont., draws a gloomy picture of the lumber situation in that region. His letter is dated August 5th, written before word would have reached him of the final passing of the free lumber measure in the United States Senate. Mr. Herriman says:—"Lumbering is very dull here at present. All the mills are closed for the season. The large quantities of logs taken out at the Whitefish River by J. W. Howry & Sons and J. & T. Charlton have all been sent to the American mills for manufacture; the last raft disappeared a few days ago and with it disappeared many days of honest labor that our men are justly entitled to. This great injury to our country has been going on for years from many points along these shores—how long is it to continue? Is it to go on until our last pine tree is felled? There are millions and millions of feet yet standing in this section of the province and many thousands of dollars must be spent in its manufacture and is it possible that the influential men of our nation are going to stand back and permit this great loss to continue? Is it possible that we must be forced to put our money into the pockets of the storekeepers and tradesmen on the other side of the line? If this thing must be then our lake-port towns and villages will all be like this one at present—dead—and the failures of our wholesale men will not be lessened any."

* * * *

The supply of lumber on this continent, either in Canada or the United States, is not so great that lumbermen can afford to discard any part of their product, that can by any possibility be turned to commercial uses. In fact the trend of business is towards an utilization by every possible means of the waste products of the mill. This was not always so. Even the younger men of the trade can tell of the time when the refuse and culls were consigned to the fire box with rare wastefulness as the best way of getting rid of them. We are still forced, however, to draw the line at knotty lumber, for who wants anything that is so great an eyesore? But why this objection to knotty lumber? Is it only a whim? This is a question which Mr. H. B. Wetzell endeavors to answer in a recent number of the Tradesman. It is his opinion that the objection to knotty lumber arises largely out of prejudice. Nature has placed the knots in large parts of our lumber and it is suggested that the Great Architect knew just what he was doing when he so created our timbers. Mr. Wetzell admits that lumber should be as free as possible from knots, worm holes, splits, checks, decayed or dotty wood, wind shake and other natural defects in most places where wood is used in agricultural implements and where strength is required. But clear lumber is quite generally used—and the user pays the piper—where knotty lumber would for all practical purposes answer as well. Clear lumber must be used according to present fashion for interior finish of buildings. But why? In many parts of Europe knotty lumber is used where the lumber will be the most readily seen, and there, to use the words of a lumber dealer of Glasgow, it is considered much prettier than if the wood was all clear. The knots relieve the monotony and give the surface tone and artistic effect. The interior of some of the largest and most magnificent dwellings of the wealthiest classes are finished with both soft and hard wood in their natural colors or free from paint. Throughout France, Germany, Russia and all the continental European countries, we are told, the same idea prevails. Hundreds of millions of lumber are annually destroyed or allowed to be wasted or destroyed on this continent of small and knotty trees and portions of trees cut which are not utilized, because the lumber would be too knotty to satisfy an arbitrary and false taste when it reached the hands of consumers. With this the record, in a day when economy in lumber is becoming a necessity, Mr. Wetzell wells asks the question, may we not in this country economize and at the same time improve our tastes by utilizing knotty lumber?

* * * *

"There was a clause in the United States tariff bill, as just passed, which was an amendment in the Senate, that shows how closely our neighbors have watched every detail of this tariff measure," remarked a prominent Canadian lumberman to me a few days ago. "I refer," said he, "to the clause in the bill that makes the distinction that finished lumber when imported from any country which levies an export duty or imposes discriminating stumpage dues, shall be subject to the duties existing prior to the passage of the act. This particular clause, of course, is leveled at the Ontario government, or at least at those politicians in the local legislature, who have hinted at the government increasing the stumpage dues or placing other restrictions upon the sale of lumber in this province."

GANG EDGER SAWS.

GANG edger saws are not given the attention they should have, remarks a writer in the Southern Lumberman. This may be said of every saw about the mill, but the log and edger saws are the most important saws in use. A good edger can no more make good lumber with poor saws than an engine move without sufficient steam. The question stands between the solid and inserted tooth, and diversified opinions exist. Some mill men would not have a solid saw as a gift. Others are just of that opinion as to the inserted tooth. My experience has led me to adopt the solid saw under all circumstances where a modern machine is used, so that the saws can be easily changed.

The solid saw is the cheapest in every particular, and will do better work, if kept up as it ought to be. Filers generally prefer inserted tooth, as they have less to do—when the mill man's pocket is not in consideration. This is very nice for the saw maker.

Edger saws can be very easily kept up. From 15 to 25 minutes' time will put a set of saws in order by the following method, provided there are plenty of teeth in the saw—say 2½ inches from point to point in a new saw. File the front of the teeth square. This can be quickly and economically done with a mounted emery wheel. The saw can also be kept in perfect joint by observing the dullest teeth and grinding them more. The back of the tooth is filed to a slight bevel, using a short spring set, occasionally swaging a little to keep the points the full width of the saw. A bent monkey wrench will not run in any saw, much less an edger saw. The hammer set is the best. By its use a concave set can be run directly under the corner, and the saw will do nice work and will not produce friction.

A full-swage tooth is much more trouble to keep up, and if any other than a pressure swage is used, the teeth are liable to sprawl off from rebound, especially in the use of the up-set swage. Where a full swage is used there is much more work to be done and the saws wear 25 per cent faster.

I know it is a prevailing plan among filers to give their edger saws a lick and a promise. I have done that myself, and, by experience, found out that I was losing time and giving the edger men much unnecessary worry. It is a bad practice to run edger saws too long. The saws are liable to be sprung by heating when an unexpected tough or thick piece comes over. When saws are fitted up with a good set, and not run too long they can be sharpened on the emery grinder in a very few minutes, and then are ready for another good run. but if run too long, they must be set and more likely swaged a little, owing to the corners being so round This cannot be done on a dull tooth without first grinding it, which makes a lot of unnecessary work. Besides this, the saws cannot be kept in anything like perfect joint.

A poor workman grumbles at his tools. It is astonishing what work can be got out of an edger with the saws in good trim and in line. I have seen machines used over ten years doing better work than the latest improved machines. I have never yet seen the man or machine that could control a dull saw. I once saw a $600 edger thrown out because it would not make good lumber. The cause was defects in the saws and collars. The latter had worn so as to allow the saws to lead, which they were striving to do. A new machine was put in of another make, because a new one, with new inserted-tooth saws, was seen doing fine work.

Inserted-tooth saws, with teeth at three cents each, and new ones required quite often, are a matter of expense, and the filer will find that the task of resawing them is much more than to swage solid teeth. As stated above, I prefer the spring set tooth, with a little swaging to keep the point full width; good, satisfactory work can be done and the output of the mill increased. Teeth for spring-set should be from 2 to 3½ inches apart. Spring-set teeth too far apart will tear out at the bottom, making rounding, instead of square, sharp edges. I do not advocate a thin edger saw.

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE intimation made in my letter a month ago that Mr. J. R. Booth would not likely rebuild his big mill at the Chaudiere, recently destroyed by fire, is, I am sorry to say, proving correct. Spoken to on the question some days ago, Mr. Booth said: "I have no intention of ever rebuilding on the site of the big mill. I have not changed my mind since the morning after the fire when I took in the whole situation. The old story was always some new complaint about the lumbermen, either from employees or other parties in the city. I have felt that there was little or no encouragement for me in this work, as enterprise of this sort does not seem to meet with the public appreciation". Asked as to what he proposed doing with the site, he said that the property was one of the most valuable of its kind in this part of the country, possessing some of the very best water power obtainable on the Ottawa. Such being the case it would be foolish to think of letting it stand idle. He had little doubt but that the land and water power privileges would meet with a very ready sale or if parties did not seem desirous of purchasing, he might rent the property to any firm that might want to establish itself at the Chaudiere. Mr. Booth said that his intentions regarding the old mill would have no influence upon the Perley and Pattee property, which he has fitted out as one of the most complete saw mills in this locality. The Perley mill will be operated right along.

INDIFFERENT LENGTHS.

About 400 men left the city a week ago for the Pettewawa and Mattawa limits. These are mostly road cutters and general hands, known as the improvement gang. They will get things ready for the majority of the men who will go up in September. Wages will likely range about the same as last year; road cutters $16, general hands $18, loggers $20 to $24 and teamsters $20 per month.

A cablegram has been received by the Hon. Mackenzie Bowell, giving as the reason why Norwegian lumber products have a preference over Canadian lumber in the Spanish West India Islands is due to a treaty concluded in July 1893, in which Spain agreed to give to Norway tariff treatment in her West India colonies. The treaty, however, has not yet gone into effect.

A raft of 155 cribs of the Moore Lumber Co. left a week ago for Quebec in charge of a crew of 95 men.

The last of this year's drive of logs for the Booth Lumber Co. passed through the Mattawa river a week ago. The logs are said to be very fine and will make up a total of about 400,000 logs which that firm have sent down the Mattawa this season.

An average of about 40 to 50 barge loads of lumber goes down the Ottawa every week for the Montreal and United States markets.

It is not unlikely that several rafts of square timber will be left on the Upper Ottawa this year owing to the low condition of the water.

OTTAWA, Can., August 22, 1894.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE British market is thought to be somewhat easier, which is not bad news for these provinces.

The following timber regulations will be rigidly enforced by the Surveyor-General: "No spruce or pine trees shall be cut by any licensee, under any license, not even for piling, which will not make a log at least 18 feet long and 10 inches at the small end, and if any such shall be cut the lumber shall be liable to double stumpage and the licence be forfeited". The application is to all government timber logs.

A subsidy of $32,000 has been granted to Alex. Gibson to extend the Miramachi end of the Canada Eastern, 6 miles below Chatham to Black Brook, where there is a big saw mill and also $32,000 for making a loop line 4 miles above Chatham to Nelson taking in several other large mills and just across the river from Newcastle and its mills. This extension will materially facilitate the lumber business of Mr. Gibson.

A crew of men have gone into the woods in Victoria county on account of Beaverage Bros. They expect to get out about 5,000,000 feet next winter.

A ship load of lumber is going from the Dorchester port to Buenos Ayres on account of Rhodes, Curry & Co.

It is calculated that the cut on the St. John's river this year is about 30,000,000 feet less than the average.

Smith & Wright, of Memill, are putting a new edger and trimmer in their mill.

Hale & Murchie's mill near Fredericton, which has been closed down for some time, owing to the depression, has commenced operations again sawing for Alex. Gibson, who requires outside assistance to keep in sufficient supply to meet orders for the British market.

ST. JOHN, N. B., August 21, 1894.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

WITH the C. P. R. service fully resumed after the derangement caused by the floods the mills here are now daily shipping to Manitoba and Ontario. Manitoba dealers are ordering cautiously wanting to satisfy themselves first as to the condition of the crops. An improved demand for lumber is reported from Ontario.

Three Winconsin mill men have been looking over Port Angeles with a view of erecting a mill with a capacity of 200,000 per day.

The Hastings and Moodyville saw mills have both been buying logs of Puget Sound, the prices being an encouragement. The quality, however, I am told, has not been too pleasing.

W. K. C. Manley, late of Grand Rapids, Mich., has opened a general store at Kettle river and also thinks of building a saw mill.

The Burrard Inlet Red Cedar Co. have appointed J. W. Prescott their agent at Vancouver.

Mr. W. J. Johnson, shingle manufacturer, has returned from a trip in Ontario and says there is no immediate prospect of a pressing demand for British Columbia cedar shingles in that province.

NEW WESTMINSTER, B. C., August 17, 1894.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

WITH the tariff bill passed and lumber made free some buoyancy is given to trade within the last few days. The change may not be what everybody wants, but it is worth something to have the tariff finally a fixture. Opinion prevails here among the planing mill and box men that free lumber must prove injurious to their trade and in a previous letter I gave you the opinions of several prominent manufacturers, who intimated that should lumber become free they would be obliged to do their manufacturing on your side of the line. It cannot be long before we will all ascertain just what shape matters will take under the changed conditions. This seems quite certain that things could hardly be worse than they have been for some months. With little lumber going out stocks have been accumulating quite rapidly, and in some cases the docks are becoming uncomfortably loaded up.

BITS OF LUMBER.

Michigan lumbermen who are interested in Canadian lumber are commencing to make preparations for the fall and winter work in the woods. J. W. Howry & Sons expect to cut probably 80,000,000 feet of logs and have already despatched about 100 men into the woods. So far J. T. Hurst has given out contracts for putting in 80,000,000 feet in Georgian Bay waters.

It is quite likely that there will be present a number of Michigan lumbermen at the sale of Canadian timber limits, to take place in Toronto this month. Anticipatory to this a number of land lookers have been going over some of the territory in the Georgian Bay district.

The information has already been communicated to your readers of the operation of a saw mill at Fenlon Falls by J. W. Howry & Sons and the fact that William Peters has purchased a mill at Parry Sound and will cut there. It is now stated that a syndicate of lumbermen consisting of Arthur Hill, of Saginaw, E. M. Fowler, of Chicago, and E. C. Whitney, of Minneapolis, who purchased about 500,000,000 feet of timber in the Ottawa region some time ago, will erect a band mill at a convenient point and cut their timber.

Lumber freights are the lowest ever recorded; another drop of 25 cents has taken place.

Several rafts of Canadian timber from the Georgian Bay territory are arriving at Bay City.

SAGINAW, Mich., August 23, 1894.

THE TRUTH.

THE Mississippi Valley Lumberman gives utterance to the following truth, which is wide enough in its application to easily embrace the Dominion of Canada:

"Lumbermen are learning to advertise. They are beginning to appreciate and value the opportunities afforded them by the lumber press of the country. Each year lumber manufacturers and wholesalers are coming to a better realization of the fact that to reach the retail trade, the great mass of country yard men to whom they expect to sell their product, there is no better medium than the lumber trade journal, and advertising is fast being recognized as one of the legitimate and necessary items of annual expense. A few years ago the trade journals had to depend largely upon machinery manufacturers for their support, and in justice to them it should be stated that their support has been the best that the lumber trade papers have had, for they were quick to appreciate their value as an advertising medium, and the way in which they have continued to advertise is the best proof of the value of advertising that can be made. Lumbermen should not allow the machinery men to support the trade journals that are for their good and the advancement of the trade in which they are engaged, and that they are beginning to realize this themselves, the advertising pages of the lumber journals bear evidence. At the present time the lumber trade is quiet, and the far sighted lumberman should readily see that it can be stimulated in no better way than by judicious use of printer's ink. A word to the wise is sufficient."

TRADE WITH AUSTRALIA.

MR. Carter Troop, who has spent considerable time in Australia investigating commercial conditions, has issued a very practical and comprehensive report, pointing out a possibility of the profitable exchange of products between Canada and Australia. He is of the opinion that there is a good market in that country for Canadian timber. On these points he says: "In New South Wales the timber trees of hard woods predominate, both in variety and in the area covered by the forests, the soft woods being limited to the brush forests of the coast districts. The Morton Bay, or colonial, pine, which is much used for joiners' work and for flooring, is a very unsatisfactory timber, as it not only swells during wet weather, but rapidly decays if exposed to wet and dry weather alternately. Some of the most easily worked of the soft woods have a peculiar tendency to shrink, even after thorough seasoning, so we are not surprised to find that the importation of lumber is very considerable. In 1891 the quantity amounted to 17,147,100 feet of dressed timber, valued at £147,000, and 88,015,800 feet of undressed, valued at £575,600; besides which there are sundries to the value of £38,300, consisting chiefly of doors, laths, and shooks and staves, the total value of timber imported being £760,900. Over 49 per cent. of all the timber imported by New South Wales comes from South Australia and New Zealand. Scandinavia and the United States come next in order, and then follows the Canadian Dominion, which exports to Australia about 6,000,000 feet per annum. Other things being equal, the Australians are more ready to import from Canada than from the republic or Scandinavia. It should not be difficult, therefore, to increase greatly the amount of our exports in this important business. The shingles of British Columbia, for instance, are the best that can be obtained anywhere."

Mr. Troop further adds: "There is yet another article of commerce in which Canada and Australia might work up a trade; that is in hard timbers. Australia is well supplied with the syncarypia laurifolia, locally and popularly known as the turpentine. Its bark is peculiarly heavy and thick, and resists the ravages of the toredo. For this reason the turpentine is of great commercial value, being in large demand for piles, etc. It could be imported with ease by British Columbia, where toredo resisting piles are greatly needed. There are, no doubt, other hard woods grown in Australia that would be of value to manufacturers in Canada."

It is estimated that more than 2,000,000,000 feet of lumber is used in railway cross ties every year in the United States.

Bill Nye, the humorist, comes of a lumber family. His father was a lumberman, and that's how he came to move over from Cape Cod to Maine, in which state the funny man was born. All the Nyes in Maine were in the lumber business.

The Victorian tariff charges duty upon all dressed timber, but admits free Ash, Blackwood, Cedar, Hickory, Oak, Pine, Sycamore, Walnut, Whitewood, Hardwood (above nine inches square). It also admits American Pine, Sugar Pine, California Redwood (one inch and over in thickness), spars, spokes, fellies, box wood, oars and shafts, if undressed.

THE NEWS.

CANADA.

—F. S. Deschr, lumber, Rosenfeld, Man., has sold out to Duncan Stewart.

—The Parry Sound Lumber Co. is advertising its general store business for sale.

—The Moodyville Mill Co. are constructing a logging railway at Grief Point, B.C.

—Fraser & Co., saw and grist mills, Edmonton, N.W.T., Malcolm McLeod, deceased.

—Nine rafts of lumber have gone down to Quebec from the Upper Ottawa river this summer.

—It is reported that American capitalists contemplate erecting a large lumber mill near Eganville, Ont.

—The capital stock of the Brunette Saw Mill Co., Victoria, B.C., has been increased from $200,000 to $300,000.

—A St. John River lumberman thinks the year's cut is 30,000,000 to 40,000,000 less than in ordinary years.

—Mr. Saddler, of Staffa, Ont., has purchased from Samuel Horton a new sixty horse-power boiler for his saw mill.

—George W. Anderson, of Rochester, one of the largest lumber dealers in the State of New York, has assigned.

—The employees of Dodd's planing mill at London, Ont., went out on strike last week against a reduction of wages.

—The British Columbia Wood Works Co., of Vancouver, has gone into liquidation. J. W. Weart has been appointed liquidator.

—James McDonald, of Tilbury Centre, Ont., is about to commence the erection of a planing mill and sash and door factory at that place.

—Price Bros.' saw mill at St. Thomas Montmagny, Que., destroyed by fire in the month of May, has been reconstructed and has commenced operations.

—Quebec takes the lead in the supply of timber, her output of sawlogs amounting to 5,000,000,000 feet board measure, and of square timber to three and a quarter million cubic feet.

—D. G. Stephenson, lumber merchant of East Toronto, recently made an assignment of his property and a few days afterwards departed for new fields. His liabilities exceed $50,000.

—The Waterous Engine Works Co. are making arrangements to rebuild their branch factory at St. Paul, Minn., recently destroyed by fire. The works will be rebuilt on a much larger scale.

—Grant, Horne & Co., the well-known lumber dealers of Fort William, Ont., are supplying the Ontario Government with the necessary lumber for the erection of a log slide at Pigeon River.

The employees of McLachlan Bros., lumbermen, of Arnprior, Ont., have formed a mutual benefit society to be known as the Arnprior Lumber Mills Association. Nearly 500 men have already joined.

Humphrey & Trites, of Petitcodiac, N.B., have their new saw mill at that place in operation. It is somewhat smaller than the mill destroyed by fire some time ago, but is said to be well equipped.

—F. J. Drake, Belleville, Ont., recently shipped a shingle mill and lath machine to Marston & Brock, Hawkesbury, Ont., and a complete outfit for James Morrison's new shingle mill at Gooderham, Ont.

—The Vancouver Sash and Door Co., Ltd., of Vancouver, B.C., has been incorporated by the Dominion Government. J. B. McLaren, R. D. Fetherston and Henry De Penrier, compose the directorate.

—The Winnipeg Free Press states that a western member of the Retail Lumbermen's Assocaition has been suspended and fined $200 for selling lumber at rates less than scheduled in the association's price list.

—The Rathbun Co., of Deseronto, Ont., have received the last shipment of red pine timber purchased from H. M. Loud & Co., of Ausable, Mich. The raft broke away at Tonawanda and passed over Niagara Falls.

—The Southampton Lumber Co., of Southampton, Ont., is applying for incoporation, with a capital stock of $10,000, to manufacture lumber, shingles, etc. Charles M. Bowman, of Southampton, is one of the chief promoters.

—In the year 1892 the firm of Mullin & Co. purchased the Bloor street lumber yard in Toronto of Robert Thompson & Co. for $11,600, giving a chattel mortgage to secure the amount. We now learn that the concern has been sold out.

—The effects of O. E Konkle, lumberman, of Hamilton, Ont., are reported to have been taken possession of by the sheriff. Some time ago Mr. Konkle gave a chattel mortgage for $4,800, the foreclosure of which is said to have been the means of closing his business.

—Donald Fraser's new mill at Fredericton, N.B., has commenced operations, and will be operated day and night for the remainder of the season. Nearly 100 men will be employed, and it is expected three million feet of lumber will be cut before the close of navigation.

—It is said to be the intention of a company, of which W. S. Taylor, of the Don Valley Pressed Brick Works, Toronto, is at the head, to erect a saw mill at Jardine's side road, near Collingwood, Ont. The company is also interested in other speculations in that vicinity.

—It is reported that several American lumbermen have been negotiating for the purchase of the Cormier estate at Aylmer, Que. The mill has been in dispute for some time, and has cut no lumber this year. It is well equipped, and when in full running order would give employment to a large number of hands.

—Several new lumbering firms are commencing operations in the northern part of Ontario. William Peters, of Bay City, Mich., has taken over the Midland and North Shore Lumber Co.'s mill at Parry Harbor and will cut logs next season. Mills are being put up at Kennebuck, Algoma, by the Cutland & Savage Co., also of Michigan, and supplies and equipments are being purchased.

—A large number of men have already been engaged to work on J. R. Booth's limit on Sturgeon river. Mr. Booth states that there is a desire, on the part of lumbermen, to commence operations in the woods early this fall, owing, no doubt, to the small cut of last year. Wages will be somewhat lower than last year, log cutters receiving only $15 to $22 as against $18 to $26 last year.

—The Dominion Government has decided to set apart all heavily timbered lands in Manitoba west of the Red river as permanent timber reserves, which will be held as the sources of fuel supply for settlers. Among the tracts already divided up and withdrawn from settlement are the bush lands in Turtle, Moose and Riding mountains, and in the Touchwood hills, besides other scattered patches of timber of less extent.

—The Timber News of July 31st contains the following relative to the consumption of Canadian lumber in Liverpool: The greater quantity of spruce deals from the New Brunswick and Nova Scotian ports have so far gone straight into consumption, very few having been yarded. A few cargoes have gone up the Manchester Ship Canal to Runcorn, Saltport and Manchester, several being dealt with by Manchester merchants.

—Four car loads of horses and one hundred men recently passed up the O. A. & P. S. Railway for the St. Anthony Lumber Company's limits, beyond Barry's Bay. This company have purchased the old Perley limits in that locality, and this will be the first season's operations. The company are erecting a saw mill about sixty miles beyond Killaloe, where their logs will be cut, and the timber shipped over the O. A. & P. S. Railway and C. A. R. to the United States.

—The Peterboro' Review of recent date says: "The Gilmour Company's drive of 60,000 logs is being taken through Sturgeon Lake this week. The drive is one of the largest that has ever passed down the lake, and the apparent ease with which it is handled by the alligator boat which accompanies it, is marvellous. The drive is kept moving day and night; at night the operations are conducted by the aid of an electric light on the alligator boat. The men eat and sleep on shore in well-appointed tents."

—In chatting with Mr. J. W. Duval, a mill-owner at Grimsby Village, a few days ago, a correspondent of the Toronto Globe was informed that he had sawn this spring at his mill 15,180 feet of apple-tree lumber. All this was cut from sound, green trees that had been cut down. To produce this lumber required one thousand trees, some of which were 22 inches in diameter. This means that 2,000 acres of land have been denuded of orchard, for the average is fifty trees to the acre. The explanation was that the apple crop has been almost a failure for some years, and the tendency is towards small fruits, which grow in perfection and give much more profitable returns.

—A peculiar suit has been entered by the H. M. Louds Lumber Co., of Ausable, Mich., against Charles Nurse, of Humber Bay, Ont. During a flood last winter a boom broke at Tonawanda, N.Y., and allowed a huge raft of square timber belonging to the above named company to go over Niagara Falls. During the next couple of months the shores of Lake Ontario from Oswego to Hamilton Beach were dotted with sticks of timber that had drifted ashore. A quantity landed near the Humber, and it is alleged that Mr. Nurse captured several sticks that came ashore and used them. Nesbitt & Gauld, of Hamilton, have issued a writ on behalf of the company for $200 against Nurse for alleged wrongful conversion of the timber. The suit will be an interesting one should it go to the courts.

—Wm. Mackey, of Ottawa, is said to be the only lumberman in Canada who has been continuously in the square timber business for half a century. To a reporter of the Ottawa Journal, Mr. Mackey said: "I made my first raft of red pine during the winter of 1844-5 on the Madawaska river, there being no demand for white pine in those days. I have held the license and paid the ground rent on the limit on which I made my first raft for nearly fifty years. Yes, prices for timber and supplies have varied much. When I commenced first I paid as high as 25 per cent. interest on moneys advanced to purchase supplies, etc. The average wages for men were from $10 to $14 per month. Hewers got $20 per month, and these were the highest priced men. There was far more square timber taken out then than now, for this was long before the era of sawlogs. I have known of 100 rafts passing here in one season. This year 10 rafts will be the limit."

FIRES AND CASUALTIES.

FIRES.

—The planing mill of B. H. Armstrong, Fairville, N.B., has been destroyed by fire; no insurance.

—John Morrison's saw mill near Bathurst, N.B., was burned about the end of July. The loss will probably reach $3,000.

—The carding, saw and shingle mills of Mr. Cumberland, at La Patrie, Que., have been totally consumed by fire. There was no insurance.

—Maclaren's saw mill at Fort Macleod, N. W. T., was burned to the ground the early part of last month. The loss is estimated at $12,000.

—The lumber yard of J. H. Fraser, Wallaceburg, Ont., was visited by fire recently and $8,000 worth of lumber destroyed. The loss is partially covered by insurance.

—A dispatch of recent date from Windsor, Ont., states that timber fires are raging along the line of the Lake Erie and Detroit River Railroad. The damage will amount to a large sum.

—Jacob Bundscho's saw mill and cheese box factory at Milverton, Ont., was destroyed by fire recently. Loss about $3,000; insurance $1,000. Mr. Bundscho suffered a similar loss five years ago.

—The shingle and saw mill at Stirling Falls, Ont., owned by William Dunbar, was destroyed by fire a fortnight ago. 155,000 shingles were burned and a quantity of lumber. Loss $2,100; insurance, $6,000.

—On the 10th ultimo the planing mill of W. C. Harrison, at Norwood, Ont., was totally consumed by fire, which is supposed to have been caused by a spark from the smoke stack. The mill was valued at $9,000. The lumber in the yard and Mr. Harrison's dwelling was saved by the efforts of the fire brigade.

—One of the most serious fires of the past month occurred at Port Arthur, Ont., on the 13th of August, by which the large planing mill at the south end of the town, owned by James Conmee, ex-M.P.P., was totally destroyed. The building and machinery were valued at $18,000 and were insured for about $10,000. Vigars Bros., who operated the mill, lost some lumber and machinery. We have no doubt the mill will be re-built.

—At Bridgenorth, Ont., on the 2nd of August, fire was discovered in the engine room of W. B. Kelly's saw mill, which resulted in the entire destruction of the mill, together with 50,000 feet of lumber and 1,000 ties. Loss on mill, $5,000; on lumber and ties, $8,000. The burned mill had a daily capacity of 20,000 feet of lumber, and was built about ten years ago. We are pleased to learn of Mr. Kelly's intention to rebuild.

—The most disastrous fire which has visited Chicago since the big conflagration of 1872 occurred on the 1st of August, the scene of the fire being in what is known as the lumber district. Three million dollars worth of property was destroyed. Lumber companies suffered the following losses: Perely, Lowe & Co., $300,000; Martin Lumber Co., $700,000; R. E. Conwar, $150,000; Longley, Lowe & Co., $100,000; Keystone Lumber Co., $150,000; Wakefield Hines Lumber Co., $200,000.

CASUALTIES.

James C. Hunter, employed in Palmer's lumber camp near McGregor, Ont., was struck on the head by a broken belt recently and died from the effects thereof.

—While working in Hadley's lumber mill at Chatham, Ont., Dan. Crump had his right hand caught in the machinery and badly crushed. It was found necessary to amputate three fingers and the thumb.

—The 15 year old son of Ambrose Herritt, while working in his father's shingle mill at Rodney, N.S., was caught in the belting. His arm was broken and he received some painful, but not fatal flesh wounds.

The CANADA LUMBERMAN, $1.00 per year. Subscribe.

TRADE REVIEW.

Office of CANADA LUMBERMAN,
August 25, 1894.

THE GENERAL SURVEY.

MORE than one indication of an improvement in the lumber trade has been made manifest during the month. The culminating circumstance, of course, to give fresh life to business, has been the passing of the United States tariff bill, making lumber free. This particular question is dealt with fully in another part of these pages, so that little more than a brief reference is called for here. The various views expressed are hopeful, so far as future trade is concerned. It is believed as a result of free lumber that there will be a general leveling up of values, both as regards timber limits and the manufactured products of the forest. In some respects this may not be deemed necessary, as prices have shown very little tendency to depreciation, when the severity of the depression is considered. Now, however, the confidence that was manifest by the firmness of prices, will be made practically manifest in the moving of stocks. It is anticipated that within the next few months there will be considerable changing of ownership in limits, as not a few sales have been hanging fire, pending the tariff decision.

The manufacture of lumber in all departments can hardly fail to be benefitted by this change in the tariff, and the opinion is expressed by a number of leading lumbermen, elsewhere in this issue, that we may expect in the near future an important development in the line of saw mills and planing mills. There is certainly good reason to anticipate, that it will pay to manufacture lumber here and ship it as dressed lumber, rather than to ship simply the coarse lumber, and have the dressing done in United States mills.

Aside, however, from the stimulus thas been given to the trade through the passing of the Wilson bill, there were indications even before this that the lumber trade was reviving. This was shown in the early preparations that were being made by a number of firms for work in the woods the coming winter, and also in the purchase by United States lumbermen of Canadian mills and the determination on their part to operate them.

Local trade in the province has remained very dull. One large wholesale firm remarked to the writer a few days ago that they had not done so small a business since 1882. The building permits granted in Toronto during the past month would indicate a present revival in the building trade. These show a total for July of $259,150. This is the largest amount for the same month in any year since 1890, except in 1891, when the amount included half a million. These figures are encouraging in a way, but they do not mean very much for the lumber trade. They are covered largely by several buildings running into considerable figures, in the construction of which there will not be a great deal of lumber used.

Trade in British Columbia at present is quiet. And the same is to be said of present conditions in Quebec and the Maritime provinces, but the hope is there, as it is in Ontario, that a revival will follow the change in tariff.

UNITED STATES.

A fortnight ago it would have been impossible to have written anything encouraging of lumber conditions in the United States. No one could have done anything else but have told the old, old story of continued depression and plenty of it. Piling grounds loaded up with stocks, so that in some cases the lumbermen had commenced to make extensions in this direction to accommodate increasing supplies. Anyone who wanted to buy had nothing but a little sorting up order to present, that a year or more ago he would have been ashamed to hand in. But a change has come over the scene. The tariff bill has practically become law. Lumber, as was expected, despite various protests to the contrary, has been placed on the free list. And the result has been that everybody is plucking up courage. This does not say that everybody is satisfied with the issue, but there is something definite to work on now, and it is here that the encouragement comes. It must be admitted that things have been bad enough to render it a physical impossibility for the trade to recuperate and become convalescent all of a jump. The long looked for turn for the better has nevertheless taken place, and whilst at this writing it is not possible to be specific and tell of large sales that have been made, yet it is quite safe to talk in confident terms of an improved spirit, and though it may partake of the over-sanguine, so delightful is the change, yet it is believed that the record of the lumber trade in the months to come will indicate a steadily growing revival. The men who have been holding firm to prices feel now that their confidence in the soundness of the lumber situation has not been misplaced.

FOREIGN.

Hardly any encouragement comes to lumber interests in Great Britain. Mr. John Donogh, who has recently returned from the Old Country, tells us in an interview on another page that in Edinburgh, Glasgow and London he found the lumber trade exceedingly depressed. The advices we receive from lumber correspondents in the United Kingdom all indicate like conditions. Denny, Mott & Dickson, of London, in their current wood market report, tell us that business for the month has been marked by increasing apathy. "Strikes and labor difficulties continue to handicap traders, and the conviction that these social problems are impeding Britain's progress as a manufacturing nation is spreading." Hope is expressed, however, that tariff reform in the United States and the great check to the spending power of Colonial and South American customers will help in the way of a revival of business. Farnworth & Jardine, of Liverpool, in their wood circular, remark that there is no improvement in values, which are difficult to maintain, especially for the leading articles. The arrivals of Waney timber are reported as having been large. The import of pine deals has also been large, namely, 5,468 standards, against 2,075 the same month last year. Of spruce deals the import has been 12,746 standards, against 15,105 standards same month 1893, and 10,587 in 1892. The Timber Trades Journal states that at the last auction, Canadian pine, which was offered in large quantities of the more expensive grades, met with a fair demand, which, upon the whole, may be considered satisfactory. There are no changes of any moment to note in the Australian markets. Dullness continues to reign there, though it is thought that the hardest part of the depression is over. Considerable shipments are being made to South America.

TORONTO, ONT.

TORONTO, August 25, 1894.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch	2 50	2 60
XX shingles 16 inch	1 50	1 60
Lath, No. 1		2 15
Lath, No. 2	1 80	1 85

YARD QUOTATIONS.

		F. M.		
Mill cull boards and scantling	$10 00	1 1-2 in. flooring, dres'd	26 00	30 00
Shipping cull boards, promiscuous widths	13 00	" " rough	18 00	22 00
" stocks	16 00	" " dres'd	25 00	28 00
Scantling and joist, up to 16 ft	14 00	1 1-4 in. flooring, undressed, B.M.	16 00	18 00
" " 18 ft	15 00	1 1-4 in. flooring, dres'd	18 00	20 00
" " 20 ft	16 00	" " undres'd	12 00	15 00
" " 22 ft	17 00	Beaded sheeting, dressed	20 00	35 00
" " 24 ft	19 00	Clapboarding, dres'd		12 00
" " 26 ft	20 00	XXX sawn shingles per M.	2 60	2 70
" " 28 ft	22 00	Sawn lath		2 60
" " 30 ft	24 00	Red Oak	30 00	40 00
" " 32 ft	27 00	White "	37 00	45 00
" " 34 ft	29 50	Basswood, No. 1 and 2	28 00	30 00
	23 50	Cherry, No. 1 and 2	70 00	90 00
" " 36 ft	31 00	White ash, 1 and 2	24 00	35 00
" " 38 ft	33 00	Black ask, 1 and 2	20 00	30 00
" 40 to 44 ft	37 00			
Cutting up planks, 1 and thicker, dry	25 00 28 00			
" board	18 00 24 00			
Dressing blocks	16 00 20 00			
Picks Am. inspection.	30 00			

HARDWOODS—PER M. FEET CAR LOTS.

Ash, white, 1 to 2 in.		$18 00	$20 00	Elm, soft	1 " 1½	$11 00	$12 00
" " 2½ to 4		20 00	24 00	" "	2 " 3	12 00	13 00
" black,	1 " 1½	16 00	18 00	" rock	1 " 1¾	14 00	16 00
Birch, sq.,	1 " 4	17 00	20 00	" "	1½ " 3	15 00	18 00
" "	4x4 " 8x8	20 00	22 00	Hickory	1½ " 2	28 00	30 00
" red	x " ½	20 00	22 00	Maple	1 " 1½	16 00	17 00
" "	2 " 4	22 00	25 00	"	2 " 4	17 00	18 00
" yellow	1 " 4	14 00	15 00	Oak, red, p'n	1 " 1½	28 00	30 00
Basswood	1 " 1¾	15 00	16 00	"	2 " 4	30 00	32 00
"	1½ " 2	16 00	18 00	" white	1 " 1½	28 00	30 00
Butternut	1 " 1½	23 00	25 00	" "	2 " 4	30 00	35 00
"	2 " 3	25 00	28 00	" quart'd	1 " 2	48 00	52 00
Chestnut	1 " 2	2 00	25 00	Walnut	1 " 3	85 00	100 00
Cherry	1 " 1½	50 00	60 00	Whitewood	1 " 2	32 00	36 00
"	2 " 4	60 00	65 00				

OTTAWA, ONT.

OTTAWA, August 25, 1894.

Pine, good sidings, per M feet, b.m.	$32 00	40 00
Pine, good strips, " " "	27 00	35 00
Pine, good shorts, " " "	20 00	27 00
Pine, 2nd quality sidings, per M feet, b.m.	20 00	25 00
Pine, 2nd quality strips, " " "	18 00	22 00
Pine, 2nd quality shorts, " " "	15 00	18 00
Pine, shipping cull stock, " " "	14 00	16 00
Pine, box cull stock, " " "	11 00	13 00
Pine, s.c. strips and sidings " " "	11 00	14 00
Pine, mill cull	8 00	10 00
Lath, per M	1 60	1 90

QUEBEC, QUE.

QUEBEC, August 25, 1894.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	14 @	18
For fair average quality, according to average, etc., measured off.	16	20
For good and good fair average, " " " " "	23	27
For superior " " " " "	28	30
In shipping order " " " " "	29	35
Waney board, 18 to 19 inch " " " " "	30	36
Waney board, 19 to 21 inch " " " " "	37	40

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	45	51

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	
" " " " 30 to 35 feet	25	

ASH.

14 inches and up, according to average and quality	30	

BIRCH.

16 inch average, according to average and quality	20	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $37 to $42 for 3rd quality.
Bright spruce, according to mill specification, $40 to $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality.

NEW YORK CITY.

NEW YORK, N. Y., Aug. 25.—The distribution of lumber at this centre is narrowed down to a very small compass. Transactions continue of the lightest character. A measure of renewed activity is certain to be manifest now that the tariff question has been settled, and various deals that have been hanging fire will come to a close. This of itself will mean a fair distribution of lumber and activity through all the various channels of distribution. To this extent the future looks more bright than has been the case for many months.

WHITE PINE—WESTERN GRADES.

Uppers, 1 in.	$44 00@45 00		Coffin boards	20 00	22 00
1¼, 1½ and 2 in.	46 00	47 00	Box, in.	$17 00@17	50
3 and 4 in	55 00	58 00	Thicker	17 50	18 50
Selects, 1 in.	40 00	41 00	Ccil'g, base, fig. No. 1	40 00	42 00
1 in., all wide	41 00	43 00	No. 2	35 00	37 00
1¼, 1½ and 2 in.	43 00	44 00	No. 3	24 00	26 00
3 and 4 in.	52 00	53 00	Shelving, No. 1	30 00	32 00
Fine common, 1 in.	36 00	37 00	No. 2	25 00	27 00
1¼, 1½ and 2 in.	38 00	40 00	Molding, No. 1	36 00	37 00
3 and 4 in.	46 00	48 00	No. 2	34 00	36 00
Cutting up, 1 in. No. 1	28 00	30 00	Bevel sid'g, clear	22 50	23 00
No. 2	21 00	23 00	No. 1	22 00	22 50
Thick, No, 1	29 00	32 00	No. 2	20 00	20 50
No. 2	24 00	26 00	No. 3	16 00	17 00
Common, No. 1, 10 and 12 in.	22 00	23 00	Norway, c'l, and No. 1	23 00	25 00
No. 2	20 00	21 00	No. 2	20 00	22 00
No. 3	17 00	18 00	Common	18 00	19 00

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N.Y., Aug. 25.—Local lumbermen might object to giving away the situation entirely by showing the figures of sales this season as contrasted with several seasons of the past, but there can be no doubt that the record would show a very great shrinkage in business. A local lumberman told the writer a few days ago that there was simply nothing moving. Seeing that the people here are very much opposed to free lumber they are not prepared to say just what the result will be, seeing that free lumber has actually come. Large stocks of lumber are to be found on the docks, and whilst generally prices are holding up well, yet there are not a few dealers who will shade quotations in order to make sales.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in.	$46 00	48 00	Shelving, No. 1, 13 in and up, 1 in.	31 00@33	00
2½ and 3 in.	52 00	55 00	Dressing, 1¼ in.	25 00	26 00
4 in.	58 00	60 00	1¼x10 and 12		26 00
Selects, 1 in.	38 00	39 00	1½ in.	24 00	25 00
1¼ to 2 in.		42 00	2 in.	26 50	28 00
2½ and 3 in.	47 00	50 00	Mold st'ps, 1 to 2 in.	33 00	35 00
4 in.		52 00	Barn, No. 1, 10 and 12 in.	21 00	23 00
Fine common, 1 in.	35 00	38 00	6 and 8 in.	20 50	22 00
1¼ and 1½ in.	37 00	38 00	No. 2, 10 and 12 in.	18 00	19 00
2 in.	39 00	40 00	6 and 8 in.	18 00	19 00
3 in.		45 00	No. 3, 10 and 12 in.	14 00	16 00
4 in.		45 00	6 and 8 in.	13 50	15 50
Cut'g up, No. 1, 1 in.	27 00	29 00	Common, 1 in.	16 00	18 00
1¼ to 2 in.	33 00	34 00	No. 2, 1 in.	17 00	18 00
No. 2, 1 in.	17 00	18 00	No. 2, 1¼ to 2 in.	23 00	24 00
No. 2, 1¼ to 2 in.	18 00	19 00	No. 3, 1¼ to 2 in.	16 00	20 00
No. 3, 1¼ to 2 in.			2 in.	19 00	22 00

BOSTON, MASS.

BOSTON, MASS., Aug. 25.—The trade at this point take the changes in the tariff as affecting lumber in a very philosophical manner. They have not been, as in some places, any way belligerent in their attitude to the bill, and they do not seem to anticipate any terrible trouble now that free lumber is here. It is not unlikely that the change will lead to the bringing in of considerable quantities of spruce from New Brunswick.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$12 00	¾ inch	$ 9 25 – 9 75
Coarse No. 5	16 00	11-16 inch	9 00
Refuse	12 00 – 12 50	⅝ inch	8 50
Outs	9 00 – 10 00	Clapboards, sap ext.	50 00 – 55 00
Boxboards, 1 inch	10 75 – 11 00	Sap clear	45 00 – 50 00
⅞ inch	9 75 – 10 00	Sap, 2nd clear	40 00
		No. 1	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in	$50 00@51 00	Fine com., 3 and 4 in	42 00 – 46 00
1¼, 1½ and 2 in	52 00 – 55 00	No. 2, 1 in. Fine com.	28 00 – 30 00
3 and 4 in	60 00	1¼, 1½ and 2 in	29 00 – 31 00
Selects, 1 in	43 00 – 45 00	No. 1 strips, 4 to 6 in.	43 00 – 44 00
1¼, 1½ and 2 in	48 00 – 50 00	No. 2	36 00 – 37 00
3 and 4 in	51 00	No. 3	28 00 – 30 00
Moulding boards, 7 to 11 in. clear	36 00 – 38 00	Cut ups, 1 to 2 in	24 00 – 32 00
60 per cent. clear	34 00 – 36 00	Coffin boards	21 00 – 23 00
Fine common, 1 in	38 00 – 40 00	Common all widths	22 00 – 26 00
1¼, 1½ and 2 in	42 00	Shipping culls, 1 in	15 00 – 15 50
		do 1¾ in.	15 50 – 16 50

SPRUCE—BY CARGO.

Scantling and plank, random cargoes	14 00@15 00	Coarse, rough	12 00@14 00
Yard orders, ordinary sizes	15 00 – 16 00	Hemlock bds., rough	12 00 – 13 00
Yard orders, extra sizes	16 00 – 18 00	" " dressed	12 00 – 14 00
Clear floor boards	19 00 – 20 00	Clapbds., extra, 4 ft.	29 00 – 30 00
No. 2	16 00 – 17 00	Clear, 4 ft.	30 00 – 31 00
		Second clear	23 00 – 24 00
		No. 1	12 00 – 16 00

LATH.

Spruce by cargo ..... 2 50@2 75

SHINGLES.

Eastern sawed cedar, extra	$3 00 – $3 25	Eastern shaved sawed cedar, 1st quality	5 00
clear	2 30 – 2 75	2nd quality	4 75
2nd's	2 00 – 2 35	3rd "	3 85 – 4 00
extra No. 1	1 50 – 1 75	4th "	3 00 – 3 25
		Spruce No. 1	1 50

SAGINAW, MICH.

SAGINAW, MICH., Aug. 25.—A few sales much beyond the average size of sales as they have been going for some months has proven a source of encouragement to lumbermen of Michigan. One sale was reported of 7,000,000 feet cut at the Whitney & Batchelor mill at Melbourne, to Grey, Jenks & Co., of Cleveland. The price is believed to have run at from $16 to $17. Outside of transactions of this kind, all through the month trade has been very dull and lumber has been showing a rapid accumulation at all the leading piling grounds. Much of this must now commence to move, seeing that the long discussed tariff bill has finally become law, and lumber become free of any duty.

FINISHING LUMBER—ROUGH.

Uppers, 1, 1¼ and 1½	45 00	Fine common, 1 in	35 00
2 in	46 00	1¼ and 1½ in	36 00
Selects, 1 in	40 00	2 in	37 00
1¼ and 1½	40 00	C, 7, 8 and 9 in	30 00
2 in	40 00		

SIDING.

Clear, ½ in	24 00	C, ½ in	19 00
⅞ in	48 00	⅞ in	34 00
Select, ½ in	21 00	No. 1, ½ in	13 00
⅞ in	40 00	⅞ in	23 00

TIMBER, JOIST AND SCANTLING.

2x4 to 10x10, 12, 14 and 16 ft.	$11 00	20 ft.	14 00
18 ft.	13 00	22 and 24 ft.	15 00

For each additional 2 ft. add $1; 12 in. plank and timber $1 extra; extra for sizes above 12 in.

SHINGLES.

XXX 18 in. Climax	3 65	18 in. X (cull)	1 00
XXX Saginaw	3 40	XXX shorts	2 25
XX Climax	2 25	XX	1 50
18 in. 4 in. c. b	1 25		

LATH.

Lath, No 1, white pine	2 00	Lath, No. 2, W. pine, Norway	1 65

BOX.

1x10 and 12 in. (No 3 out)	14 00	Narrow	13 00@14 00
1x6 and 8 in (No. 3 out)	13 50	1¼ in	15 00 – 18 00
1x13 and wider	15 00 – 17 00	1½ in	15 00 – 18 00
		2 in	15 00 – 18 00

SHINGLES.

18 in. XXX, clear	3 85 – 4 00	16 in., *A extra	2 60 – 2 70
18 in. XX, 6 in. clear	2 85	16 in. clear butts	2 10

LATH.

No. 1, 4 ft.	2 50 – 2 60	No. 1, 3 ft.	1 10
No. 2, 4 ft.	1 95		

OSWEGO, N.Y.

OSWEGO, N. Y., Aug. 25.—It cannot be said that there is anything of particular moment to report of lumber here. The volume of trade is undoubtedly curtailed, though it is hoped that strength will be given to shipping interests with the lumber tariff finally settled.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$47 00@48 00		
Pickings, " "	39 00 – 40 00		
No. 1, cutting up, " "	34 00 – 35 00		
No. 2, cutting up, " "	24 00 – 25 00		
In strips, 4 to 8 wide, selected for moulding trips, 14 to 16 ft.	32 00 – 34 00		

SIDING.

1 in siding, cutting up		1¼ in selected	38 00@43 00
1 icks and uppers	32 00@39 00	1¼ in dressing	20 00 – 22 00
1 in dressing	19 00 – 21 00	1¼ in No. 1 culls	15 00 – 17 00
1 in No. 1 culls	14 00 – 15 00	1¼ in No. 2 culls	14 00 – 15 00
1 in No. 2 culls	13 00 – 14 00	1 in. No 3 culls	11 00 – 12 00

1X12 INCH.

12 and 16 feet, mill run	21 00 – 24 00
12 and 16 feet, No. 1 and 2, barn boards	19 00 – 20 00
12 and 16 feet, dressing and better	27 00 – 31 00
12 and 16 feet, No. 2 culls	15 00 – 16 00

1X10 INCH.

12 and 13 feet, mill run, mill culls out	21 00 – 23 00		
12 and 13 feet, dressing and better	26 00 – 28 00		
1x10, 14 to 16 barn boards	18 00 – 19 00		
12 and 13 feet, No. 1 culls	16 00 – 17 00		
12 and 13 feet, No. 2 culls	15 00 – 16 00		
14 to 16 feet, mill run mill culls out	21 00 – 23 00		
14 to 16 feet, dressing and better	26 00 – 28 00		
14 to 16 feet, No. 1 culls	17 00 – 18 00		
14 to 16 feet, No. 2 culls	15 00 – 16 00		
10 to 13 feet, No. 3 culls	11 00 – 12 00		

1¼X10 INCHES.

Mill run, mill culls out.	$22 00@25 00	No. 1 culls	17 00 – 18 00
Dressing and better	27 00 – 35 00	No. 2 culls	15 00 – 16 00

1X4 INCHES.

Mill run, mill culls out	17 00 – 21 00	No. 1 culls	14 00 – 15 00
Dressing and better	24 00 – 30 00	No. 2 culls	13 00 – 14 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20 00 – 25 00	6, 7 or 8, No. 1 culls	16 00 – 17 00
6, 7 or 8, drsg and better	25 00 – 30 00	6, 7 or 8, No. 2 culls	14 00 – 15 00

SHINGLES.

XXX, 18 in pine	3 70 – 3 90	XXX, 18 in. cedar	3 50 – 3 70
Clear butts, pine, 18 in.	2 70 – 2 90	Clear butt, 18 in. cedar	2 50 – 2 70
XXX, 16 in. pine	3 00 – 3 20	XX, 18 in. cedar	1 90 – 2 00
Stock cedars, 5 or 6 in.	4 50 – 5 00		

LATH.

No. 1, 1¼	2 30	No. 2, 1¼	2 25
No. 1, 1 in.	1 80		

ALBANY, N.Y.

ALBANY, N. Y., Aug. 25.—The number of small orders that shippers receive now-a-days for lumber gives them a good deal of additional labor in handling cargoes. It takes several small orders to make up a boat load, and it is a method of doing business that they have not been accustomed to in the past. Not that the trade here have leaned very much to free lumber, but as it means a settlement of the tariff difficulty it is believed there will be considerable activity in lumber for the rest of the season.

PINE.

2½ in. and up, good	$56 $60	10-in. common	$15 $16
Fourths	58	12-in. dressing and better	28 34
Selects	50	Common	15 17
Pickings	45	1¼-in. siding, selected, 13 ft.	40 45
1¼ to 2-in. good	52 55	Common	15 17
Fourths	47 50	1-in. siding, selected	38 42
Selects	42 45	Common	15 17
Pickings	37 40	Norway, clear	22 25
1-in. good	52 55	Dressing	16 18
Fourths	47 50	Common	11 15
Selects	42 45	10-in. plank, 13 ft., dressing and better, each	c. c. 42 55
Pickings	37 40	10-in. plank, 13-ft. culls, each	23 25
Cutting-up	22 27	10-in. boards, 13 ft., dressing and better, each	28 32
Bracket plank	30 35	10-in. boards, 13-ft. culls	17 21
Shelving boards, 12-in. up	30 32		
Dressing boards, narrow	19 21		

LATH.

Pine	$2 40	Spruce	$2 30 – $2 40

SHINGLES.

Sawed Pine, ex. XXXX	$4 40 – $4 50	Bound butts, 6 x 18	$5 90 $6 00
Clear butts	3 15 – 3 25	Hemlock	2 15 – 2 30
Smooth, 6 x 18	5 50 – 5 60	Spruce	2 20 – 2 30

NOTES FROM THE PACIFIC COAST.

SEVERAL parts of British Columbia have suffered from the extensive bush fires. In the Kootenay County several towns and settlements were entirely destroyed. At Bear Lake, Messrs. Arnold and McDermott lost their saw mill from bush fires. Valued at $20,000.

British Columbia Fir has been tried for mine work in South Africa with great success, and it is likely further orders will be placed for it.

Business continues very quiet, but all are hoping for an improvement in the near future.

CANADA'S GREAT FAIR.

THE Toronto Industrial Exhibition, which is to be held from the 3rd to the 15th of September will no doubt be the greatest fair of the present year, and from the present indications it promises to excel all others, both in point of exhibits and in attendance of visitors. The grounds have been vastly improved since last year, and already most of the space in all the buildings has been applied for. A good programme of special attractions, both novel and interesting, will be provided as usual. Cheap excursions will as usual be run on all railways at rates in keeping with the times.

The United Association of Lumbermen will hold their annual meeting at Denver, Col., Sept. 13-14.

The saw and shingle mills at Odessa, Ont., owned by Mancur & Babcock, were destroyed by fire a fortnight ago. The property was insured for $2,500.

The Fleming wood and lumber mills in Tay township, about one mile from Midland, Ont., were burned to the ground on the 23rd ultimo. Loss $15,000.

BY THE WAY.

THE following notice relating to the crown timber dues in Quebec to be levied on pulp wood appears in the last issue of the Official Gazette: "Whereas, the present rate of dues chargeable on spruce logs for paper pulp is 25c. (twenty-five cents) per cord of 128 cubic feet, and whereas, it is advisable to raise it, while allowing a reduction when pulp wood is to be manufactured in this province—it is ordered, that the rate of dues on spruce logs for paper pulp be fixed at forty cents (40c) per cord of 120 cubic feet, but that a reduction of fifteen cents (15c) per cord be allowed when the pulp-wood is to be manufactured in this province."

× × × ×

Foreign lumber markets, it is stated, have not recovered from the effects of flooding those markets with inferior American logs. When will business men learn how short-sighted is the policy of putting on the market goods of an inferior quality? A temporary purpose may be gained, but the time is short when the reaction shows itself and the whole interests of a particular trade are prejudiced by such conduct. Two or three years ago the farmers of Manitoba were foolish enough to ship to Great Britain a considerable quantity of frozen wheat. What was the result? It was not long before millers and grain men there became suspicious of any wheat that came from any part of Canada and the whole grain and milling interests of the country were prejudiced by this act. The old proverb is as true to-day as ever that "honesty is the best policy."

× × × ×

A meeting of the American Forestry Association is to be held at the White Mountains, N. H., towards the end of this month. More than usual activity is just now shown in forestry circles in the United States. Every effort will be made to prevent the cutting of trees in the Adrirondack district. Evidence was recently given before the New York Board of Trade that considerable harm had already come from the cutting of forests in those territories. One delegate stated that he could have walked across the Hudson river across the Troy dam almost without wetting his feet. It was believed that the time would come when all the cities along the Hudson river would have to look to the Adrirondack for their water supply. It has been scientifically demonstrated on more than one occasion that the forests brought rain and that tornadoes never take place in wood countries; and the present condition where the worst has not nearly been reached in the Adrirondack district is evidence along these lines.

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In a city like Toronto where the whole trend is in the direction of paving our streets with asphalt, there may not appear to be much encouragement to talk wood pavements. But there are other places besides the Queen City needing pavements, and all have not become converted to the idea that asphalt makes the best pavement, or if so, are not sure if they are in a position to experiment very much in that direction. Wood pavements have been eschewed in this city to some extent, because of their alleged unhealthiness. It is worthy of remark that wood paving in European cities continues to be carried on to no small extent. We have before us at this writing a report of the London county council saying that resolutions have been passed for the purpose of wood paving in a number of districts. In Bristol application has been made to the proper authorities for permission to borrow £37,500 for street improvements. The larger part of these will be wood pavements. Wood pavement is to be extended on the Gloucester road and other streets within what is known as the Kensington district. All this indicates faith in wood pavements. So far as their healthfulness is concerned the Lancet, a leading medical journal in Great Britain, has recently spoken out in plain terms on this question. It confesses to serious doubts as to the attack made on wood pavements on sanitary grounds. "Coming to the evidence of disease," says the Lancet, "we are unable to discover that there has been an increase of illness from wood pavements as compared with other districts. Obviously, therefore, the accusations leveled against our wooden roads on the score of health must, so far be disallowed, as not proven."

TALKS WITH WOOD-WORKERS.

THE mechanic who uses his tools awkwardly may be set down as a poor mechanic. It has been remarked that there is a right way and a wrong way of doing everything, and in the handling of tools it is most important that the workman knows how to handle these in the right way. Some men, says Mr. F. J. Harmon, writing in the Wood Worker, are better workmen than others, and it is not fully decided that a good deal of this superiority does not arise from the position of the man while working. The largest amount of good work can not be done while the body is in a cramped position. It is not enough to hold correctly and use them right, but the body, too, should be handled right, in order that a man may do the maximum amount of work he is capable of turning out. To this effect, all prolonged work should be executed with the chest out and the shoulders thrown back. A contracted chest will produce shortness of breath and palpitation of the heart. The head should be held erect as possible. By keeping the head in a bent position the passage of the blood through the veins of the neck and throat is impeded (the vein tubes being stretched vertically) and at the same time the muscles at the back of the neck which hold up the head, become strained. When we are erect, much of the weight of head is supported by the spine. Again, in a bent position we look at things from a wrong angle. This makes it almost impossible to do accurate work.

× × × ×

In sawing, some people claim that the feet should be so far apart that the legs form an angle of 90 degrees. Other people say that 60 degrees is right. I believe it depends upon the kind of work to be done. For light, easy sawing I can work to advantage with my feet 45 to 60 degrees apart, but on the very heaviest kind of sawing, by bracing out to the 90 degree angle work is done to greater advantage. The arms and shoulder must be in line with the saw kerf, so as to swing in the direction which the saw is to take. There is just one way in which the head may be held high when shoving a saw or a plane, and the chest may be kept well expanded, and that way is by having the work supported at exactly the right height. To this end every bench ought to be made, especially for sawing, so that it may be raised or lowered as the work requires.

× × × ×

When sawing with the right arm, the left foot should be extended, with the leg out straight and parallel with the bench. When sawing with the left arm (and a man can saw as well with one as the other if he will only practice equally with each), the right foot is to be put forward; in either case the arm should move in the direction of the resistance. The saw always ought to move in a line parallel with the bench, then there will be no danger of running into that piece of apparatus and possibly damaging the saw on a nail or screw. The body should never be held stiff. Good, fast work can not be done unless the body moves slowly backwards and forward, and its swing should be regulated by the amount of resistance to be overcome. Therefore, in light, easy sawing there need be much less motion than when a tough bit of stuff is being attacked and full power of the man is required.

× × × ×

In planing, the left knee (right-hand work) should be parallel to the bench and one foot at right angle to the other. The pressure on the plane, so that the plane-iron will catch the wood, should come from the weight of the plane. Very little force should be put upon the plane with the arms. Planing is different from drilling or boring. In performing either of these operations the weight of the body should be used to overcome the resistance of the material.

× × × ×

The scope of this article includes the grinding and setting of plane-irons or the filing of saws, but unless the tools are in perfect condition, no man, be he ever so good a workman, can hold himself in the correct working position while using such tools. For instance, a plane is dull; the iron will not pick up a chip unless considerable weight be put upon the plane, and the very act of "riding" upon the plane prevents the workman from keeping in position. Suppose a board of eight feet long has both edges to be jointed up so it can be used as a straight edge. In taking a chip off this board the workman desires to cut a continuous shaving without once stopping the plane. He must take off a continuous chip or he can not get the edge smooth and true. Every time the plane stops a slight ridge or bunch will be left; therefore it is necessary to walk along the work and push the plane, consequently the tool must go easily, and a little bearing down beyond its weight can be permitted. If the plane is dull, bearing down harder is necessary to make it cut. But bearing down hard is fatal to true work, hence the tool must be sharp to insure good work, through a correct position of the workman.

× × × ×

Upon correct position, then, depends much more than is apparent at first sight. The man who grasps a hammer handle close up under the head, does not expect to do as much work as the man who seizes the handle in its proper place. The old German mechanic understood this point when he marked off his hammer handle into inches and marked the first mark from the head $1.25, the next mark $1.50 and so on up to the eight-inch mark, which he labelled $3.00. Being asked the meaning of the marks Hans said: "Ven I gits $1.25 a day, I takes him at dot mark," and he struck a blow that had but very little force, "but when I gits $3.00, I takes him dere" (the eight inch mark), and Hans struck a blow that had unmistakable force. Correct position then is the correct thing for the wood-worker to attain, in order to do the greatest possible amount of the very best work.

JAS.

ROPE DRIVING.

THE subject of rope driving may properly be placed under two heads, according to the nature of the material composing the ropes—whether fibrous or metallic. With few exceptions metallic or wire ropes are used almost exclusively on long-distance or telodynamic transmission, while fibrous ropes are employed for intermediate and comparatively short drives. Among the materials used in this method of power transmission we find manilla rope in much favor in this country, as well as in Great Britain and Germany.

In many cases ropes of cotton are also used, as they are generally softer and more pliable than the ordinary manilla ropes, thus allowing smaller pulleys to be used with less injury to the fibres. In fact, cotton ropes of small diameter have been used for years in cotton machinery bandings over pulleys and under conditions which would wear out a manilla rope in one-third the time. There is also an advantage, in that there is less internal chafing and wear when the rope is bent over a pulley, on account of the smoothness of the fibres and the great elasticity of the yarns.

The fibre of cotton is in itself a single cell, or hair, which grows on the coat of the seed and is thus a unit. These fibres are divided into two classes, constituting what are known as the short and long stapled varieties, in which the length varies from 3-8 inch to 1¾ inches. The unit cell, when attached to the seed in the plant, is in the form of an elongated cylinder, but when dried and separated from the plant the walls of the cells collapse; the flattening of the cells is not uniform nor continuous in a straight line, and as a result the fibre assumes the appearance of a twisted ribbon of numerous convolutions, somewhat resembling a corkscrew.

The shape of the fibre is thus well adapted to the work of being twisted into yarns and on account of each fibre being a unit its surface is comparatively smooth; the structure of the fibre permits considerable elongation, and especially in the long stapled varieties, the natural wax on its outer surface acts as a lubricant and permits a freedom of motion between the unit fibres without undue wear.

Thus it will be seen that cotton ropes are particularly well adapted to the transmission of power, in which the rope is constantly undergoing a varying strain, and is subjected to much flexion. The strength of cotton ropes is, however, extremely small, and although the weight is about one-third less than manilla the actual first cost is from fifty to seventy-five per cent. greater than for the latter. The working strength of cotton transmission rope may be taken higher, in proportion to its ultimate strength, than is used for manilla, for the latter is weakened by the grease with which it is lubricated, and, moreover, a large factor must be allowed for wear on account of the character of the manilla fibre, which breaks more easily under bending strains.

As compared with manilla, then, the advantages of cotton ropes of the same diameter are: Greater flexibility, greater elasticity, less internal wear and loss of power due to bending the fibres, and the use of smaller pulleys for a given diameter of rope. Its disadvantages are greater first cost, lesser strength, and possibly, a greater loss of power due to pulling the ungreased rope out of the groove—in any case this is very small with speeds over 2,000 feet per minute.

In England manilla is now being used very largely, but cotton were formally preferred to the exclusion of all others for all kinds of driving, but the most probable cause of this was not that cotton was the best or most economical for the purpose, but that rope driving is most common at cotton factories, and cotton ropes were made in the locality by men who were familiar with the local product and had for years been making spindle and rim bands of small size. When the demand for large sizes arose these rope makers applied themselves to the newer industry and shut out other materials.

In the mills of Dundee and vicinity, and in the North of Ireland, where flax and hemp are worked, we find ropes of hemp, a local product, used entirely.

Rawhide ropes, which are made from 3-8 inch to 2 inches in diameter, are used to a limited extent. Where the stress in a rope is not great and the accompanying slip is small, rawhide works very well, and will last from three to six, and, in some cases, ten years. Under ordinary circumstances, it is not necessary to use any dressing, as sufficient lubrication is furnished by the rope itself; if the rope slips in its groove the leather will be burned and lose its flexibility and also its adhesive qualities to a certain extent. A rawhide rope has very little tendency to rotate on its axis, and for this reason the wear is not uniform, and with a heavy tension it is liable to take the set of the groove in which it runs; this is rather an advantage for a straight drive, where the rope always runs in the same direction, but in those cases where a rope is led on to the pulleys at an angle this will be a disadvantage, as under such conditions the rope often slips and wear is excessive. Where the rope is subject to wet or dampness, rawhide is an excellent material to use, as it is very little affected by dampness.

The cost of rawhide rope will average about six times that of a good quality of manilla transmission rope.

Solid round and square ropes of leather are sometimes used, and steel ropes with leather washers closely threaded on have been tried with considerable success, but the expense of such a rope would necessarily limit its application.

As we have already noted, manilla rope is used very extensively for transmission pusposes, but its application has not always met with that success which would follow a more thorough knowledge of its requirements. Inefficient rope drives are erected and run for a few months, or perhaps only days, and are replaced with larger ropes if the sheaves will permit, or, as in many cases, the ropes give way to leather belting and henceforth rope driving is condemned. The true cause is not so much the inefficiency of the ropes as it is the lack of knowledge concerning their use and application.—Flather, in the Electrical World.

EXPANSION OF CYLINDERS.

MUCH trouble is experienced in long stroke engines by the cylinder working loose on the foundation, caused by expansion in the cylinder body from the heating of the steam. Various means for overcoming this have been adopted and the most satisfactory seems to be to fasten one end of the cylinder solid to the foundation and leave the other end free to expand endwise, but of course prevent from vertical motion by the proper appliances, in other words, have a sliding expansion joint at one end. In tandem engines where one cylinder is fastened to the other direct, that is, the back end of the first to the head end of the next, this expansion is something considerable and should be provided for. This expansion can be diminished by not connecting the cylinder as first stated, but connecting the head of the first cylinder to the head of the second by rods running outside of the smaller cylinder.

VIEWS AND INTERVIEWS.

Seen Through Other Eyes.

Among the delegates to the World's Congress of Young Men's Christian Associations a few months ago was Editor Defebaugh, of the Chicago Timberman. He varied his labors as a delegate to that great meeting by inspecting English methods of lumbering and seeing anything, evidently, that would interest him as a lumberman-journalist. In a recent issue of his journal Mr. Defebaugh tells us of his visit to Windsor Park. He says: "To one whose impression of England is that it is a little, overcrowded island, the existence within twenty miles of London of such a forest as Windsor Park is a startling revelation; although if he be a timberman he will perhaps not be greatly impressed with the historic "fine old oaks," from a commercial point of view, at least. William the Conquerer's oak, for instance, is a mere hollow shell, little longer than it is broad. The English people pay the same respect to the ruins of a noble tree as they do to ruins of any other sort, especially when the aforesaid tree can be connected in some manner or other with some historic personage. The age of some of these historic trees, such as that just mentioned, makes our own charter oak a mere infant. When this forest first became a royal possession, in 1791, it contained over 60,000 acres, including Maidenhead thicket, Tylehurst and Wickham heaths, and other commons. While a considerable portion of this land has passed from the domain of the ornamental to that of the useful, the balance has been greatly improved, by the reclamation of swamp lands and in other ways, so that the forest is to-day in better condition than it has ever been. It was in these improvements that the late Prince Consort made his reputation for scientific "farming," which means merely that he was a successful grower of trees, and not of potatoes or hay. Windsor, however, is by no means the only large forest which remains of the million acres with which this portion of England was once covered; although it is the most notable, through being a royal possession. Epping forest, although since the time of Charles I. it has dwindled from 60,000 to 6,000 acres, in its still spacious extent preserves almost unchanged the appearance of the early English forests, before ever Julius Cæsar waded ashore to establish his authority in the island. The principal trees are oaks, beeches, blackthorns, hawthornes, and hornbeams; the latter a tree much resembling the beech, whose limbs show a curious tendency to reunite with the parent stem, jug handle fashion. There is also elm and ash among the timber, and birches are rapidly increasing in number with the drainage of portions of the land and the thinning out process about which there has been considerable fussing recently. The appearance of the forest varies greatly in the different portions, but an examination shows that these variations are caused by new combinations of the various trees, rather than by the introduction of new varieties; and compared with an American forest of equal extent, the number of different varieties of trees represented is exceedingly small.

Hopeful.

The intense depression in lumber circles for many months, and especially so in the district of Washington territory, has not sapped all feelings of hope with the Puget Sound Lumberman. Our cotemporary sees signs of at least slow progress. "What a demand for lumber and shingles," says this journal, "must come when business revives. Nearly every lumber yard in the country looks as if a cyclone had passed through, and it will be to most of the yardmen like starting business over again. Stocks have been badly reduced since the financial flurry struck the country; in fact none have been buying the past year to stock up. The orders that have been placed with the mills and dealers the past 10 months were for the barest necessities, such as repairs, etc. The farmers, mechanics and capitalists have postponed building until brighter days. When, therefore, business revives what an immense amount of building there will be. The same is true of the demand in foreign lands. Australia, for instance, must begin to build soon; so much South America where the rebellions and wars of the past five years have retarded progress. And Mexico and Europe need buildings. All this activity will come when the sun shines again, and then the saw mills will be busy places."

Immense Leaves.

With some trees the leaf is not the least significant part of the tree. A writer in the Lumber World tells us that really gigantic leaves are seen in the vegetable world. The largest of all leaves are grown on palm trees. Travellers tell of the Inaja palm, on the banks of the Amazon, in Brazil, the leaves of which are fifty feet in length by ten to twelve feet in width. Certain leaves of the Ceylon palm attain a length of 20 feet and the remarkable width of sixteen feet. The natives use them for making tents. Next comes the cocoanut palm, the usual length of whose leaves is about 30 feet. The umbrella magnolia, of Ceylon, bears leaves that are so large that a single one sometimes serves as a shelter for fifteen or twenty persons. One of these leaves carried to England as a specimen was nearly thirty-six feet in width. The plant whose leaves attain the greatest dimensions in temperature climates is the Victoria regia. A specimen of this magnificent plant exists in the garden of the Royal Botanical Society of Edinburgh, Scotland. Its leaf, which is about seven feet in diameter, is capable of supporting a weight of three hundred and ninety-five pounds as it floats on the water.

Durability of Cedar.

The following experiment is related as having been made by a farmer in Western Missouri with the purpose of ascertaining what kinds of woods would last longest when exposed to all the vicissitudes of the weather. He took a number of stakes two feet long and one inch thick, drove them into the ground, and left them there for four years. At the end of that time he found that elm, ash, hickory, white pine, oak and fir were entirely rotted, so that in some cases the stick could not be drawn out of the ground, and in several it left only a line of rotten vegetable fiber. Yellow pine and teak were decayed on the outside only, the interior remaining firm and solid, while the best cedar was as good as when first put in the ground. The experiment should be of value to people who make fences and also to builders, as showing what kind of wood will best suit places where dampness is the natural condition.

TIMBER WORKING HINTS.

TO get as much timber as possible from a log, cut the log up into lengths of from 12 ft. to 16 ft., find the largest square that you can cut out of each piece, and then saw it out. Let us take an example, and work it out. "A stick of timber is 42 ft. long, 12 in. diameter at the top, and 30 in. at the bottom. It is cut into three pieces of equal length, what sized squares can be cut out of each piece?" Here we must, first of all, cut it up into three equal lengths, and each of these we find to be 14 ft. long (because $42 \div 3 = 14$). Next we must get the biggest square that can be cut out of each of those pieces, and in doing this the diameters at the ends of the middle log must be determined. These we can arrive at in the following way: Take the difference of the diameters of the two ends given, divide this difference by the number of equal lengths into which the log is to be divided, and this will give the common difference between the ends of the log. Doing this we get $30'' - 12'' = 18''$ difference of diameters. Then $18'' \div 3 = 6''$, as the common difference between the diameters. From this we find the four diameters to be 12", 18", 24", and 30".

We must now determine the side of the largest square that can be cut from each log, and in doing this we must take it from the smallest end of each log. Bearing in mind that to get the side of a square described in a circle you multiply the diameter by .7071, we find the sides of the square to be:—

1. In the smallest log, 8 4852 in., because 12 in. $\times .7071 = 8$ 4852 in.
2. In the next log, 12 7278 in.
3. In the next log, 16 9704 in.

To roughly estimate the contents of a log:—First, get the mean girth of the tree by taking the circumference at the top and bottom, adding them together and dividing the result by two, or else measure the circumference about one-third of the way up the tree. Now a certain portion of this girth is taken up by the bark, so take off an eighth of this mean girth to allow for the bark, and then if you take a fourth of the girth thus reduced, square it, and multiply the heighth of the tree, the result will be the cubical contents of the tree. The above may be tabulated thus:—

Let g = the mean girth of the tree after an eighth has been deducted.
h = the height of the tree,
c = the cubical contents of the tree;

$$\text{then } c = \left\{\frac{g}{4}\right\}^2 \times h, \text{ or } h\left\{\frac{g}{4}\right\}^2.$$

Of course, if you take the height in feet, you must take the mean girth in feet; if in inches, the girth must be in inches.

STATISTICS FOR SAWS.

1. For sawing up of baulks, the proper stroke is 20 in. The proper number of strokes per minute equals 120. The surface cut per indicated horse-power per hour equals 45 ft. super. in soft and 35 ft. in hard woods.

2. For the sawing up of deals, the proper stroke is 20 in. The proper number of strokes per minute equals 150. The surface cut per indicated horse-power per hour equals 45 ft. super.

3. For circular saws, the best speed is 6,000 ft. per minute. Every horse-power indicated will cut 75 ft. super. in soft and 56 ft. super. in hard woods per hour.

RULES FOR FINDING THE WEIGHTS THAT TIMBER OF A GIVEN SIZE, SUPPORTED AT BOTH ENDS, WILL SUSTAIN.

1. If a weight be uniformly distributed from end to end of a horizontal beam it produces the same effect on a beam as though one half the weight were gathered at the centre of the beam.

Example: A horizontal beam, 16 ft. in length, sustains a floor 2 ft. each side of it—if the weight of floor and load that may be expected to get on it be taken as 75lb. per square foot, we should find the total load sustained by the beam to be its length multiplied by number of square feet sustained, multiplied by the load on each square foot, or $16 \times 4 \times 75 = 4{,}800$ lb. This would be equivalent to a centre load of 2,400 lb.

2. (Converse of first.) If a beam sustain a certain load at the centre it will sustain twice as much load, provided it be uniformly distributed.

3. The safe load should not exceed one-fourth or one-fifth the breaking load in bridges, or in floors subject to much vibration from moving bodies. In roofs the safe load should not exceed one-fourth or one-third the breaking load. (These precautions are necessary for two reasons: timber is injured by a load much below the breaking load, and imperfections in workmanship and materials are constantly occurring.)

4. (The safe load is assumed to be one-fifth the breaking load.)

To find the safe load that a horizontal pine beam, supported at both ends, will sustain:—

Rule.—Multiply the breadth of a beam by the square of its depth, and that product by the number 90; divide this result by the length of the beam between the supports, and the quotient will be the number of pounds in the load that the beam will safely carry at the centre. If the load is uniformly distributed it will be twice the safe centre load, and the foregoing result may be doubled to obtain the distributed load. (See rule first and second.) If any material besides pine is used, instead of the No. 90 must be used the numbers in the following table:—

Material	No.
White oak	120
Red or black oak	110
White ash	130
Swamp ash	80
Black ash	60
White beech	90
White cedar or arbor vitæ	50
Walnut	90
Tamarack	80
Spruce	90
Maple	110
Hickory	140
Rock elm	70
Locust	120
White pine	90

Example.—What will be the centre safe load of a pine beam, 4 in. by 6 in. supported in two places, and 12 ft. long between the supports?

(1) If the depth be 6 in., and the breadth 4 in., the centre load will be equal to $4 \times 36 \times 90$ divided by $12 = 1{,}080$ lb.

(2) If the depth be 4 in. and the breadth be 6 in., the

centre load is 6 by 16 by 90 divided by 12 equals 720 lb. From these examples it is seen to be always most economical to set a horizontal beam on its edge, or place it so that the greatest dimensions shall correspond to its depth.

5. To find the weight that an inclined beam (as a rafter) will safely bear at the centre distance between supports :—

Rule.—Find the centre weight by the fourth rule—that a beam of length equal to the horizontal span or spread of the inclined beam will safely sustain—divide this result by the horizontal span of the inclined beam.

Example—What will a pine rafter 20 ft. long, with 12 ft. rise and horizontal span of 16 ft., of 2 in. by 4 in., sustain safely at centre when there is supposed to be no support at its centre? If horizontal and 16 ft. long, the safe centre weight equals 2 by 16 by 90, divided by 16, or 180 lb.; dividing this result by 16, and multiply by 20, the safe centre weight is 220 lb. This would correspond to a uniformly distributed load of 440 lb. If the rafter be supposed to carry two square feet for each foot in length, the load would be 104 lb. to each square foot.

Note.—A rafter of these dimensions would need a support at the centre; in that case its horizontal span would be 8 ft. instead of 16 ft. The result would be a safe centre load of 440 lb., or a safe distributed load of 880 lb.; but this is distributed over a rafter 10 ft. long instead of 20 ft., so that on the same supposition as before the safe load becomes 41.6 lb. per square foot; a safe load for any roof.

Remark.—This rule, although sufficiently exact for ordinary purposes, and safe for ordinary roofs when the factor of safety, five, is used, must be replaced by more exact and complicated rules when very exact results are required. This is safe for all farm buildings.

6. When the dimensions of a horizontal beam that will safely carry a given load are wanted, the following rules must be used :—

The product of the breadth into the square of the depth equals the load at the centre divided by ninety for pine, or by the numbers given under the fourth rule for any other material. By assuming the depth the breadth can be found.

Example.—What sized pine beam, 16 ft. long, will safely support 1,000 lb. at its centre? $1,000 \div 90 = 77.1$, equals the breadth multiplied by the square of the depth. If we assume the depth to be 3 in., its square is 9 and the breadth 11.1, divided by 9 = 1.3.

Hence the answer is a piece 1.3 by 3.

When the load is distributed over a number of square feet, the centre load must first be found by multiplying by the number of feet and dividing by two.

7. If the beam is inclined, divide the centre load by the length of the beam. Multiply this quotient by the horizontal space, and proceed as in the sixth.

8. The amount an upright beam will safely carry when subjected to a pulling strain, can be found by multiplying the number of square inches of its cross section by the strength of one square inch.

The following table gives the safe strength of different woods :—

Woods.	Safe strength lbs. per sq. inch.
Ash	3,200
Elm	1,200
Hickory	2,200
Maple	2,000
White oak	2,000
Pine	2,000
Walnut	1,600
Poplar	1,400

9. The amount an upright post loaded at upper end will sustain can be found approximately in the same way as the tensile load; the amount per square inch should be taken about four-fifths that given in Rule 8. This is an approximate rule that cannot be relied on in cases where very accurate results are required.

These rules give accurate results with the exception of rules 5th and 9th. The results given by rule 5th are safe, and do not differ much from the true results. Those given by rule 9th for the size of posts are very near correct when the posts are of moderate length.

PERSONAL.

Mr. M. Gendron, a well-known lumberman of the Upper Ottawa, has returned to Ottawa after a successful season's operations.

A protest has been entered against the election of Mr. A. Miscampbell, the well-known lumberman and member-elect for East Simcoe.

Mr. David McLaren, the well-known lumber merchant of Montreal, has been eleeted on the board of directors of the Consumers' Gas Co. of that city.

It is with regret we observe the announcement of the death at Liverpool, England, of Mr. Robert Blackburn, of the Hawkesbury Lumber Co., of Ottawa, at the age of 66 years.

Mr. Frederick Lingham, of Belleville, Ont., has just returned from a trip to Johannesburg, Africa. Mr. Lingham is interested in lumbering and mining matters, and this fall intends to make a large shipment of lumber to Africa by way of British Columbia.

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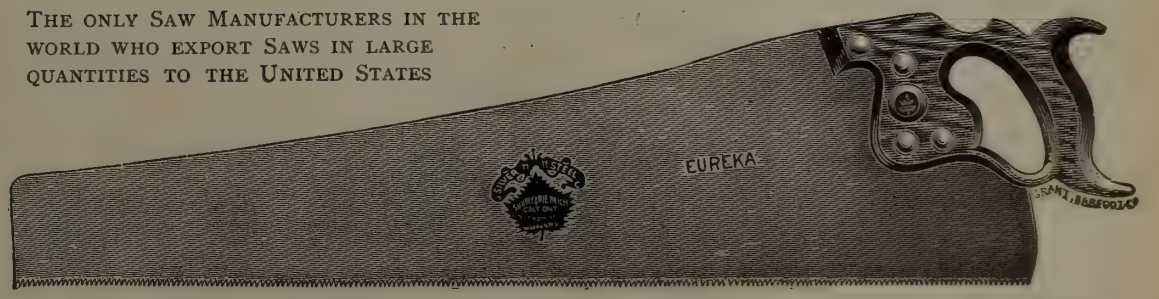

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FOR HEMLOCK, DIMENSION LUMBER, hardwood flooring, cedar shingles, pi es, sawdust, etc., write J. E. MURPHY, lumberman, Hepworth Station, Ont.

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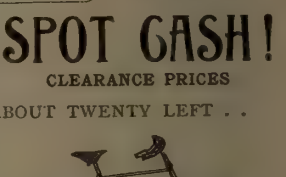

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TOWN	Railway, Express, or nearest Shipping Point	NAME	BUSINESS	Power, Style and Daily Capacity
Ottawa, Ont	Ottawa	Booth, J. R.	Lumber, Wholesale and Retail	Steam, Circular and Band Mill
Ottawa, Ont	Ottawa	Bronson & Weston Lumber Co.	2 Sawmills, White and Red Pine, Wholesale	Water, Gang and Band, 450m
Parry Sound, Ont	Utterson	Conger Lumber Co.	Lumber, Wholesale and Retail	
Parry Sound, Ont	Parry Sound	Parry Sound Lumber Co.	Saw, Shingle and Lath Mills, Pine, Wholesale	Water, Gang, Circular, Saw 90m, Shingles 70m, Lath 30m
Muskoka Mills, Ont	Midland	Muskoka Mill and Lumber Co., Head Office, Arcade, 24 King st. w., Toronto	W. Pine Lumber, Lath and Bill Stuff, all lengths.	2 Mills, Water, 1 Band, 2 Gangs and 3 Circulars.
Alexandria, Ont	Alexandria	McPherson, Schell & Co.	Cheese Box Factory, Pine, Spruce, Cedar	
Almonte, Ont	Almonte	Caldwell, A. & Son	Sawmill, Pine, Lumber, Hemlock, Hardwoods	Circular, 3m
Barrie, Ont	Barrie	Dyment & Mickle	Sawmill, Pine, Spruce, Cedar, Hardwoods	Steam, Circular, 40m
Barrow Bay, Ont	Wiarton	Barrow Bay Lumber Co., Limited	Saw, Shingle and Heading Mill, Pine, Cedar Oak, Oak Railway Ties, Paving Blocks	Steam, Circular, 16m
Blind River, Ont	Blind River	Blind River Lumber Co.	2 Saw, Sh. and Lath Mls., Pine, Hem., Bl. Birch	Stm., Band, Cir., S. 75m, Sh. 60m
Bobcaygeon, Ont	Fenelon Falls	Boyd, Mossom & Co.	Lumber, Wholesale and Retail	
Barrie, Ont	Barrie	Burton Bros.	Lumber, Wholesale and Retail	
Waubaushene, Ont	Waubaushene	Georgian Bay Consolid. Lumber Co. Hd. office arcade 24 King st. w., Toronto	Pine only.	Waubaushene mill, stm., 200m; Pt. Severn mill, water, 120m
Calabogie, Ont	Calabogie	Carswell, Thistle & McKay	Lumber, Wholesale and Retail	
Callander, Ont	Callander, G.T.R.	John B. Smith & Sons Head Office, Strachan Ave., Toronto	White and Red Pine Lumber, Bill Stuff, Lath and Shingles	Steam, 2 Circular, 80m
Collins Inlet, Ont	Collins Inlet	Collins Inlet Lumber Co.	Lumber, Pine, Oak, Ash, Birch, Whol. and Ret.	
Glammis, Ont	Pinkerton	McIntyre, N. & A.	Saw, Shingle and Lath Mill, Timber Lands, Hemlock, Pine, Lumber, Hardwoods	Steam, Cir., Saw 14m, Sh. 20m
Hamilton, Ont	Hamilton	BRADLEY, MORRIS & REID CO.	Lum., Tim., Pine, Hem., Hwds., Whol. and Ret.	
Huntsville, Ont	Huntsville	Heath, Tait and Turnbull	Sawmill, Pine, Spruce, Hemlock, Hardwoods	Steam, Circular, 25m
Hamilton, Ont	Huntsville and Katrine	Thomson, Robert & Co.	Sawmill, Pine, Spruce, Hardwoods	Steam, Circular, 4m
Keewatin, Ont	Keewatin	Dick, Banning & Co.	Sawmill, Pine, Hardwoods, Wholesale	Steam, Circular
Keewatin, Ont	Keewatin	Keewatin Lumber & Mfg. Co.	Saw, Lath, Sh. and Pl. Mill, Moving Posts, Pine	Water, Band and Circular, 100m
Lakefield, Ont	Lakefield	Lakefield Lumber Mfg. Co.	Lumber, Wholesale and Retail	
Little Current, Ont	Sudbury	Howry, J. W. & Sons.	Lumber, Wholesale and Retail	
London, Ont	London	Gordon, James	Exp. and dlr. in Am. Hwds, made to specification	
Longford Mills, Ont	Longford	Longford Lumber Co.	Saw and Plan. Mill, Tim. Lands and Logs, Pine	Steam, Band and Circular, 100m
Norman, Ont	Norman	Minnesota & Ontario Lumber Co.	Lumber, Wholesale and Retail	
Louise, Ont	Elmwood, G.T.R.	S. B. Wilson & Son	Hardwoods, Shingles, Lath, Handles	Steam, Circular, 20m.
Toronto, Ont	Warren, C.P.R	The Imperial Lumber Co., Limited	Pine	80 M. per day, Stm., 2 Cir. Saws
Toronto, Ont	Cache Bay, Ont.	Davidson, Hay & Co.	W. Pine, Lath, Shingles, Dim. Timber, Car Sills	Stm, 2 Band, Cir. & Gang, 140m
Toronto, Ont., Mill: Stony Lake	Lakefield	S. J. Wilson & Co.	Pine and Hardwood, Wholesale	Steam, Circular, 15m.
Toronto, Ont	Toronto	F. N. Tennant	Lumber, Wholesale	
Toronto, Ont	Toronto	Donogh & Oliver	Lumber, Wholesale	Com.
Toronto, Ont	Toronto	Victoria Harbor Lumber Co.	3 Saw, Shingle and Lath Mills, White Pine, Whol.	Stm., Cir., Gang and Band, 140m
Toronto, Ont	Toronto	W. N. McEachren & Co	Lumber, Wholesale	Com.
Toronto, Ont	Toronto	James Tennant & Co.	Lumber, Lath, Shingles, etc., Wholesale	Com.
Toronto	Toronto	DeLaplante & Bowden	Pine and Hardwood Lumber, Whol. and Retail.	
Toronto, Ont	Toronto	James McBain Reid.	Ry. and Ship Timber, any required dimensions	
Wiarton, Ont	Wiarton	Miller, B. B.	3 Sawmills, Lumber, Barrel Heads	Stm., Wr., Cir., Port. & Sta., 10m
Montreal, Que	Montreal	Dufresne, O. Jr. & Frere	Sawmill, Pine, Spruce, Hemlock, Hdwds., Whol.	Steam, Circular and Band, 50m
Montreal, Que	Montreal	SHEARER & BROWN	4 Sawmills, Oak, Ash, Elm, Pine, Hem., Dim.	2 Stm., 2 Wat., Band, Cir., 40m
Moodyville, B.C.	New Westminster	MOODYVILLE SAWMILL CO.	Sawmills, P. Fin, Spruce, Cedar, Hardwoods	Steam, Circular, 20m
New Westminster, B.C.	New Westminster	Brunette Sawmill Co.	Saw and Planing Mills, Sash, Doors and Blinds. Fir, Cedar, Spruce, Hardwoods	Steam, Gang and Circular
Canterbury, N.B	Canterbury Stn.	James Morrison & Son	Sawmill. Pine, Hardwoods	Steam, Circular, 38m
Bridgewater, N.S	Bridgewater	DAVIDSON, E. D. & SONS	5 Saw, Shgle. and Lath Mills, Pine, Spr., Hwds.	Water, Circular and Gang, 200m
South River, Ont	South River, G.T.R.	South River Lumber Co., Ltd.	Pine, Spruce, Birch, Hemlock, Shingles	Stm., Cir., 40m, Shingles, 35m, Lath, 15m

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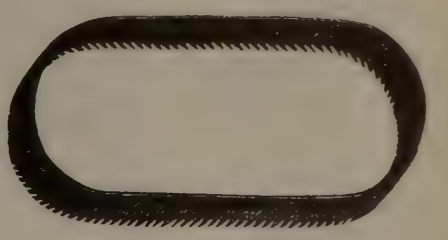

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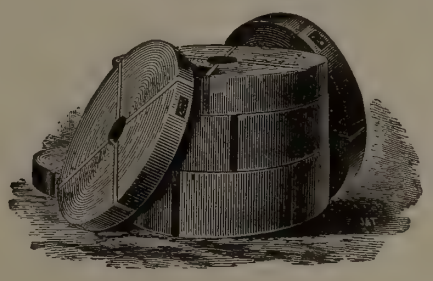

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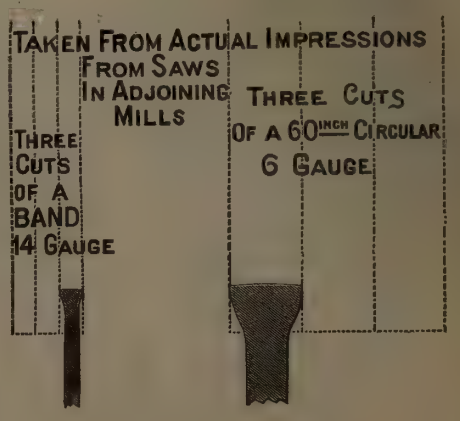

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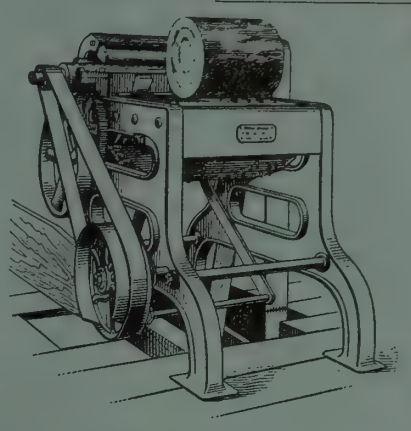

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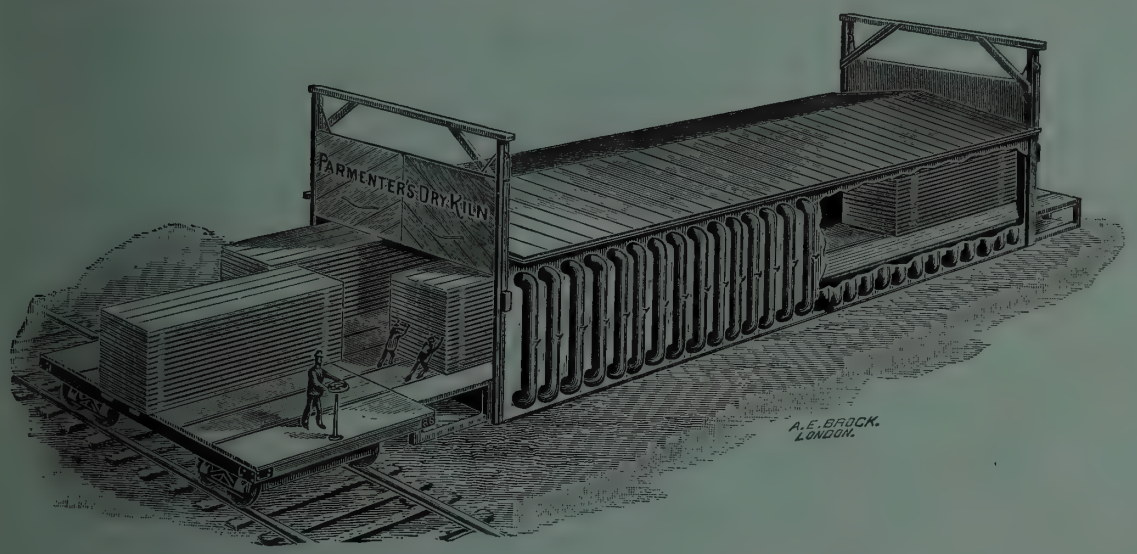

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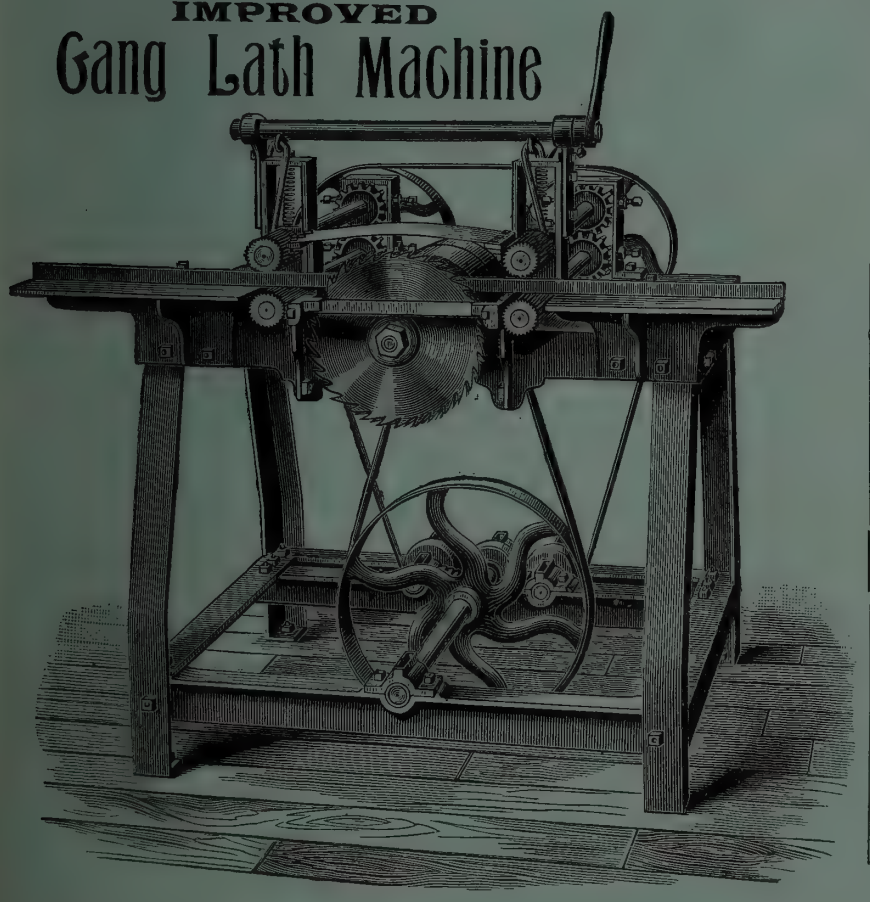

BY means of the hand lever shown at top of machine the feed can be stopped instantly. The machine is provided with supports for the lath between the saws; these supports prevent any short pieces of lath from breaking off and becoming stuck between the saws. This is the principal cause of so many Lath Saws becoming heated and ruined.

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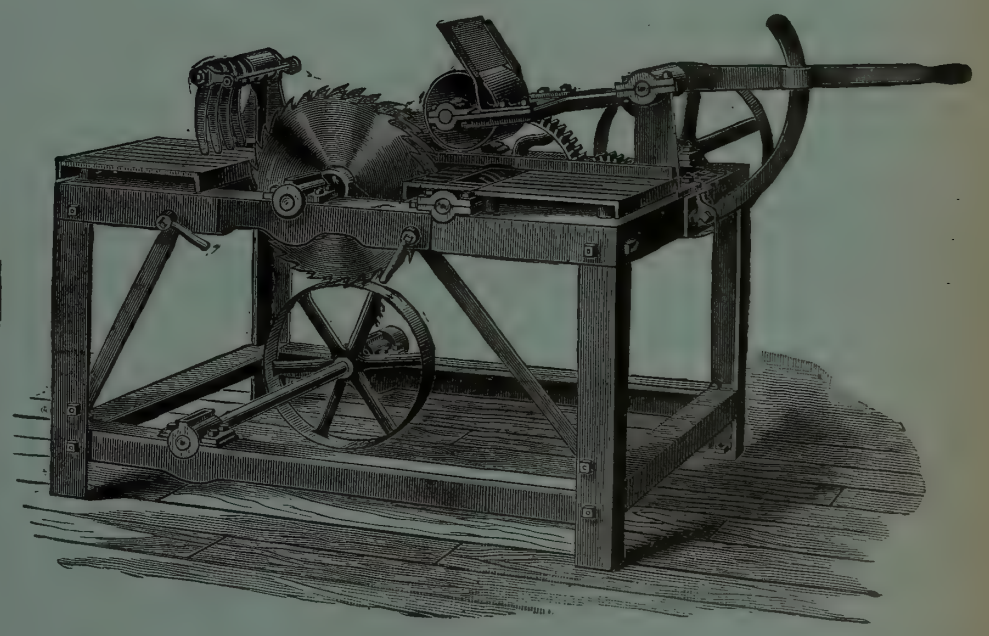
FITTED WITH TWO OR THREE SAWS



HAS solid iron frame, geared feed roller, and heavy binding roll of large size so it will adapt itself to rough or uneven slabs. Heavy steel saw arbor with three bearings. The outer bearing is made with a slight taper, and the box is easily removed for the purpose of changing saws. The drive pulley is 10 inches diameter, 13 inches face. Weight, 1,200 lbs. Speed of saws, 2,500.

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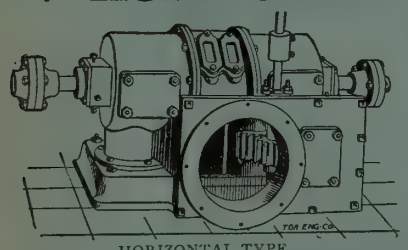

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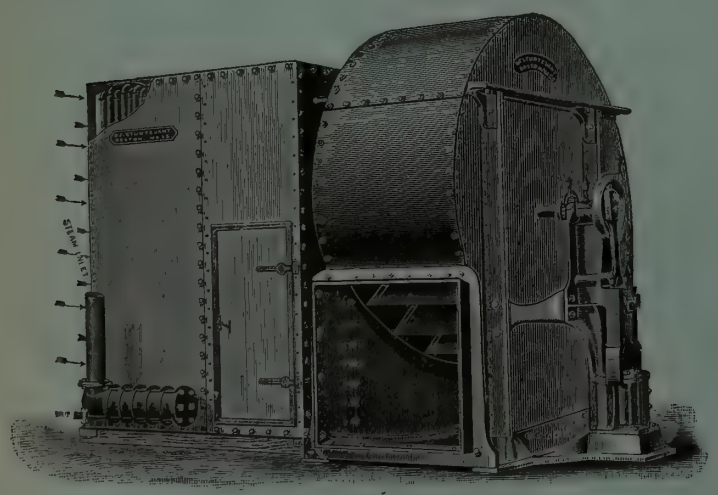

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WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

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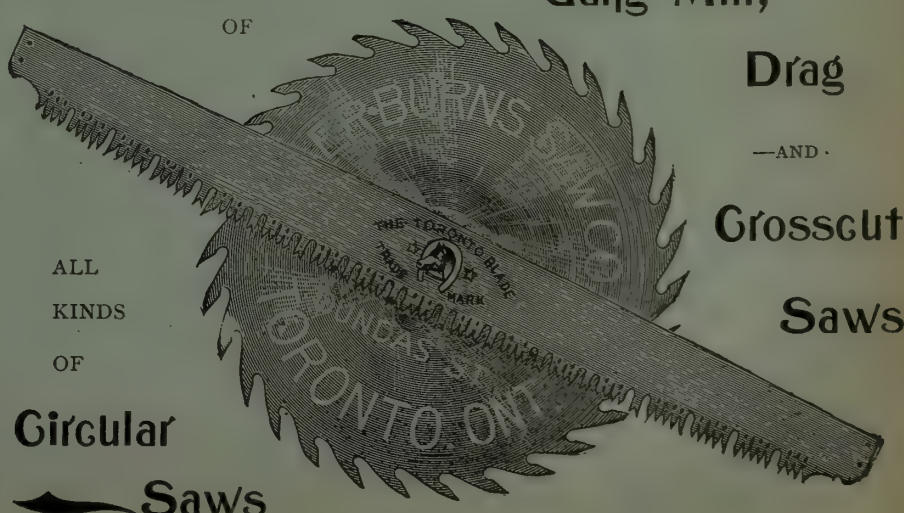

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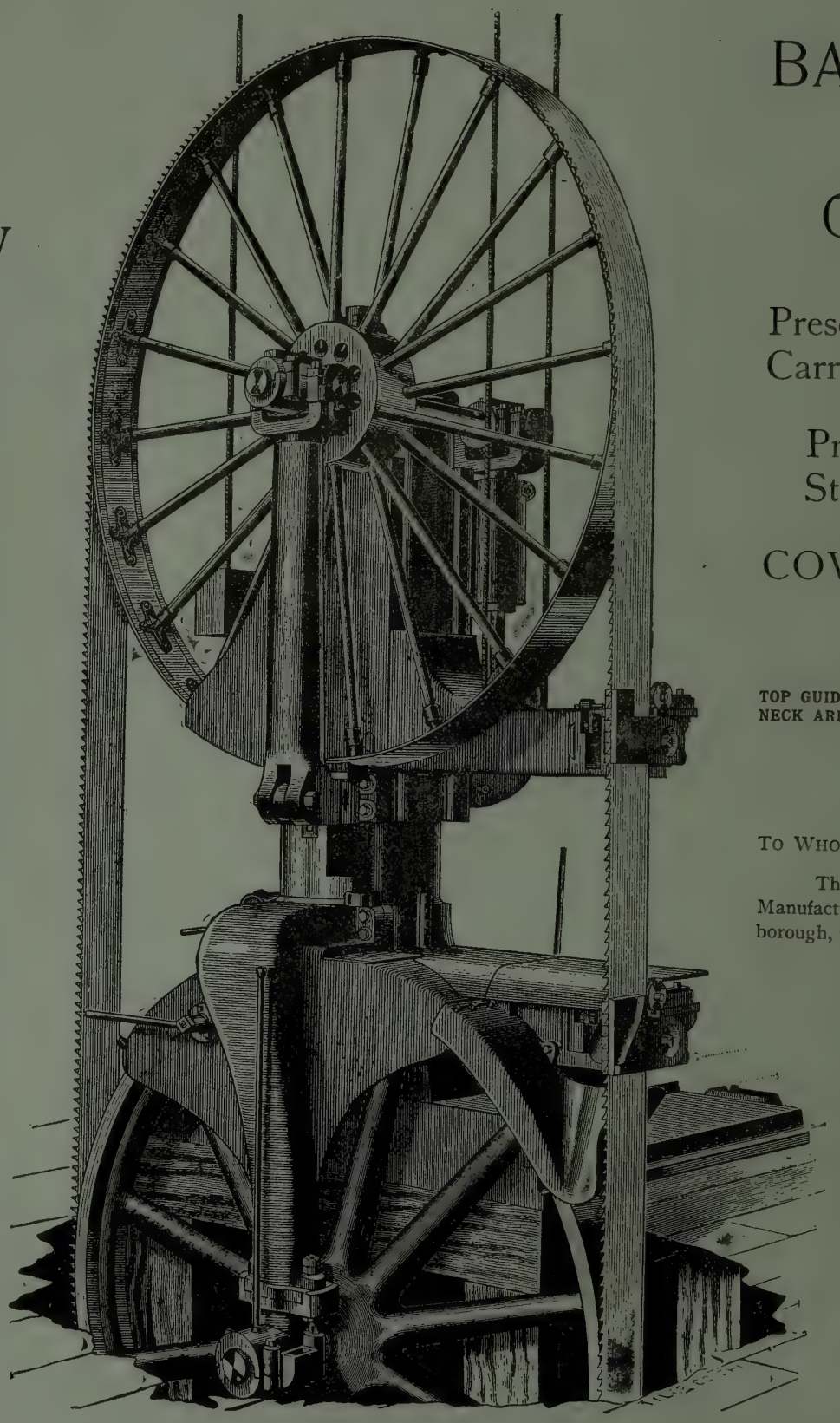

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THE CANADA LUMBERMAN

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BY THE WAY.

IT becomes interesting to study tariff matters in their relation to various departments of the lumber business. Shipments of lumber are not confined to white pine, whether in the log or the more finished state. But there are classes of lumber that are effected in different ways, according to locality sometimes, and also as a result of local conditions, existing at particular times and seasons. For example, we find lumbermen in New Brunswick divided as to the expected effect of free lumber. Our New Brunswick letter mentions that one benefit to Canadian trade, will be to make it necessary for American lumbermen, who have hitherto operated in Maine, to transfer their operations to New Brunswick. On the other hand we find the trade done on the St. Croix, which has Calaix Me. on one side and St. Stephen, N. B. on the other, connected by a bridge and an electric street railway, raising the question just how these particular conditions will effect them. Heretofore at New Brunswick, lumber has been taken to St. Stephen on the cars and transferred on rafts to Calaix to be loaded on American schooners. From Jan. 1 to Aug. 31 this year 1586 cars were rafted at St. Stephen and most of it went to Calaix ; and this represents only about half what it would handle in the same time in an ordinary year. The belief of some is that much more will now be shipped from the St. Stephen wharves while others hold that Calaix shipments are made to fill orders and the Canadian are generally mixed cargoes, and therefore likely to be distributed as before. Besides entry fees and pilotage dues on foreign vessels at St. Stephen would be an offset in rafting to Calaix.

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Again we come to the box shook industry in Michigan. Shooks for flour and sugar barrels, the Michigan people say, were not placed on the free list although staves and heading were. The Tribune of Bay City, figures out the situation like this : The Ottawa lumber district is about 300 miles nearer New York market than is the Saginaw Valley and in this geographical position Ottawa manufacturers have a freight charge of $2.50 a thousand on box shooks over local producers. As matters stood over the McKinley tariff the Ottawa manufacturers were confronted with the 35% ad val duty when they brought their products into the market of the metropolis. The lowest valuation at which box shooks could be entered is $10. a thousand, which brought the duty to $3.50 a thousand, thus making a net protection of $1. a thousand to the American manufacturer. In all these matters there is a good deal of speculation, and time alone will show how things will work out.

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On this matter of shooks an American lumberman has put the case in this shape : "The Gorman bill as originally drawn places box shooks on the free list, and even on the final revision an ad val duty of only 20% was secured. The advantage which the Ontario manufacturers enjoy from their closer proximity to the New York market remains, of course, on the same figure $2.50, while this is not now counterbalanced by the $2. ad val duty which is all the Canadian must pay. Instead of affording a protection to our Michigan producers the Gorman schedule of the new tariff law really discriminates in favor of the Canadian who goes into the New York market, and this discrimination amounts to 50c. a thousand. While this is a nominal protection of 20% duty, the actual effect of the law is one-sided free trade in which Canada alone is the gainer." The clause in the new tariff under which box shooks are enumerated is as follows : "Casks and barrels, empty ; sugar-box shooks and packing-box shooks, of wood, not especially provided for in this act, 20% ad val." The conclusion of the Michigan dealer is that hundreds of millions of staves and heading for sugar and flour barrels manufactured in northern Michigan have no protection at all.

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Stave manufacturers in Michigan fear that the placing of staves on the free list will place them at a decided disadvantage in competition with Canada. The duty under the McKinley bill was only 50c a thousand, and at that time competition was keenly felt. John C. Liken, one of the most extensive manufacturers of staves in Michigan says, that the only way in which Michigan manufacturers can meet Canadian competition is to reduce wages and the price paid for stave timber. The sugar trust, which handles the greater portion of the Michigan product seems to have had things pretty much its own way, not only as to sugar, but in having staves and heading put on the free list.

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Then if we go to Quebec the spruce industry comes into consideration, and whilst it is believed that trade will be benefited by the change in tariff, yet there is as a stumbling block to complete progress in that branch the heavy duties that continue on pulp in the chemical shape. From Quebec we jump to British Columbia and lumbermen are not yet certain just how free trade may result in providing competition in shingles with the Washington territory district. Taken altogether the question is an interesting one to every thoughtful lumberman.

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Some of the various conditions that will have their influence in shaping trade under the new tariff are suggested in the specially contributed articles in another page from Mr William Little, of Montreal, and Mr. C. H. Clark, formerly of Barrie. It will be interesting to read these along with other views that are given in the LUMBERMAN, as showing the different circumstances that shade the difierent branches of trade, when under differing conditions.

HARDWOOD AFFAIRS.

JOHN N. SCHATCAERD, of Buffalo, a prominent dealer in hardwoods, has said that he did not expect any change in the condition of the hardwood business under the new tariff. "After the tariff bill had been passed," said he, "we tried to make prices with the Canadian dealers on the basis of the new tariff, but we found a disposition on the part of the Canadian lumbermen to add to their prices the $2 taken off by the tariff which does not enable us to get lumber any cheaper than before. Whenever we have made prices on lumber in Canada, we have made it the same delivered in Buffalo as the price of lumber brought from Ohio, Pennsylvania or the west and delivered here by the producer. The Canadian, therefore, paid the tariff. Now he seems disposed to take advantage of the reduction of the tariff."

A writer in Hardwood makes the statement that at the present time the state of Minnesota probably possesses a larger amount of soft maple than any other state in the union. The whole wooded section of the northern half of the state has it in more or less extensive bodies often mixed with other hard woods as a scattering tree and sometimes even with white pine. Across the border in Manitoba the same wood is to be found in large quantities. The wood varies somewhat in color and texture, but is generally lighter in color than rock or hard maple, and is much softer and lighter in weight, and decays quickly under exposure. The wood takes a good polish which it retains, and does not grow dark with age. It can be used for many purposes for which hard maple is used, such as flooring, furniture and cabinet work, and in panels makes a light dainty house finish. For this purpose, however, it answers best in the form of thin veneers. It is excellent for butter tubs, or for any such purpose where an odorless wood is desired. It is a good material for flour and sugar barrels both for staves and heading. It is valuable for many kinds of turnery, such as handles for household utensils and even for some of the utensils themselves. But its main use must be for cheap furniture, for which it is especially adapted.

That little, but ably edited journal Hardwood, from which we have already quoted has been discussing the effect of free lumber on the lumber trade of the United States. Its opinion is that the people will not get any benefit from the change in tariff : "That the wily owner of Canadian stumpage will simply add $1 duty, which he has been paying since the passing of the McKinley bill to the price of his stumpage." Of hard woods it says : "These will stand less chance of being affected than pine, for the list of Canadian hardwoods is a limited one, red oak and hard maple being the most important. Birch and elm are already imported in considerable quantities, but at present the bulk of the stock on the other side is held by American dealers, who expect to make an extra profit of about the amount of the old duty. There will be some increase in the importation of mahogany, rosewood and other fancy foreign woods."

UTILIZING DISTANT WATER POWERS.

THE utilization of water power, says a writer in the Age of Steel, probably ante-dates written history, the interval between crude and primitive methods and the latest triumph of engineering skill at the Niagara Falls covering the entire period of human progress and civilization. Here and there where the bones of extinct races have mouldered into dust and centuries of time have been silent and blank, traces have been left of man's attempt to utilize the running stream and the falling cataract. Down to our own immediate times and in sundry fashions and places the water wheel and the dam have been familiar objects.

It has, however, been left till the advent of electricity for the real value and scope of this force to be generally recognized. By this means the conveyance of power to great distances has been made possible, its service being no longer limited to immediate localities. It is in this sense that natural forces are multiplied by extending their area of service, and each new science as developed becomes the handmaiden of the rest. In fact, none are complete until all are a unit, and till the last is added the rest are immature. Electricity promises to be one of the most potential of modern forces in making this fusion, and in the wide distribution of energy from waterfalls may practically revolutionize industrial conditions. In this country, where enterprise is alert to any and every advantage, the revival of interest in water power is spontaneous and general. There can be no doubt that this revival of interest will continue and keep pace with our industrial progress wherever water power is economically available.

A SUGGESTION RE. PULLEYS.

THE editor of the Engineering Magazine says that the flesh side of leather is the best to place against the pulley when such leather is used as a belt, notwithstanding this to be contrary to the most usual practice, but this general practice is due to the ideas of belt makers rather than to those of belt users. Traction, he says, is greater than where the surface is elastic and has a clinging tendency than where it is hard and smooth. This is because this kind of surface clutches the pulley more securely by being pressed into all the pores and interstices of the metal or varnish.

FUTURE OF FREE LUMBER.

EXPECTED INFLUENCE ON THE CANADIAN LUMBER TRADE—TIMELY CONTRIBUTIONS FROM MR. WM. LITTLE AND MR. C. H. CLARK.

THE contributions which follow on the change in the lumber tariff in the United States were suggested by a letter of enquiry sent out a month ago to various leading lumbermen in the Dominion.

Mr. Wm. Little, of Montreal, is a well-known contributor on lumber matters, and years of study of the lumber question lends interest to anything he may write, even when everyone may not agree completely with his views. Mr. C. H. Clark, though writing from Duluth, Minn., where for a few months past he has been located, is an old Canadian lumberman, having been for many years identified with the firm of Burton Bros., of Barrie. He has travelled largely throughout leading lumber centres in the United States, a circumstance that ought to enable him to view the present question from a somewhat broad and liberal point of view.

VIEWS OF WM. LITTLE.

I beg to say in reply to your questions:

1st. What is likely to be the general effect of the removal of the duty upon the lumber industry of Canada?

If our lumbermen act with any degree of prudence, I see no reason why the general effect should not be beneficial to the Canadian lumber industry. I believe this, notwithstanding I am fully aware of the disastrous effects to the lumber trade occasioned by overproduction following almost immediately after the Reciprocity Treaty went into operation in 1854—which stimulated Canadian production to an extent that Canadian pine lumber, which for years previous thereto sold at about $11 a thousand feet in the Buffalo market, paying $1 import duty, could with difficulty be sold at $7 a thousand feet three years after, in 1857, under free imports. My reasons for not anticipating any such evil effects at this time is on account of the change that has since taken place in the amount of the American production. The comparative smallness of our present manufacture for export to the United States, which is now, even in white pine lumber, barely five per cent. when compared with their larger home production, makes our exports a less important factor than forty years ago, when our competition was almost wholly with the limited product of New York and Pennsylvania—Michigan, Wisconsin and Minnesota, now the great sources of supply, not at that time producing to any great extent for the eastern markets. The greater scarcity of white pine and spruce timber both here and in the United States will also do much to prevent any such overproduction as then took place; so that the effect should be beneficial not only to Canada but to the American lumber trade, by showing American lumbermen that in late years they alone are responsible for any disasters arising from overproduction—which has been the great bane of the lumber trade in both countries.

2nd. To what extent will the removal of the lumber duty tend to stop the exportation of logs from Canada to the United States, and induce the manufacture here?

I regret to have to say that I do not think it will have any appreciable effect in restricting the export of pine saw logs from the Georgian Bay district to Michigan. The exceptional advantages possessed by the larger market at milling points in Michigan, such as Bay City, Saginaw, Alpena, etc., where purchasers can supply themselves from an assorted stock with what they require at any time, and have it sent forward by the cheaper water and especially railway service at all seasons, is of itself a great advantage. Then the comparatively small cost and trifling risk in towing logs to mills already established there of the best description, coupled with the value of the offal from the logs for fuel in the production of salt, equal to almost enough to pay the cost of sawing, will tend to cause the continuance of the export of pine logs from that district till the pine timber there is exhausted. It must also be considered that the lower peninsula of Michigan is now so completely stripped of white pine timber that it must for the future require stock from Canada, even for its own home consumption. Some few American firms having lumber yards in Ohio and New York States may manufacture pine lumber in Canada, as they can then stock their yards direct from their Canadian mills, and also a few mills may be built along the railway lines, but in my opinion there will be no falling off in the export of pine saw logs till occasioned by a scarcity of pine timber. It may, however, stop the export of spruce logs intended for lumber from Quebec and the eastern provinces, but spruce pulp wood, which is a growing industry, will be exported in steadily increasing amounts, till our people insist, as they no doubt soon will, that free pulp wood shall be conditional on free pulp.

3rd. Is free lumber likely to lead to the erection of new mills in Canada?

My opinion is that, in so far as the older provinces and eastern Canada are concerned, except along railway lines, not many new mills will be built. The supply of saw mills in these sections is now fully adequate for the existing stock of timber. On the Pacific coast I would anticipate some increase in mill building, as the character of our eastern pine is deteriorating so rapidly in quality that the cheapest and best material to be had in the Montreal lumber market to-day for flooring, ceiling, and general house trimming is clear fir lumber from British Columbia, while for large and long timbers it must soon be our chief source of supply.

4th. Is it probable that under the new conditions we should witness an expansion of the planing mill business in Canada? Is our planing mill equipment and capacity sufficient to cause any considerable expansion of business? In what position do we stand as to planing mill equipment and methods to compete with the planing mills of Michigan and the Eastern States?

When answering these questions in a general way, I take occasion to say that putting dressed lumber on the free list is the only thing that should at all reconcile us in permitting the free export of saw logs, otherwise I should not consider we were getting anything like fair compensation under the circumstances; as if Canada is to derive any considerable benefit from her timber it must be in its manufacture at home to the greatest possible extent. Foreigners now own such a large amount of our best timber (thanks to the ignorance and indifference of both the Government and people of Canada on this subject) that they will realize the chief benefits to accrue from the rapid advance that must at once take place in the value of timber property, and unless we desire some further advantages than the trifling amounts to be paid the provinces in the way of stumpage dues, the bulk of the value of our forests will be lost to Canada. While I have no doubt that considerable pine lumber will be dressed in Canada, the bulk of our pine will continue to go out in the shape of free logs to Michigan, and the sawing, planing, and all other advantages accruing therefrom go to the benefit of our American friends. And by far the larger quantity of sawed lumber will still go out in the rough, as many of the best millers prefer having their pine lumber especially dressed on the spot where required, as the injury to pine lumber in frequent handling after being planed would more than counterbalance any saving in the expense by having the lumber planed here before shipment. I should, however, anticipate that a large proportion of the spruce lumber, especially that intended for flooring, would be planed at the mills in Canada, as is now largely done at the mills in northern New York; for spruce being a harder and tougher grained wood is not so easily injured by handling after it is dressed. You are of course aware that there is some doubt as to what construction may be put upon the term "lumber dressed," and the question whether flooring, ceiling, mouldings, etc., will be admitted free will depend on the decision of the U. S. Secretary of the Treasury. That all these were intended to be included under the term "lumber dressed" is evident from the discussion that arose in the Senate, when Senator Allen, of Nebraska, had dressed lumber inserted in the bill—some Republican senators objecting and insisting that under this term even doors, sashes, blinds, etc., would be admitted free. As the clause reads "sawed boards, plank, deals and other lumber, rough or dressed," I think it can be fairly claimed that flooring, ceiling, mouldings, etc., are included under the term "other lumber," as there are all descriptions of lumber in the rough, and will be now entitled to free entry whether rough or dressed.

You will also observe that, in accordance with the petition addressed to the Hon. Mr. Secretary Carlisle by Mr. John Charlton "in behalf of the Michigan lumber interest," the Charlton proviso was substituted in the Senate bill for the Wilson proviso as it passed the House. This change is greatly to be regretted, as it will be sure to cause irritation in this province, and may lead to trouble, as our people cannot reasonably be expected to submit for any length of time to the unfair position of permitting the free export of pulp wood while the U. S. government continues to exact duty on Canadian pulp.

The greatest good I anticipate to arise from the removal of the lumber duties is in the effect it will have in causing the people of both countries to become enlightened as to the scarcity and consequent value of standing timber, as the removal of the lumber duties removes all incentives for misrepresenting the true conditions of the forests, which has hitherto been persistently done by interested parties, lest a correct knowledge of their condition might lead to a demand on the part of the American public for the removal of the lumber duties.

Montreal, Que., 1894.

VIEWS OF MR. C H. CLARK.

In reply to your questions: (1) What is likely to be the general effect of the removal of the duty from the lumber industry of Canada?

I believe the effect will be to increase the number of saw mills and wood-working industries of Canada, and enhance the value of standing timber of soft and hard woods equal to about half the duty deducted, also increase the price of white pine lumber for shipment, and this will increase the price of white pine lumber to Canadian consumers, which will result in creating a greater demand for hemlock and Norway—which in its order will slightly advance. Basswood, cedar, and all kinds of hardwood will share in the general increase in proportion to the demand.

(2 and 3). To what extent will the removal of the duty tend to stop the exportation of logs from Canada to the United States, and induce the manufacturing of lumber here and erection of saw mills?

In some cases, where Michigan lumber manufacturers have only a limited quantity of standing white pine timber, and others, whose white pine timber is situated a short distance from Michigan, they will probably continue towing their logs. There was an argument in favor of towing logs to Bay City and Saginaw and some other points a few years ago, viz., that a lumber purchaser could go there from most any point in New York State and have 200,000,000 feet to select from and return home in two or three days; whereas to see half the same quantity on Georgian Bay would require ten days to two weeks. But lumber business has changed since then, and is going to change more. Now, Saginaw and Bay City do not sell or ship by hundreds of millions as much as they did then, from the fact they have not got the timber to produce it, and they cannot secure and place it at their mills with any degree of safety and economy. They want slabs there to manufacture salt, and they want cull and box lumber to manufacture boxes, but it will not pay to tow 1,000,000 feet of logs to get the slabs, mill culls, and box lumber. Millions of box and cull lumber are now shipped to Bay City from Lake Superior parts, and now that the duty is off, the same grades can be shipped from Georgian Bay mills at $1.25 per M, which to tow would cost $2.00, including losses of logs. And after the log has been towed to Michigan and manufactured into lumber, it is not where it is wanted, as much of it is shipped to Detroit, Toledo, Cleveland, Erie, Buffalo, Tonawanda and other places. These same logs could be manufactured into lumber and shipped to the same places and save the $2.00 paid for towing, as there is no duty now. A few years ago there was only one line of steamers running on Georgian Bay. It then took ten to twelve days to see the lumber, but now there are two lines of ten or twelve first-class steamers calling at different parts, and a buyer can see the lumber he requires in three or four days. Another thing, Canadian lumber will sell without passing it through Michigan and breaking a bottle of wine and "bow" over its christening. Aside from the above, when parties have large quantities of timber tributary to Georgian Bay, they will find it to their interest to have the same manufactured

into lumber there, and this will necessitate the construction of new saw mills and starting into life many mills now idle at Midland and other places. In fact I know of parties now who are figuring on starting up certain mills and building a new one to cut in 1895. In proportion as lumber is sold to go south or to Lake Erie and Lake Ontario ports, or the English market, in that same ratio it will be an advantage to have the logs manufactured into lumber in Canada in preference to towing to Michigan by at least one dollar and fifty cents per M, which on 200,000,000 feet means $300,000, while an outlay for a two band saw mill and plant would not exceed $45,000 to $50,000. As a matter of fact, the whole profit is confined within a two dollar margin, which would be consumed in towing and risk, and lumber can be manufactured fifty to seventy-five cents per M cheaper in Canada than in Michigan or this part of the country.

(4). Is it probable that under the new conditions we shall witness an expansion of the planing mill business in Canada?

The success of a planing mill business in Canada for export depends largely upon the railroad companies; the keystone of the arch is in their hand, which is often held with an iron grasp. They can and often do run the country, but they cannot run a planing or saw mill; neither do they want to. All they ask is to own the other 'fellers' and let them run the planing mill output, the same as they allow manufacturers of lumber, shingles, lath, pulp wood, railroad ties, telegraph poles, cordwood, the farmer's oats, wheat, and agricultural crop, and miner's product generally, to pay the heavy shot. Now, a planing mill will not survive long under this kind of treatment, hence the necessity of securing rates that will enable them to meet competition. All things being nearly fair or equal, as far as railroad companies are concerned, there is no reason why planing mills should not be started and successfully run at Owen Sound, Collingwood, Midland, Victoria Harbor, Waubaushene, Parry Sound (if they can get a railroad), Peterborough, Lindsay, Brockville, Hull, Trenton, Deseronto, and many other places in Ontario and Quebec generally. The nearer the planing mill is to where the lumber is cut the better; dressed and finished lumber from most of the above places can be shipped in cars to the State of Maine, New Hampshire, Vermont, Massachusetts, Connecticut, New Jersey, Rhode Island, Pennsylvania, New York, and other places—the field is unlimited. But you will find some other gentlemen there. It is only a question of understanding the business—money, low railroad rates, and pluck—you must have this combination or bust.

(5). Is our planing mill equipment and capacity sufficient to cover any considerable expansion of business?

I do not think the planing mills generally in Canada, from what I have seen, are as fully equipped and of the capacity necessary for an extensive volume of American trade. As they have not had any export trade, it is not reasonable to suppose that they should be fully prepared for it. Still, with the quietness of the times, the planing mills would be able to turn out millions of dressed and finished lumber for export, provided they are advantageously situated.

(6). In what position do we stand as to planing mills' equipment and methods to compete with the planing mills of Michigan and the Eastern States? (and I will add Wisconsin, Minnesota, and Chicago).

From all of the above States and Chicago, planed and finished lumber is sent—north, west, south and east, as far as Boston. I have seen many of the large, as well as smaller planing mills in Michigan, Wisconsin, Minnesota, and other places within the last five months. The capacity of some of the larger mills runs from 100,000 to 200,000 feet per day, or three to six million feet a year, and they do extra smooth, true, good work. Some have store room for dressed and finished lumber 100 feet wide by 600 feet long, with plenty of room for 30 cars to be loaded. At the same time the sheds extend to car track both sides, which protects the lumber from rain and storm. In all the well organized mills the machinery is strong, large and heavy, and in many cases have three to nine dry kilns. This enables them to fill orders with dispatch, which is a great secret of success in planing mill car trade. They employ first-class men and pay good wages, paying special attention to the grading of the lumber from the time it is sorted in the yard until it enters the car. As a rule it is intended to give to the buyer as good lumber as he ordered, if not a little better. No attempt is made to slide in an inferior piece by any responsible house. In no case do you purchase a "pig in the poke." They take great pride from the manager all along the line, until the lumber is in the car and shipped, in doing their work good, and a little better than any other mill. They do business to keep their customers, and Canada will have to work hard to take them away. I might mention some of the planing mills that do good work: The Penokee Lumber Co., Morse, Wis., one of the finest and most complete in the United States; Montreal Lumber Co., Gile, Wis., near Hurley; Oskosh Log and Lumber Co., Coate, Mich.; Peyters, Kimball & Baker, West Superior, Wis.; Cranbury Lumber Co., Duluth; Scott & Holston, Duluth; N. Nelson, Cloquet, Minn., extra large; J. R. Davison, Phillips, Wis., extra large; Knox Lumber Co., Ely, Minn. From what I have seen of the planing mills in Canada, they are generally constructed too light and cheap, the machinery not large and heavy enough to stop the vibration when running fast, and two or three machines intended to do all kinds of work; shafting and hangers too light, and belting too thin and narrow. The result of this is, you cannot produce first-class work, true, smooth and even finish, presuming knives and other parts are in order. There is no reason why as good planing mills and as many of them as wanted cannot be constructed and operated successfully in Canada as the United States, and as good men to run them; though it would be advisable to engage inspectors of lumber who are accustomed to grading for the market the lumber is intended for.

(7). What importance do you attach to the statement positively made by Michigan and Tonawanda lumber manufacturers, that the effect of the new tariff will be to force American planing mill men and box manufacturers to transfer their business to Canada?

I think there is more truth than poetry in their statement, and they will find it more so than they anticipated. One day they did not want free lumber; the next day they purchased a pine tree; the day after they wanted lumber free. And now they are to have it free in all conceivable shapes and they don't want it. The next day they commenced kicking and will continue this exercise until they have elevated all the Democrats out of Congress and Republicans have come in. There can be no doubt that allowing planed and finished lumber to enter the States free will have an injurious effect on the planing mills in some parts of the States, and cause transfer of mills to Canada or building of new ones there. Many of the planing mills here are situated in connection with saw mills and are likely to remain so and take their chances in competition with Canadian planed lumber. They know the market; the Canadians have it to learn. They believe the Republican party at the next Presidential election will be returned and return the duty on dressed and planed lumber. And with this change likely to take place, many who would have built planing mills will wait—hence not as many mills will be constructed as there would be if the free duty was more permanent or definitely settled.

Duluth, Minn., 1894.

THE FATIGUE OF METALS.

THE metallic parts of machines that are in constant use if they are not fully strong enough for the work required of them, undergo what is known scientifically as fatigue. In metals there is a point in their resistance to pulling, bending or crushing which is known as the elastic limit. Beyond this limit, if continued in use, permanent strain begins. When machines are submitted to this limit of strain if it is not kept up too long, they may be restored to normal condition, just as a muscle is by resting. If the strength and power of a machine is fully equal to the task imposed upon it, it does not undergo this fatigue and the use of it may be kept up continuously until impaired by friction. The resemblance in this particular to the muscles of man and other animals is very striking.

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A CHAPTER ON FRICTION.

FRICTION is not a force in mechanics, it is a resistance; a passive resistance to motion, writes F. J. Moster, in the Wood Worker. It is the tendency of force to produce motion, whereas the tendency of friction is to destroy motion. Nor is the increase of friction between two surfaces in contact properly the amount of force necessary to produce motion, but the amount of pressure necessary to balance the friction and bring the body to a state of indifference to both rest and motion. Yet we use friction to transmit force, and it is sometimes convenient to speak of it as the force itself.

All surfaces, however highly polished, contain minute projections, hence when pressed together the asperities of the two surfaces become to some extent interlocked with each other and produce resistance to motion—and this is friction. The whole amount of friction stated in pounds of resistance, is the product of two factors. The first of these factors is called the co-efficient of friction. Co-efficient, as an adjective, means operating together; as a noun it implies co-operation—a factor in multiplication. The co-efficient of friction is a constant number which has been determined by experimenting with substances of different kinds and with surfaces in various conditions. Scientific men have made these experiments and tabulated the results of their experiments, so that now, when the practical mechanic has to solve a problem in friction, he refers to one of these tables for the co-efficient to meet the case. Oak against oak has a co-efficient varying from ·975 to ·064, according to exposure of grain and quantity and quality of lubrication. Iron against iron has a variation in like manner from ·314 to ·064. Between these two extremes in the use of iron I find six other co-efficients, so that adding the eight together the average is ·148. This is for sliding surfaces; a revolving shaft requires a different co-efficient.

I want to be sure that I make clear the exact use of this co-efficient of friction. I said it was a constant number and so it is for the same conditions. In casting the interest on $100 at six per cent., we multiply by ·06, and that multiplier is the co-efficient in the problem; it is a constant number for that rate of interest. But if we change the rate of interest to five per cent., then we change our multiplier to ·05, and that becomes the constant number or co-efficient for all sums of money at that rate of interest. So the co-efficient of friction might be called the rate or amount of friction that prevails with certain surfaces under given conditions of smoothness and lubrication. Then multiplying the total pressure by this rate of friction gives the amount of resistance in pounds—pressure being the same factor in computing the effect of friction.

Mill shafting in these days does not often run on iron surfaces, the boxes being lined with babbitt metal, but I have no table at hand that gives the co-efficient for an iron shaft running on babbitt metal; but on bronze I have. The co-efficient is ·251, which will answer our purpose for illustration. Suppose a three inch countershaft with two belts each in the same direction, 1,200 pounds each. This will give 2,400 pounds belt tension. Let the weight of the shaft and pulleys be 200 pounds, making 2,600 pounds pressure on the bearings. Inertia and atmospheric influence have nothing to do with the case, I think. Now co-efficient of friction ·251, pressure 2,600 pounds, what is the resistance in pounds? 2,600 multiplied by ·251 equals 652.6 pounds as the effect of friction. To reduce this to terms of horse power and determine its proportion to the whole of the driving force, we must make further calculation.

Suppose the driven pulley to be two feet in diameter and making 150 revolutions per minute. This will give a belt velocity of 942 feet per minute. Then, 942 multiplied by 1,200 (driving force) equal 1,130,400 dividend by 33,000 equals 34-horse power and an insignificant fraction as the amount of driving force.

The shaft is only three inches diameter and therefore does not move with the velocity of the belt on the pulley. The surface of the shaft moves only 118 feet per minute, hence we have 652.6 pressure multiplied by 118 feet equals 77,006.8, divided by 33,000 equals 2.333-horse power as the effect of friction. This is the theory of friction with all things perfect, but it is quite likely that in practice (fair practice, too) the friction would amount to one-eighth of the driving force.

THE CANADA LUMBERMAN
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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

WHY NOT?

THE question has been asked the LUMBERMAN within the past few days, why do not Canadian lumbermen organize themselves into an association? There is nothing new in the question. We have heard it over and over again, as an oft told tale. But the fact remains the same, our lumbermen do not organize, and whilst almost every business in the country can claim its organization, the lumber business, though one of the most extensive, stands out as a remarkable exception. A great meeting under the management of the United States Lumbermen's Association was held at Denver, Colo., within the past fortnight, while in Kansas, Alabama, Wisconsin and elsewhere United States lumbermen seem, for the past month, to have done little else than meet in their annual conventions.

It is quite possible to overdo this organization business. However, we are not running in that direction in Canada just now. It is not possible for anyone to read the reports of these meetings in the country to the south of us without coming to the conclusion that it has been a good thing for lumbermen, as individuals, and for the lumber trade as a whole, to have met together in this manner.

We are not without questions in the lumber trade in this country that call for the unanimous thought and action of the cleverest heads in the trade. There are problems in connection with the trade that are coming to the front all the time and light could be thrown on these by papers or addresses, that, there can be no doubt, could be prepared with credit and ability by Canadian lumbermen.

Not least of the benefits to come of organization of men engaged in the same line of trade is the knowledge each is able to obtain of the other. It has not been said that there is any large amount of cross-pulling among the lumbermen of any particular section of the country, and yet a remark made by a local lumberman a few days ago is of itself a good reason for the trade coming together. Asked how prices for lumber prevailed in Toronto, this lumberman answered, "Everybody has his own price." Now a healthy trade cannot be done when there is not uniformity in prices for the article sold, and in a product like lumber, with the market in a healthy condition, and the product itself one that is not on the decline, there can be no reason for prices being at sixes and sevens

There are a score and more reasons to be given favoring a lumberman's organization, but these will suggest themselves readily to each reader. We have simply named a few here and there, as they have occurred to us in writing. There is reason enough for lumbermen organizing. There is no reason why they should not organize. There might be an organization of the trade in Toronto. There ought to be. There might be a provincial organization of lumbermen. There used to be an organization in western Ontario of the hardwood men, and those who were active in the association at the time do not hesitate to tell of its benefits. Money would have been saved within the past year to members of the trade if that organization had continued in existence.

Why not organize? We would be glad to have our readers answer this question one way or the other as the reasons occur to themselves.

LOGGING THE COMING WINTER.

IT is somewhat difficult to arrive at a united opinion as to the probable size of the cut in the woods the coming winter. By some it is thought that operations will be on a considerable scale, and the commencement already made by several United States firms owning limits in Canada is referred to as evidence on this point. On the other hand there are many conditions that lead to an opposite conclusion. The destruction by fire of J. R. Booth's large mill, coupled with the intimation that he will not rebuild, must of itself mean a shrinkage of some size in the cut in the Ottawa district. Besides, it is well known that owing to the depression of the past year the piling docks, both in Canada and the United States, are heavily loaded up with lumber. Information from the North Shore territory shows that large quantities of lumber are on hand there. Our Michigan correspondent states that there is fully 600,000,000 feet of lumber on the piling grounds in that state. The natural tendency is to see these stocks materially reduced before supplementing them with fresh stocks. The concensus of opinion would seem, therefore, to indicate that logging will this winter be conducted on a more restricted scale. This view is voiced by Mr. John I. Davidson and other large operators. Mr. John Scully, a large contractor for lumber supplies, confirms these views. What he has to say finds a place on the Eli page.

CANADIAN-AMERICAN OPERATIONS.

LUMBERMEN from the United States cut quite a large figure in lumbering operations in Canada. We are able to form some conception of this when, at the opening of a season like the present, note is made of some of these operations. For example, J. W. Howry & Sons, of Saginaw, are placing a large staff of men in their camps in the Georgian Bay district. They will operate, it is said, eight camps, and will cut 80,000,000 feet of logs the coming winter. This firm will saw a large quantity of logs in Canada, and to their saw mill they will add a planing mill and box factory to work up the coarse lumber. Their mill operations are in the vicinity of Peterborough.

Contracts for lumber, 20,000,000 feet, on the Moon River, have been let by Arthur Hill & Co., of Saginaw, to Canadian jobbers. This firm has also sold an interest in their limits to Chas. Moore, formerly of Bay City, who will move to Canada and superintend operations. It is expected that these logs will be sawed in Canada, instead of being towed to Bay City to be manufactured, as was intended.

The new mill of Cutler & Savage, of Michigan, located near the mouth of the Spanish River, is at present in active operation and they have about 10,000,000ft. now in the booms to work on. Another Bay City operator is Mr. William Peters, who will cut his logs at French River, where he has purchased a mill, instead of towing to Bay City as formerly.

The Saginaw Lumber and Salt Company, of Saginaw, will harvest 30,000,000 feet; Thomas H. Hurst, of Wyandotte, 80,000,000 feet; C. K. Eddy & Son, of Saginaw, 20,000,000 feet; A. T. Bliss, of Saginaw, 15,000,000 feet; Turner & Fisher, of Bay City, 50,000,000, feet and several other firms from 15,000,000 to 20,000,000 feet, each of which, says the Michigan correspondent of the New York Lumber Trades Journal, will be rafted from Canada to the Saginaw River mills next season. The new mill to be erected in the Ottawa district by E. M. Fowler, of Chicago, Arthur Hill, of Saginaw, and E. C. Whitney, of Minneapolis, will have 60,000,000 night and day capacity and will be worked likely to its full capacity.

It is stated that Merrill & Ring, of Saginaw, are negotiating for 100,000,000 feet of Canadian timber held by Michigan parties.

EDITORIAL NOTES.

AN object lesson for the advocates of better protection to Canadian forests is found in the fact that one of the leading saw mills in Essex county, owned by Mr. Haines and operated at Woodslee, will be removed to Blind River in the Algoma regions, for the one reason that there is not sufficient timber in Essex county to keep the saw mills stocked. It may be said, if Essex county has not plenty of timber there are abundant supplies of the product in other parts of the province, as well as elsewhere in the Dominion. It is worth remembering, however, that it is within the lifetime of the present generation, when the same thing was said of the timber of Essex and other counties in Western Ontario, which are to-day, with few exceptions, entirely depleted of their timber. We are not alarmists, and yet it is, we believe, the case, that no one can with any measure of care study the question of protection to our forests without satisfying himself that there is a tremendous amount of prodigality in the handling of forest products, and the time is none too early to consider seriously plans, not alone pointing to the preservation of the standing forests, but of replacing the timbers that have already been destroyed.

IS the consumption of lumber in the future likely to be lessened because other building materials are already taking its place? We have all heard this question raised many times, and the answers have been of a various character. The statement has been given currency to on the authority of a prominent contractor that the Grand Trunk Railway had very much curtailed the quantity of lumber it was in the habit of using. It is well-known what a large customer the railways have been to lumbermen. Metal, it is said, will be the building material of the future, and under the observation of everyone this material is to be seen occupying a large space in the erection of many buildings in the present day. But it has been remarked by an architectural journal that metal has fewer aptitudes for building and artistic effect than is the case with lumber and other materials in use to-day. With the ingenious and inventive spirit of the age it may be that metal can be made more useful in the future, than at present seems to be the case. It need not, however, be feared that lumber can at any time take an inferior position in building operations of almost any kind. There is an adaptation about lumber that must always give it a place of supremacy in a large amount of work.

LUMBER circles were somewhat agitated the early part of the month through a press dispatch, which was very generally published everywhere, stating that a cargo of Canadian lumber assigned to Georgetown D. C., which is a part of Washington, a little further up on the Potomac, had been refused free admission under the new law. The Secretary of the Treasury withheld permission until he could ascertain officially whether the Dominion government still imposed an export duty on lumber. There could, of course, be only one answer to this question, as our tariff regulations on the point are perfectly clear and so soon as these were explained to Secretary Carlisle the cargo was released and an official statement issued that Canadian lumber should be admitted free. Nor is there any ground, as some had supposed, for a revision of the free lumber regulations, through the exercise of a discrimination of stumpage dues by Canada, or its provinces, against United States holders of limits. Perhaps the only exception was that of the Ontario Government in the case of a few limits sold here four years ago, in which the conditions were quite local, and which would have no bearing on matters at present.

BUSILY engaged wading into blue books and other official documents at his room in the Rossin House I met Mr. James Conmee, ex-M. P. P. for Algoma, a few weeks ago. This well-known resident of our north country was in the city as a delegate to the International Water Ways Convention, and was getting his ammunition ready for that occasion. Mr. Conmee's business activities have brought him into close touch with lumbering affairs in the north, and he cheerfully granted me an interview concerning these matters. "The annual lumber output," said he, "of the Rat Portage and Keewatin district is about 75,000,000 feet, chiefly, of course, of white pine. Rather more than half the logs come from Minnesota." I enquired how this was and Mr. Conmee replied that there were several circumstances that gave rise to this condition of lumbering. "For one thing," said he, "considerable lumber limits were held in Minnesota before the days of the settlement of the question of disputed territory in the Rat Portage district and this timber has not yet been all cut out and until it is a certain proportion of our cut will come from Minnesota. Again with the depression that has existed in commercial circles it has been found that logs could be got cheaper from Minnesota than in our own country. These are conveniently run into Rainy Lake. There has always been less or more of this procuring of logs from adjoining territories in the United States, local conditions making it sometimes preferable. When I was in the lumber business in Port Arthur I received a considerable quantity of my logs from Duluth. Then it sometimes depends on who own the mills. If they are owned by parties who have limits in adjoining American territory they naturally bring their supply from those points." Mr. Conmee believes that the lumber trade generally in Canada will be strengthened by the passing of the Wilson free lumber bill. As a good Liberal he refers to the wisdom of the Ontario government in refusing to handicap trade with the States in any way as was proposed in certain legislation at the last session of the Ontario Assembly. He thinks there is no doubt but that there will be a noticeable revival in the saw mill business, and to some extent there will also be an extension of the planing mills of Canada.

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Mr. H. H. Cook, of the Ontario Lumber Co., has said: The changes in the United States tariff were likely to give an impetus to the lumber trade, the like of which has not been witnessed for many a year, and the Parry Sound and other districts will hum this season. Many United States firms will commence operations on an extensive scale. A year or two ago the Midland and North Shore properties could not be given away. Now the Peters' firm of Michigan have purchased these for $25,000 and will commence operations forthwith. Mr. Miscampbell will, in the early spring, start up the old British-Canadian mills at Midland, and mills will be started all through the districts, excepting in small limits, where it does not pay to erect mills, owing to the fact that 10 per cent. of the lumber is either lost or stolen before it can be marketed.

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A few days ago I drew the attention of Mr. William Little, of Montreal, who had been making a short stay in Toronto, to the remark made by Mr. Robt. Cox, the well-known lumber merchant of Liverpool, Eng., and who is at present in Ottawa, that the statistics show that the consumption of lumber in England has not varied 5% in any year during the past 40 years. "That statement," said Mr. Little, "is just somewhat wide of the mark. There is, I am sure, from some considerable knowledge of the English trade, a larger variance than 5 in 40 years, and yet practically the statement is correct. The English people are very conservative. The amount of building and extension of public works varies very little from year to year." Then, I remarked, we can hardly look to the United Kingdom as a market where we may dispose of any unusual surplus of Canadian lumber. "That is the case," said Mr. Little, "and yet it is to be remembered that this average annual consumption of lumber in the mother land represents a very encouraging trade. Our natural outlet for lumber is the United States and if our people are only wise enough to recognize the position of supremacy as lumber producers that they now hold they will be able to place large quantities of lumber in the States at most satisfactory prices. It is the greatest foolishness imaginable for our people to be in too big a hurry to get rid of the prodcuts of the forest. They have a gold mine in these products and prices must continue to advance from year to year. It is quite true there are yet large amounts of timber in the United States, but for certain sections of the States the natural market is Canada, and to Canada these people will come to buy their supplies."

* * * *

Certain Maine lumbermen take a somewhat gloomy view of the lumber clause in the United States tariff bill, so far at least as their trade is concerned. A week ago among visitors to St. John, N. B., were John Sweeney, W. H. Cunliff, C. H. Dickey and J. A. Laliberte, gentlemen actively engaged in lumbering operations down by the sea. To an interviewer Mr. Sweeney said: "The lumber business in the Aroostock country is at a standstill. We are all of us pretty well discouraged, and if it were not for the fact that we have our horses and our sleds and other possessions necessary to carry on our business, we would not strike a blow this winter. I am sure there will be little or nothing in it, but what are we going to do? We have from 20 to 50 horses and it would be next to impossible to dispose of them for anything like a reasonable price. We are, as you will readily see obliged to go ahead, but the cut this winter will be very light, much lighter than it has been for years." "No," continued Mr. Sweeney, in answer to a question, "I have no idea what the outcome of this change will be. I don't know what we are going to do about it. Things look pretty blue just now." When asked why the recent tariff changes would so seriously inconvenience the Maine lumberman, Mr. Sweeney pointed out that the Maine lumberman had to pay $2 stumpage, whereas the New Brunswick operator had only $1.50 to pay, and having no duty to pay it was obvious that the New Brunswick man could put the Maine man out of business.

* * * *

Johann Reuter, a Spanish lumber merchant of Venezuela, has been in Ottawa during the past week with the purpose of establishing a trade in Canadian pine logs between here and Venezuela. Mr. Reuter says that New York has been his market for logs for many years, but as a result of his trip to Canada, he has discovered that he can do much better by shipping from Montreal or Quebec, and at the same time get a better class of logs. His contract with the New York firm expires in December. After that date he will make Ottawa his purchasing point for Canadian pine. His yearly shipment will be 1,500,000 feet, or three or four vessel loads each year, each vessel carrying between 3,000 and 4,000 feet of logs. Montreal or Quebec will be the shipping ports. Before coming to Ottawa, Mr. Reuter visited the Michigan lumber districts, but he thinks the Michigan pine is not half as good in quality as that located down in Ottawa. Mr. Reuter states that Canadian pine is very much in demand in Venezuela, and is now being more used for building purposes than any other timber imported into South America.

* * * *

"Yes," says J. S. Pinch, of the Collins Inlet Lumber Co., who operate largely in the Georgian Bay district, "the new tariff of the United States will be a great benefit to the timber and other interests of this country. In the first place it has practically stopped the exportation of logs. Firms that formerly engaged in this business are now buying or building mills in our district. Cutler & Savage, of the Saginaw, who have exported from fifteen to sixteen million feet in the round are now building a mill at Kenabuth, near Little Current, where they will do all their cutting hereafter, and Peters another big Michigan lumberman who has sent out 20,000,000 feet of logs has bought the Parry Harbor Company's mills and his cutting will be done here. But this is not all. The freeing of lumber has increased the demand for the products of our mills and in consequence there will be an addition to the output of 30 per cent. as compared with last year and you know what that means to everybody engaged in the production of supplies which the lumberman uses."

* * * *

Hon. E. H. Bronson was asked how he thought the removal of the duty would effect Chaudiere interests. He replied that it certainly would not be a disadvantage. The gain to the trade would not be as much as appeared on the surface by the removal of the duty because as he explained only about one third of the lumber cut at the Chaudiere goes to the United States market. Still the removal of the duty on lumber would be of advantage to the trade.

* * * *

Mr. John Scully, of John Scully & Co., contractors' agents, who have extensive dealings with the lumber camps, says there will be no increase in the lumber cut this year, "and I incline," says Mr. Scully, "to the belief that it will be smaller than usual. There are heavy stocks in the United States at the present time. The building trades of Chicago, Cleveland, Buffalo, New York and Boston have been very dull, and till the stocks on the other side are disposed of I do not think there will be much of a spurt. Lumbermen are later going into the woods this year than usual. Square timber that has been on the Quebec market for a year is not sold yet. I know that less men than usual are wanted this year, and wages also are lower, fully 10 per cent. lower. I sent a lot of men through the other day to La Cloche and Little Current in the Georgian Bay. These men came from the Peterboro' district, and received $12 to $18 a month. Last year they would have got from $14 to $20 a month. There are more men offering than we can supply work to do." Many of the American firms owning limits bring there own skilled men over, and many of the workmen now are from the States, as they can be got there as cheaply as in Canada.

* * * *

"Somebody in the days that are to come," said Peter Ryan, as I chatted with him the other day about lumber affairs, "will grow rich out of Canadian lumber. But there are a good many fellows who have not the strength to hold on, and they will drop some money in the meantime. The result of my recent timber sale has in no way damped my confidence in the value of lumber as a Canadian asset. At the same time, I do not see as a result of free lumber that we are going to have an immediate boom on an extensive scale. There is a good deal of lumber in the country and United States lumbermen have heavy stocks on hand. I am told also that the banks are not encouraging investments in lumber to the extent that some might suppose. Probably they are just waiting a little to see how trade will shape."

* * * *

If the statements made by Buffalo, Tonawanda and Albany correspondents of some of our lumber exchanges are something better than mere bluff, then the new tariff bill is going to play havoc with the planing mills of those localities, Canada being the gainer thereby. In the Tonawanda correspondence of the New York Lumber Trades Journal the statement is that "The new tariff bill will, in the opinion of several mill owners, injure Tonawanda. Canadians have heretofore found it to their advantage to bring lumber to this point for dressing. The new bill changes this, and the belief is that it will ruin a few mills engaged in that business." From Albany the report is: "The removal of the duty on Canadian lumber will make it almost impossible for our planing mills to compete with Canadian dressed lumber. Some think that our Canadian cousins will immediately advance their prices $1 per 1000 feet, but I do not believe they will, as they have large stocks on hand, not only of this year's cut, but large quantities left over from last year's, and are only too glad to sell at old prices less the duty."

Mr. G. B. Cowper, who for thirty years was chief clerk of the woods and forests branch of the Ontario Crown Lands Department, died suddenly in Buffalo a couple of weeks ago. He was 75 years of age.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

CONSIDERABLE losses are being sustained here by forest fires. Extensive fires have been raging in the Squamish Valley, making a serious clearing of timber. The fires have also spread along the east side of Howe Sound, where a good deal of damage has been done.

Messrs. Cates & McDermoth, the stevedores, have secured the contract to load the British ship, Listimore, which is chartered to take a cargo of lumber at the Hastings mill to Buenos Ayres. Trade with South America seems to be looking up.

The following vessels are to load lumber at British Columbia ports for foreign points: At Hastings mill, American barque Newsboy, 559 tons, for Sydney; Italian barque Cavour, 1389, for Callao; British ship Ballachulish, 1806 tons, for Valparaiso. At Vesuvius Bay, American ship Occidental, 1470 tons, loading mining props for Santa Rosalia.

The Brunette Saw Mill Co. recently shipped to Montreal a double cargo load of Douglas fir timber. Three of the largest pieces were of the following dimensions: 24×24×60 and 24×36×60, and the largest piece without a single knot. No larger timber has ever been shipped from British Columbia. The sticks are to be used in dredge building for the Montreal Harbor Commissioners.

NEW WESTMINSTER, B. C., Sept. 18, 1894.

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

AN evidence of fresh activity in the lumber trade is found in the determination of mills to run much later than usual this year. A prominent lumberman of the Chaudiere is authority for the statement that with perhaps hardly an exception all mills will run until winter compels them to close down. Logs are in good supply and shipments have become quite brisk since the settlement of tariff troubles in the United States.

Much interest continues to gather around the saw mill intentions of Mr. J. R. Booth. Nothing new has developed since my last letter to indicate that he will change his mind, so far as re-building the big mill, but it is thought by some that he will erect another mill, and just where this will be located is an item of speculation with many. It is being realized that logs from the upper Ottawa find more difficulty every year in reaching the saw mills in this section, and for this reason it has been thought that Mr. Booth's mill might be situated farther up the river. Pembroke has been hoping to receive the plum, but enquiry at Mr. Booth's office gives the information that nothing definite is yet known where the mill will be situated, whilst it is not a settled fact that Mr. Booth will really erect another mill.

INDIFFERENT LENGTHS.

Large numbers of men are getting into the woods for the winter's work. The village of Gatineau Point is becoming depopulated through the number of its young men who are entering the lumber camps. Already more than 100 have left there for the woods.

The Perley mill, now operated by Mr. J. R. Booth, has never been running so satisfactory as at present.

Those of the Chaudiere and Hull lumber establishments who do not run all night are having electric plants put in shape for operating lights early in the mornings and evenings up to 6 o'clock, as the days are rapidly becoming shorter.

A purchase of 36 horses was recently made for the St. Anthony Lumber Co. on the Perley timber limits Madawaska.

Two detectives are said to have been sent here by the Underwriters' Association of Montreal to investigate the origin of the recent lumber fire here. It is not believed, however, by our people, that any ground exists for supposing it to have been an incendiary.

Some trouble is being experienced by the mills at the Chaudiere on account of the scarcity of water power. Old hands say that they never remember seeing the water of the Ottawa recede so fast as this summer. If the difficulty grows it may mean the closing down of quite a number of manufacturing establishments.

The act passed at last session of the House of Commons, to compel lumbermen to dispose of the sawdust of their mills other than by dumping it into the rivers, will come into effect on May 1st, 1895. A meeting of the Chaudiere lumbermen has been held and the Minister of Marine and Fisheries will be asked to extend the time in order that proper preparations may be made.

A dangerous job now under way is the building of the new rafting pier on the Hull side of the Chaudiere Falls. The force of the current at this point is so strong that a long pier, which was run out above the Buell, Hurdman Co. property, has been carried away piecemeal. As the waters are unusually low at the present time mill owners have thought it opportune to engage now in these repairs.

A private letter received here a few days since says that forest fires are raging in the Madawaska district. It is said that McLachlin Bros. limits are getting a terrible scorching.

It is expected that the last of the drives of the upper Ottawa saw logs will reach Des Joachim's boom almost immediately, when the boom will be closed up for the season.

The Upper Ottawa Improvement Company who handle all the logs after they reach Des Joachim, and by steamers tow them down the Ottawa, never had, on the whole, a more favorable season, as the height of the water in the river was nearly uniform all the summer.

OTTAWA, CAN., Sept. 21, 1894.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN.]

A CARGO of 375,000 feet of scantling recently cleared for Buenos Ayres.

American mill owners wil is thought, as an effect of free lumber, be compelled to turn their attention to New Brunswick for logs instead of Maine. It is claimed that the higher stumpage and cost of logs in Maine will not permit them to compete with provincial mills. John Sweeney, C. H. Dickey and other lumbermen, who have been in the city lately say that the cut on the Aroostook next winter will be extremely small.

The feeling here is that lumber interests will be considerably benefited by the passing of the Wilson free lumber bill. This gain will be felt more in a year or two than even now.

The last raft has left the St. John river boom.

The logs rafted by the Fredericton Timber Co. on the St. John river this season are placed at 97,000,000 feet. This company has been improving its equipment, having recently erected a building on the shore and will manufacture pins there this winter. They have also improved the fire protection by putting in a pump with a capacity of 500 gallons a minute. A wharf, 90 feet long, will be erected, dredging going on with this object in view now.

The province, as with other parts of the country, has unfortunately suffered not a little from forest fires.

Alexander Gibson, of whom you published such a life-like pen picture in the last number of the LUMBERMAN, is about to build a new mill at Blackville to cut hemlock boards, in which he says he sees more profit than in spruce. His calculation is that there is 100,000,000 feet of hemlock along the Canada Eastern, a railroad property, of which he is the chief owner. A mill equipped with rotary, planer, and two shingle machines, is being erected at Boiestown by James S. Fairley.

ST. JOHN, N.B., Sept. 20, 1894.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

OUR people have just passed through an experience from drought that has not had a parallel in this district for many years. Numbers of our lumbermen have been heavy losers through the destruction of their property by fires. On the line of the Mackinac division of the Michigan Central fires have been especially severe.

Expressions of opinion, as to the effect of free lumber, are as frequent as ever, but lumbermen do not seem to have satisfied themselves what the actual results will show. Time must be allowed to tell this. This much, however, is plain that trade is reviving, as a result, if nothing else, of the fact that business men have something like a certainty to rest on, in the meantime, at any rate. The Saginaw Lumber & Salt Co. say that business is better than the same time last year. Mr. Loveland believes that prices will, at least, hold their own. The large quantities of white pine that have been destroyed by fires will be a factor in keeping prices up.

BITS OF LUMBER.

Whitney & Batchelor will only cut hemlock and hardwood logs this year, their pine being exhausted. H. A. Batchelor is reported to have said that "he will not look for any marked activity in lumber for another year, that such vast timber acres have been burned over it would be necessary for the owners to strain every effort to cut this fall and winter in order to save it and this will glut the market, and with the increased supplies that will come into the markets from Canada will make trade dull and prices low."

It is estimated that nearly 600,000,000 feet of lumber finds a place on the docks here, which means a large amount of capital locked up. This fact is likely to have an influence in curtailing the size of cut this winter.

A raft of nearly 5,000,000 feet has arrived from Georgian Bay for Col. A. T. Fletcher, of Alpena, and at Squaw Bay about 15,000,000 feet of logs, which had been brought over from Canada.

Hitchcock & Bialy are bringing over logs from Canada. J. W. Howry & Sons sent a crew of 100 men to Canada to work on their limits.

Shingle manufacturing on the Saginaw river this season has been very dull.

Lake rafting has about come to a close.

SAGINAW, MICH., Sept. 21, 1894.

AXES.

THOSE who are not familiar with the subject, or who, have not given the matter any thought, scarcely realize that the improvement in axes during the last fifty years has been almost as great as in other lumbering inplements. The axe is an implement of very ancient origin. Those made by primitive races were heavy and clumsy, and when the European nations began to emerge from the dark ages, axes of ornamental design were often unsuited for the best uses for which they were intended.

Of late years lighter axes have come into use, and the two-bladed, or double bitted axe has preference over the single bit in camps of the most progressive and successful lumbermen.

The best choppers prefer to grind one bit thin and have it with keen edge which will sink deep into the wood, while the other blade or bit is kept more blunt and is used for trimming tops of trees, or where it is necessary to strike into knots which would damage a thin ground edge.

Thus the double-bit axe serves a purpose which cannot be obtained from a single bit axe. Some inexperienced choppers who have never used double bit axes have preconceived notions about them and object to using them on the ground that they are dangerous, and that a chopper is liable to cut his head off in using them.

The least that can be said of such an one is that a man who pretends to be a chopper and handles an ax so awkwardly as to cut himself about the head with a double bit axe would knock out his brains—if he had any—with the pole of a single bit ax.

FOOLISH TRADE NAMES.

ONE gets sick and tired of trade names, such as victor, ideal, paragon, excelsior, and the like, also wonders how the makers of machines thus named can afford to waste the effect produced by using the maker's name instead of these pseudonyms. The name of a firm or company applied to a machine such as a waterwheel, gas engine or a moving machine, is of real trade value, and comes constantly into use, but a nickname rarely ever does. Gas engines are thus afflicted, but not steam engines, the latter being accorded too much respectability for a nickname. We have, out of regard for the machines and believing it to be vastly to the advantage of the makers, never printed one of these names when it could reasonably be avoided.—Industry.

THE NEWS.

—Geo. Upham is building a new saw mill at Hartland N. B.

—Samuel Gray, planing mill, Victoria, B. C., mortgage sale advertised.

—W. N. Roberts is building a sash and door factory at Renfrew, Ont.

Hammil & McLeod, sash and door factory, Armstrong, B.C., have dissolved.

—A demand of assignment has been made upon N. H. Thibault & Co., lumber dealers, Montreal.

—A. A. Macbee & Co., who operate a planing mill at St. John, N. B., are reported in difficulties.

—The Dickson Company have upwards of ten million feet of lumber at Harwood, Ont., ready for shipment.

—The planing mill of John Graham & Sons, at Inglewood, Ont., was sold by auction on the 21st September.

—C. A. B. Purdy, lumber dealer, Porter's Lake, near Halifax, N. S., has turned his estate over to the assignee.

—The recent fires along the Madawaska river, near Kingston, are said to have destroyed $50,000 worth of timber.

—E. C. Gooden & Co., lumber and general merchants, Baie Verte, N. B., are offering to compromise at 30c. on the dollar.

—J. S. Fairley is building a new saw mill near Boistown, N.B. It will be equipped with a rotary, planer, and two shingle machines.

—Hanson Bros., of Durham, N. B , have lately been sawing hemlock boards and have made a shipment to the American market.

—Six and a half million feet of logs in one raft were towed from French River to Collingwood recently, to be cut in the mills there.

—The assets of the Toronto Wood and Lumber Co., who recently assigned, were sold by auction at their mill in Toronto on the 14th ultimo.

—Mitchell's new saw mill at Selkirk Man., has commenced operations. The capacity is 35,000 feet per day, and the logs are towed from Lake Winnipeg.

—The sash and door factory of Boyd & Co., at Athelstan, Que., has been taken over by the Montreal Trust and Loan Co., who held a mortgage on the property.

—Application has been made for a provincial charter for the Assiniboine Lumber Company to carry on business in the city of Brandon, with a capital stock of $100,000.

—The Muskoka Mill and Lumber Co. has recently purchased a fine timber limit on Vancouver Island, B. C., from the Toronto and British Columbia Lumber Co.

—At a meeting last week of the Retail Lumbermen's Association of Winnipeg, it was decided to reduce the price of shiplap $2 a thousand and lath 25 cents a thousand.

The large saw mills at Collingwood, Ont., have commenced operations, and there is timber enough in the bay to keep them running until January. More than 200 men are employed.

—The first ship load of British Columbia lumber sent to Egypt left Vancouver a few days ago for Alexandria. The cargo goes on the barque, "Verejean," which is loaded with 1,630,000 ft.

—A large saw mill is being fitted up at Pine Tree Harbor, Ont., by Messrs. Bowman, of Southampton, and Siebert, of Chippewa Hill. There are large quantities of timber in the district.

—Withrow & Hillock, lumber dealers and manufacturers, of Toronto, owing to losses in real estate and general business depression, have been obliged to call a meeting of their creditors. The liabilities are said to be about $120,000.

—Owing to contemplated improvements to their mills and the unusual lowness of the water, McLachlin Bros., of Arnprior, have closed down. New and improved machinery is to be put in and the river channel to the mills deepened.

—The Fleming Wood and Lumber Mill, at Midland, Ont., destroyed by fire last month, was the only mill of its kind in Canada. It sawed and split cordwood into stove lengths and dry-kilned the wood. The head office is in Toronto.

—The plant and property of the Blind River Mill Company in Algoma have been purchased by J. Haynes, of Woodslee; W. R. Todd, of Gesto; R. Wigle, of Essex, and R. Tader, of Windsor. The purchasers have secured timber limits near the mills.

—Mr. W. F. Wilson, who was formerly connected with the lumber trade in Winnipeg, but who recently has been located in British Colnmbia, is opening an office in Winnipeg. He is now representing the Red Cedar Lumber Co., of Victoria, B.C., with mills at Port Moody. He has a big scheme on hand for handling British Columbia lumber.

—William Irwin, proprietor of some timber limits in Muskoka, has entered an action against James Turner and a number of other Michigan lumbermen to recover the sum of $22,257, which he claims is due on a promissory note given in payment for 21,000,000 feet of logs sold to them.

—William Laking, a lumberman, of Fesserton, Ont., recently purchased a limit of six and a half square miles in Gibson township from the Muskoka Mill and Lumber Co. It is his intention to take out three and a half million feet of logs in North Orillia, Gibson and Matchedash, for next season's cut.

—The supply of timber in Essex County is not sufficient to keep the saw mills stocked. One of the leading mills, owned by Mr. Haines and operated at Woodslee, will be removed to Blind River in the Algoma lumber regions. The removal will be made in a few weeks.

—L C. Wideman has erected and put in operation a new planing mill at Guelph, Ont. The building is three stories 46 x 67 feet. The first story contains a planer, rip saw and moulder; the second, a band saw, shaper, rip, cross-cut and scroll saws, sharpeners, and trimming, lathe and boring machines; and the third is used as a store room.

—The Lumberman received a pleasant call during Exhibition week from Messrs. Duff & Stewart, ef Bluevale, from whom we learn that the union furniture factory at Wingham, which has been closed down for some time past, has been put in operation by a new companny, among the promoters of which are Messrs. Thos. Bell, James Cline, Benj. Wilson and John McLean.

—An action has been entered by F. X. Stafford, of Montreal, against the McCready estate, to gain possession of a timiber limit. The late James McCready had granted a timber limit to plaintiff, on condition that he should sell other similar limits. As the conditions of the grant were fulfilled only after Mr. McCready's death, the executors claim that the mandate did not exist at that time, and that Mr. Stafford could not demand his timber limit. Hence the action.

—About two weeks ago a neatly dressed young man presented a cheque at the Merchants' Bank, Toronto, for $6,000, purporting to be made by Alexander Burnett, the well known lumberman of Renfrew, and endorsed by the Cook & Bros. Lumber Co., of Toronto. The fact that the cheque was made for an unusually large amount aroused the teller's suspicion, and upon examination the signature was found to be a forgery. The young swindler, observing the actions of the bank officials, made his escape.

FIRES AND CASUALTIES.

FIRES.

C. A. Sleeve's saw mill at Coverdale, N.B., has been burned.

—The saw and grist mills at Dartford, Ont , have been burned. Loss, $5,000.

—The hoop and stave mill of Smith Bros., at Stewart, Ont., was consumed by fire a week ago. Loss, $9,000; insurance, $3,000.

—M. McCormick's planing mill at Winnipeg, Man., was completely destroyed by fire a couple of weeks ago. Loss, $10,000.

—McKechnie's saw mill at Durham, Ont., was burned to the ground the early part of last month. The loss is estimated at from $15,000 to $20,000. No insurance.

—Gillies' Bros'. lumber yard at Paris, Ont., was damaged by fire recently to the extent of $5,000. All the lumber, shingles and lath in stock were consumed. No insurance.

—Fire broke out in the planing mill of Robert Patterson, at Hensall, Ont., on the 8th ultimo, consuming the building and a quantity of lumber in the yard. The loss is roughly estimated at $7,000; no insurance.

—No sooner had our September number gone to press than the news reached us of the destruction by fire at Ottawa of from eight to ten million feet of lumber owned by J. R. Booth, and valued at from $150,000 to $200,000. About 60 per cent of the loss is covered by insurance. Only a few weeks previous Mr. Booth lost a mill valued at $150,000, on which the actual insurance paid was $140,000.

CASUALTIES.

—John Matteson was drowned at Fort William recently while working on the boom at Graham, Horne & Co.'s mill.

—Egbert Barnes, foreman in W. C. Edward's mill at New Edinburgh, Ont., was struck on the head with a lever a few days ago and seriously injured.

—While working at an edger in Booth's saw mill at Ottawa, a man named Champagne was hit by a flying plank. One arm was broken and lacerated and he was otherwise seriously injured.

—J. A. Gagnon's saw mills at Three Rivers, Que., were wrecked by the explosion of a boiler on the 7th of September. The fireman, Samuel Beaumier, was instantly killed, while several others were badly scalded and otherwise injured. The mill was a new one and had just been put in operation.

PERSONAL.

Mr. A. Barnet, lumberman, of Renfrew, Ont., recently paid a visit to Manitoba and the Northwest Territories.

We learn of the death the early part of last month of Mr. William McClymont, long a resident of Ottawa and a well-known lumberman.

The marriage is announced on the 30th August of Mr. Geo. Gordon, a prominent lumberman of Pembroke, Ont., to Miss Minnie Parry, of Dunnville. A hearty reception was given the newly-wedded couple by the townspeople, in recognition of the popularity of the young lady.

TRADE NOTES.

Messrs. McRae Bros. & Co., of Ottawa, have purchased the handsome sawmill carriage recently exhibited at the Toronto exhibition by the Waterous Co., of Brantford. It will be placed in their extensive mills at Calabogie.

The Brunette Saw Mill Co., of New Westminster, B. C., have receutly put in operation a new "King" lumber planer, weighing 27,000 pounds, manufactured to their order by Messrs. E. & B. Holmes, of Buffalo. This machine is capable of dressing timber up to 16 x 30 inches on four sides at one operation.

Messrs. White & Co., of St. John, N. B., have ordered from A. R. Williams, of the Soho Machine Works, Toronto, one of his new brake lathes to swing 86". This lathe is to embody all the latest improvements in lathes of this description, and is calculated to do a very wide range of work. It is similar in many points of construction to the one exhibited by Mr. Williams at the World's Fair, Chicago, but of larger dimensions.

PUBLICATIONS.

The Review of Reviews for September gives surveys of recent Congressional and State legislation in special articles; the comparative table of tariff rates, especially, will be found useful for reference purposes, as it shows at a glance all the important changes made by the enactment of the new law.

UTILIZATION OF SAWDUST.

IN large lumber manufacturing districts the utilization of waste products, such as slabs, sawdust, etc., in some way other than burning these as fuel, is, says Mr. Leicester Allen in the Tradesman, worth considering. One of the methods whereby profit has been made from sawdust, is the manufacture from it of oxalic acid, which is a simple process producing a material in wide commercial demand in the arts of dyeing and other chemical arts. As intimated, the process is not only simple, but the outfit for conducting it does not involve a large investment. The principles involved are not complicated and the process can be carried out by cheap labor under the superintendence of a fairly intelligent director.

Oxalic acid is frequently met with in the vegetable kingdom, especially in combination with gases which destroy its poisonous character. Oxalate of lime is found in considerable quantity in the rhubarb plant; oxalate of potash is found in the sorrel, and axalate of soda in salicornia and salsoda. Formerly the acid was obtained from the sorrel, oxalis acetosella, but more recently from sugar, by the action of the nitric acid upon it. The nitric acid and sugar are boiled for some time, then evaporated to dryness, and the oxalic acid formed is purified by recrystallization from water. A much cheaper material than sugar is sawdust. In this case an alkali must be employed instead of an acid, as well as a higher temperature. The operation is conducted in an iron vessel of suitable size and shape; and either caustic soda or potash is employed, the yield being greater with the latter.

Some recent experiments made by William Thorne, in Stuttgart, go to prove that a mixture of forty parts of caustic potash to sixty parts of caustic soda, will produce as large a yield as when potash alone is used, provided the operation be performed in shallow vessels with thin layers of the material, avoiding as far as possible the fusing of the mass. Soft woods, such as pine and fir, produce larger quantities of oxalic acid than hard wood like oak. The proportion of the wood to alkali should not exceed 75 to 100, and the temperature should be about 480 degrees Fahrenheit.

TRADE REVIEW.

Office of CANADA LUMBERMAN,
Sept. 25, 1894.

THE GENERAL SURVEY.

BEYOND any doubt business in lumber has improved during the month. The shipments out from Ottawa have been on a much larger scale than for some months past. At Oswego operations are active as a result of the arrivals of Canadian lumber. The Northwestern Lumberman says that Canadian lumber is beginning to cut quite a large figure in eastern markets. Dealers at Tonawanda and Buffalo are securing some of the benefits. Our cotemporary sounds this note of warning to United States dealers: "The pine dealers in all the lake regions will have to meet this Canadian competition, and they may as well brace their fortitude for the trial. The effect will be to some seriously felt within a year or two. After that supply and demand will get settled to new conditions and the diminishing supply in the States will help to that end."

Canadian lumbermen continue to discuss tariff matters and opinions vary a good deal, as a reference to this and a past issue of the LUMBERMAN will prove. A prominent Chaudiere lumberman said that he did not look for any immediate change in the present dull state of the market there, from the fact that depression in the States had been so long continued and extensive. At the same time the fact is that lumber in increased quantities has been going out from Ottawa during the month. This one important benefit has accrued, that the settling of the tariff difficulty has given stability to trade, which it much needed.

Elsewhere we discuss the outlook of logging operations the coming winter. There is good reason to suppose that these will be more restricted than had some time ago been expected. Saw mill business is showing an encouraging revival. Our information is that the leading mills of the province will cut this season clean up to the time they will be barred out of further work by the severity of the weather. And it is to be remembered that within a month even, there has been an increase worthy of mention in the number of mills that have recommenced sawing operations.

How far the extensive and lamentably serious forest fires that have taken place this summer throughout Wisconsin, Minneapolis and some portions of Michigan will affect the size of the winter's operations, and likewise trade the coming spring, is being widely discussed in lumber circles. A safe estimate would seem to be that fully 1,000,000,000 feet of timber has been damaged by fire, and to save this from complete loss the work of cutting will need to be commenced at once. No doubt in those states this fact will cause lumbermen to reduce the size of operations in cutting green timber. Then it is a question to what extent the necessarily placing of this large amount of timber on the market will affect trade and govern prices a little later on. Fortunately fires in Canada have not been so large as to have a commercial influence in this direction, but, as we now look to the United States as a field for an increased white pine trade, the future must be effected to some extent by the anticipated operations of United States white pine lumbermen.

New Brunswick trade is reported to have already felt some benefits from the new tariff relations. It is expected that the position of spruce, as a result of these changes, both in Quebec and New Brunswick, will be a good deal strengthened.

Lumber trade in British Columbia is somewhat quiet. Cedar shingles are lower in price than a year ago, and the market is sufficiently demoralized to make it hard to say what the future may be. Some reductions in prices have been made in lumber in Winnipeg, perhaps an average of $2.00 per thousand on ordinary grades.

Ontario's local trade has improved some during the month and wholesale men say that they are anticipating at least a fair fall trade.

UNITED STATES.

Whilst the increase in lumber trade in any part of the Union during the month has not been remarkable, the signs are clear that business is actually reviving. Just how large will be this revival, and exactly what shape it will take under the new tariff, lumbermen are not yet, apparently, ready to say, but it is encouraging to them that trade is in a progressive state. Advices from the eastern markets tell of a considerable movement of lumber during the past few weeks, and whilst the stocks on hand at manufacturing centres are large, yet some inroad is being made into these. These improved conditions, it is expected, will continue to prevail, and the spring, it is hoped, will open out with something like old time activity in the lumber business.

FOREIGN.

Trade in Great Britain is not in a very satisfactory shape. A camplaint has been growing for some time that shipments of lumber have been sent from the United States to the United Kingdom with very little regard as to whether they were really needed or not. A result is that the market has become demoralized, and the English lumber trade journals are now speaking out in plain terms and saying that a halt needs to be called. Denny, Mott & Dickson, of London, Eng., tell us that there has been little change in the relation of supply to demand during the month. The landings at this time of the year are ample to meet all likely needs that can be foreseen at present. This authority gives expression to the dissatisfaction caused in the lumber market by the receipt of "a large proportion of sawn stuff sent by ill-advised shippers," and which is "unsaleable in this market. In the floating cargo market there have been more sales for speculation than of late, although the prices reported can hardly cover the present import cost." The advent of a sounder condition of trade and industry is, says this circular, not evidently at hand. Farnworth & Jardine, of Liverpool, state in their current circular, arrivals from British North America have been during the last month 54 vessels, 57,055 tons, against 53 vessels, 48,592 tons during the corresponding month last year. They say: "Business during the month has been quiet, and imports, although not extensive, have been quite sufficient; there has been a fair enquiry for most of the leading articles, but prices generally rule low, though with a slightly firmer tone. Stocks on the whole are quite ample." The indications continue to point to a growing improvement in trade in South America, and the visit of Johann Reuter, of Venezuela, referred to elsewhere in these columns, is not without commercial significance to the lumber trade.

TORONTO, ONT.

TORONTO, September 25, 1894.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		1 90
XX shingles 16 inch		1 40
Lath, No. 1		2 15
Lath, No. 2	1 80	1 85

YARD QUOTATIONS.

Mill cull boards and scantling	$10 00	
Shipping cull boards, promiscuous widths	13 00	
" stocks	16 00	
Scantling and joist, up to 16 ft	14 00	
" " " 18 ft	15 00	
" " " 20 ft	16 00	
" " " 22 ft	17 00	
" " " 24 ft	19 00	
" " " 26 ft	20 00	
" " " 28 ft	22 00	
" " " 30 ft	24 00	
" " " 32 ft	27 00	
" " " 34 ft	29 50	
	23 50	
" " " 36 ft	31 00	
" " " 38 ft	33 00	
" " 40 to 44 ft	37 00	
Cutting up planks, 1 and thicker, dry	25 00	28 00
" board	18 00	24 00
Dressing blocks	16 00	20 00
Picks Am. inspection.		30 00

F. M.		
1 1-2 in. flooring, dres'd	26 00	30 00
" " rough	18 00	22 00
" " dres'd	25 00	28 00
1 1-4 in. flooring, undressed, B.M.	16 00	18 00
1 1-4 in. flooring, dres'd	18 00	20 00
" " undres'd	12 00	15 00
Beaded sheeting, dressed	20 00	35 00
Clapboarding, dres'd		12 00
XXX sawn shingles per M.	2 00	2 10
Sawn lath		2 60
Red Oak	30 00	40 00
White "	37 00	45 00
Basswood, No. 1 and 2	28 00	30 00
Cherry, No. 1 and 2	70 00	90 00
White ash, 1 and 2	24 00	35 00
Black ask, 1 and 2	20 00	30 00

HARDWOODS—PER M. FEET CAR LOTS.

Ash, white, 1	to 2 in.	$16 00	$18 00	Elm, soft 1	" 1½	$10 00	$11 00
" " 2½	to 4..	18 00	20 00	" " 2	" 3..	10 00	11 00
" black, 1	" 1½	15 00	17 00	" rock 1	" 1¼	14 00	16 00
Birch, sq., 1	" 4..	17 00	20 00	" " 1½	" 3..	15 00	18 00
" " 4x4	" 8x8	20 00	22 00	Hickory 1½	" 2..	28 00	30 00
" red 1	" ½	20 00	22 00	Maple 1	" 1½	15 00	16 00
" " 2	" 4..	22 00	25 00	" 2	" 4..	16 00	17 00
" yellow 1	" 4..	14 00	15 00	Oak, red, p'n 1	" 1½	20 00	22 00
Basswood 1	" 1¼	15 00	16 00	" " 2	" 4..	22 00	25 00
" 1½	" 2..	16 00	17 00	" white " 1	" 1½	25 00	30 00
Butternut 1	" 1½	20 00	21 00	" " " 2	" 4..	25 00	30 00
" 2	" 3..	22 00	23 00	" quart'd 1	" 2..	45 00	48 00
Chestnut 1	" 2..	22 00	25 00	Walnut 1	" 3..	85 00	100 00
Cherry 1	" 1½	40 00	45 00	Whitewood 1	" 2..	29 00	34 00
" 2	" 4..	50 00	52 00				

OTTAWA, ONT.

OTTAWA, Sept. 25, 1894.

Pine, good sidings, per M feet, b.m.	$32 00	40 00
Pine, good strips, " " "	27 00	35 00
Pine, good shorts, " " "	20 00	27 00
Pine, 2nd quality sidings, per M feet, b.m.	20 00	25 00
Pine, 2nd quality strips, " " "	18 00	22 00
Pine, 2nd quality shorts, " " "	15 00	18 00
Pine, shipping cull stock, " " "	14 00	16 00
Pine, box cull stock, " " "	11 00	13 00
Pine, s.c. strips and sidings " " "	11 00	14 00
Pine, mill cull	8 00	10 00
Lath, per M	1 60	1 90

SAGINAW, MICH.

SAGINAW, MICH., Sept. 25.—The anticipated improvement in trade, as foreshadowed in our comments from here a month ago, is being borne out by the business of the month. Trade is better, and though stocks on hand are not only ample to meet all demands, but are indeed heavy, still they are commencing to move. As much as anywhere lumbermen here discuss the likely effects of the tariff on the lumber situation. Some argue that the bringing in of large quantities of Canadian lumber will have the effect of preventing any rise in prices, and may possibly cause a decline. A number of sales of some moment are reported within the past week or two, one of 1,000,000 feet of box at $10, and 1,000,000 feet of log run at $15.50, being among the more noted.

FINISHING LUMBER—ROUGH.

Uppers, 1, 1¼ and 1½	45 00	Fine common, 1 in	35 00
2 in	46 00	1¼ and 1½ in	36 00
Selects, 1 in	40 00	2 in	37 00
1¼ and 1½	40 00	C, 7, 8 and 9 in	30 00
2 in	40 00		

SIDING.

Clear, ½ in	24 00	C, ½ in	19 00
⅞ in	48 00	⅞ in	34 00
Select, ½ in	21 00	No. 1, ½ in	13 00
⅞ in	40 00	⅞ in	23 00

TIMBER, JOIST AND SCANTLING.

2x4 to 10x10, 12, 14 and 16 ft.	$11 00	20 ft	14 00
18 ft	13 00	22 and 24 ft	15 00

For each additional 2 ft. add $1; 12 in. plank and timber $1 extra; extra for sizes above 12 in.

BOX.

1x10 and 12 in. (No 3 out)	14 00	Narrow	13 00@14 00
1x6 and 8 in (No. 3 out)	13 50	1¼ in	15 00 18 00
1x13 and wider	15 00 17 00	1½ in	15 00 18 00
		2 in	15 00 18 00

SHINGLES, 18-IN.

Fancy brands, XXXX	3 45	Standard brands. river made, XXXX	3 00
Clear Butts	2 25	Clear Butts	2 00

WHITE PINE LATH.

No. 1	1 50	No. 2	1 25
		Hemlock	1 00

BOSTON, MASS.

BOSTON, Mass., Sept. 25.—A particularly quiet spot for lumber for many months back has been the Hub, but the past few weeks contain signs of better things for Boston. We are told that there have been many arrivals from Canadian ports, and that fair prices have been paid for the stuff. Spruce has shown an upward tendency and it may be said of all lines that there is an improvement in the market.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$12 00	¾ inch	$ 9 25 9 75
Coarse No. 5		11-16 inch	9 00
Refuse	12 00 12 50	⅝ inch	8 50
Outs	9 00 10 00	Clapboards, sap ext..	50 00 55 00
Boxboards, 1 inch	10 75 11 00	Sap clear	45 00 50 00
⅞ inch	9 75 10 00	Sap, 2nd clear	40 00
		No. 1	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in	$50 00@61 00	Fine com., 3 and 4 in	42 00 46 00
1¼, 1½ and 2 in	52 00 55 00	No. 2, 1 in. Fine com.	28 00 30 00
3 and 4 in	60 00	1¼, 1½ and 2 in	29 00 31 00
Selects, 1 in	43 00 45 00	No. 1 strips, 4 to 6 in.	43 00 44 00
1¼, 1½ and 2 in	48 00 50 00	No. 2	36 00 37 00
3 and 4 in	51 00	No. 3	28 00 30 00
Moulding boards, 7 to 11 in. clear	36 00 38 00	Cut ups, 1 to 2 in	24 00 32 00
60 per cent. clear	34 00 36 00	Coffin boards	21 00 23 00
Fine common, 1 in	38 00 40 00	Common all widths	22 00 26 00
1¼, 1½ and 2 in	42 00	Shipping culls, 1 in	15 00 15 50
		do 1¼ in.	15 50 16 50

SPRUCE—BY CARGO.

Scantling and plank, random cargoes	14 00@15 00	Coarse, rough	12 00@14 00
Yard orders, ordinary sizes	15 00 16 00	Hemlock bds., rough.	12 00 13 00
Yard orders, extra sizes	16 00 18 00	" " dressed	12 00 14 00
Clear floor boards	19 00 20 00	Clapbds., extra, 4 ft.	29 00 30 00
No. 2	16 00 17 00	Clear, 4 ft	30 00 31 00
		Second clear	23 00 24 00
		No. 1	12 00 16 00

LATH.

Spruce by cargo	2 50@2 75

SHINGLES.

Eastern sawed cedar, extra	$2 75 $3 00	Eastern shaved sawed cedar, 1st quality	5 00
clear	2 25 2 50	2nd quality	4 75
2nd's	1 75 2 00	3rd "	3 85 4 00
extra No. 1	1 25 1 50	4th "	3 00 3 25
		Spruce No. 1	1 50

NEW YORK CITY.

NEW YORK, N. Y., Sept. 25.—A spirit of recuperation is manifest in lumber in the metropolis. Not very many large sales are to be noted, but there is more general demand for lumber, a result of an improvement in trade

conditions in all lines of business, and lumber is receiving a portion of the gain. The demand for low grade stuff, particularly box, is quite considerable, and some are saying that white pine stocks will be scarce before the season is over.

WHITE PINE—WESTERN GRADES.

Uppers, 1 in.	$44 00	@45 00	Coffin boards	20 00	22 00
1¼, 1½ and 2 in.	46 00	47 00	Box, in	$17 00	@17 50
3 and 4 in	55 00	58 00	Thicker	17 50	18 50
Selects, 1 in.	40 00	41 00	Ceil'g, base, fig. No. 1	40 00	42 00
1 in., all wide	41 00	43 00	No. 2	35 00	37 00
1¼, 1½ and 2 in.	43 00	44 00	No. 3	24 00	26 00
3 and 4 in.	52 00	53 00	Shelving, No. 1	30 00	32 00
Fine common, 1 in.	36 00	37 00	No. 2	25 00	27 00
1¼, 1½ and 2 in.	38 00	40 00	Molding, No. 1	36 00	37 00
3 and 4 in.	46 00	48 00	No. 2	34 00	36 00
Cutting up, 1 in. No. 1	28 00	30 00	Bevel sid'g, clear	22 50	23 00
No. 2	21 00	23 00	No. 1	22 00	22 50
Thick, No, 1	29 00	32 00	No. 2	20 00	20 50
No. 2	24 00	26 00	No. 3	16 00	17 00
Common, No. 1, 10 and 12 in.	22 00	23 00	Norway, c'l, and No. 1	23 00	25 00
No. 2	20 00	21 00	No. 2	20 00	22 00
No. 3	17 00	18 00	Common	18 00	19 00

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N. Y., Sept. 25.—Where the tendency had been for prices to weaken, the situation during the month shows a change in this respect. Those looking for bargains have been here, but they have not found them as readily as at other times during the past summer. Box men are encouraged by the number of orders they have been able to book. Shingles are somewhat slow.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in.	$46 00	48 00	Shelving, No. 1, 13 in and up, 1 in.	31 00	@33 00
2½ and 3 in.	52 00	55 00	Dressing, 1¼ in.	25 00	26 00
4 in.	58 00	60 00	1¼x10 and 12		26 00
Selects, 1 in.	38 00	39 00	1½ in.	24 00	25 00
1¼ to 2 in.		42 00	2 in	26 50	28 00
2½ and 3 in.	47 00	50 00	Mold st'ps, 1 to 2 in.	33 00	35 00
4 in.		52 00	Barn, No. 1, 10 and 12 in.	21 00	23 00
Fine common, 1 in.	35 00	38 00	6 and 8 in.	20 50	22 00
1¼ and 1½ in.	37 00	38 00	No. 2, 10 and 12 in.	18 00	19 00
2 in.	39 00	40 00	6 and 8 in.	18 00	19 00
3 in.		45 00	No. 3, 10 and 12 in.	14 00	16 00
4 in.		45 00	6 and 8 in.	13 50	15 50
Cut'g up, No. 1, 1 in.	27 00	29 00	Common, 1 in.	16 00	18 00
1¼ to 2 in.	33 00	34 00	1¼ and 1½ in.	18 00	20 00
No. 2, 1 in.	17 00	18 00	2 in	19 00	22 00
No. 2, 1¼ to 2 in.	23 00	24 00			
No. 3, 1¼ to 2 in.	18 0	19 00			

ALBANY, N.Y.

ALBANY, N. Y., Sept. 25.—Greater activity has been noticeable in the lumber market since the tariff bill was passed, and dealers, if they do not like some features of this bill, are encouraged by the activity in trade that is showing itself. Planing mill men are somewhat fearful of what the result may be to them, but as has been remarked before from this point, time will alone tell the true inwardness of the matter.

PINE.

2½ in. and up, good	$56	$60	10-in. common	$15	$16
Fourths		58	12-in. dressing and better	28	34
Selects		50	Common	15	17
Pickings		45	1¼-in. siding, selected, 13 ft.	40	45
1¼ to 2-in. good	52	55	Common	15	17
Fourths	47	50	1-in. siding, selected	38	42
Selects	42	45	Common	15	17
Pickings	37	40	Norway, clear	22	25
1-in. good	52	55	Dressing	16	18
Fourths	47	50	Common	11	15
Selects	42	45	10-in. plank, 13 ft., dressing and better, each	c.	c.
Pickings	37	40		42	55
Cutting-up	22	27	10-in. plank, 13-ft. culls, each	23	25
Bracket plank	30	35	10-in. boards, 13 ft., dressing and better, each	28	32
Shelving boards, 12-in. up	30	32	10-in. boards, 13-ft. culls	17	21
Dressing boards, narrow	19	21			

LATH.

Pine	$2 40		Spruce	$2 30	$2 40

SHINGLES.

Sawed Pine, ex. XXXX	$4 40	$4 50	Bound butts, 6x18	$5 90	$6 00
Clear butts	3 15	3 25	Hemlock	2 15	2 30
Smooth, 6x18	5 50	5 60	Spruce	2 20	2 30

THE TORONTO INDUSTRIAL EXHIBITION.

BELOW will be found particulars of some of the exhibits at the recent Industrial Exhibition in which the readers of THE LUMBERMAN are likely to be most interested :—

Robin & Sadler, of Montreal and Toronto, presented an attractive showing in the east end of the Machinery Hall, of samples of all kinds and sizes of leather belting, laces, belt dressing, &c.

Messrs. Cant Bros., Ltd., of Galt, Ont., presented a new instrument in the form of a hollow chisel—working either horizontally or uprightly, useful alike for the very lightest and the heaviest work.

The Canadian Rubber Co., of Toronto, claim to have gained many pointers by experience, and the goods they now turn out are a great improvement as regards durability and appearance on those of earlier years. They showed their usual lines of belting, hose, seamless tubes, &c., and are bringing out shortly a new stitched belting, particulars of which will be duly placed before our readers.

The Goldie & McCulloch Co., Ltd., of Galt, Ont., exhibited a band rip saw, a Buzey planer, a tenoning machine and several wood split pulleys: also a lime extractor, heater and filter, a number of purchases of the latter having been made at the Exhibition.

The Canadian Mineral Wool Co., Ltd., of Toronto, presented neat compact samples of their asbestos goods, steam packings, cotton waste, gaskets, steam and boiler covering. The Company is now manufacturing its wool in Toronto, thus reducing the cost of its material.

The Dodge Wood Split Pulley Co., of Toronto, placed before prospective purchasers a large variety of their well known split pulleys; also for the transmission of power and for hoisting purposes their tallow laid manilla ropes. They have specially made a new pulley for dynamos and motors. All their pulleys were running at high speed and attracted a good amount of attention.

Barber & Watson, of Meaford, Ont., had on exhibition one of Barber's Canadian Turbines, which is apparently easy to handle, quick to respond, steady and sturdy in motion. The firm also manufacture gearing, hangers, shafting, pulleys, saw mill machinery and machinery and castings of all kinds. They have had an experience in the above lines of trade extending over a period of 26 years.

Messrs. Shurly and Dietrich, of Galt, had the most imposing show in the Main Building, being their exact World's Fair exhibit, for which they received the highest awards. Their racer saws, which are exported to the States, are made of the celebrated Jessops' steel and ground and finished by special process known only to the firm. The circular saws exhibited were from 1 inch to 90 inches in diameter.

The Whitman & Barnes Manufacturing Co., of St. Catharines, Ont., had in the Main Building an exceedingly artistic, compact and well arranged exhibit of machine knives. The firm have factories in the States, with branches in England and France, the St. Catharines works being the Canadian branch. It is stated that in the manufacture of their products they use the largest quantity of sheet steel of any firm in the world.

The Hart Emery Wheel Company, Ltd., of Hamilton, Ont., showed in running order their Rogers Automatie Band Saw Filer for band re-saws from 2 to 6 inches wide. This machine is simple in design and easily operated. The pawl moves to the left at about 45 teeth to the minute. The emery wheel moves in and out of each tooth as it passes, grinding either front, throat or back, or all three, as may be deemed necessary.

William C. Wilson, of Toronto, had an attractive display in the Machinery Hall of all kinds of lubricating oils and grease, engine packing, belting, electric carbons, cotton waste, &c., also samples of ammonia oils—the latter being subjected to a very high cold test and being specially prepared for ice makers and brewers. Mr. Wilson's stand was well arranged and decorated with electric lights, which showed off his exhibit to advantage.

F. E. Dixon & Co., 70 King St. E., Toronto, showed samples of different kinds of belting—round belts, rubber belting, cotton and lace leather, belt studs, twisted raw hide belting, and their Goodyear welting. The firm supplied the 18-inch double belt which was driven by the 40 H. P. engine belonging to the Johnson Electric Co. to run part of their machinery, and during the time of the Exhibition it had been in use had not stretched.

Messrs. Cowan & Co., Galt, Ont., presented a very good exhibit in the Machinery Hall, consisting of a 10 inch endless bed, 4 sided molding machine, with self adjusting pressure bar used on any shape molding. The firm will shortly bring out a new molder, adopting an entirely new principle. The Company also manufacture for Mr. Moffatt, of Woodstock, Ont., a patent feed water heater, being a lime, mud and soil extractor as well as a condenser.

Messrs. Small & Fisher, of Woodstock, N. B., exhibited the "Getchell" shingle machine, the carriage of which passes the saw opposite to the side on which the arbor is attached, so that a larger shingle can be cut with a smaller saw than can be done when the carriage runs on the same side as the arbor. The bolt being set while the carriage is advancing slowly towards the saw, receives no jar, and consequently saws a more even shingle. The machine is exceedingly easy to operate, no extra counter shaft being required to drive the jointer.

The Northey Manufacturing Co., Ltd., of Toronto, exhibited in the Machinery Hall several of their well known pumping engines. The one that attracted most attention from those practically interested, was their Underwriters' Fre Pump, the dimensions of which were 14x7x12, giving a capacity of 500 gallons of water per minute—equal to 2.1⅛ inch smooth nozzle streams—the engine, to produce this result, was driven at the rate of 70 revolutions per minute. The Company also showed an independent condenser, capable of supplying the wants of any steam engine of 200 H. P.; a brewer's air pump, with automatic regulator, as well as several small duplex feed pumps.

The Wm. Hamilton Manufacturing Co., Ltd., Peterborough, Ont., had on view the "Boss Turbine Water Wheel," which they claim gives the highest percentage of useful effect for every cubic foot of water used. It is made in dry sand, having smooth, even surfaces. The improved water wheel governor made by this Company is claimed to be the most simple, durable and efficient in connecting rapidly any disturbed motion of machinery driven by water power. The Company also manufacture Perkins' celebrated shingle mill, M. Covel's improved saw sharpener, and all kinds of high class saw mill machinery.

J. H. Banes, of Toronto, made quite a success in showing "The Phillip Mitreing Saw and Dado Machine" in the Machinery Hall. During the exhibition there was always a crowd of practical men examining the working of this new machine, which is peculiarly adapted to fine work, especially in the housing of stair strings, dados, shelving, window frames, doors, &c. The circular saw itself can be quickly adjusted to any angle, and can cut perpendicular or any mitre right or left, at any degree, and by its adaptability it produces the finest possible work, doing away entirely with the rough, ragged edges so commonly seen. The saw is usually driven at a speed of 1800 to 2000 revolutions per minute, although when tested at the Exhibition it was running at the rate of 2300 revolutions.

The Waterous Engine Works Co., of Brantford, Ont., exhibited one of their heavy band saw carriages, which is built with the best materials—head blocks of verder steel; segments and pinions of wrought cut steel; track very heavy, weighing 20 lbs. to the foot; set works being of Hector Gawley patent, double acting, and so constructed that not one-hundredth part of an inch is slack in the operation of the lever, thus insuring perfectly accurate cut lumber. The carriage is also provided with offset suitable for band mill work. This carriage is driven by Gunshot feed, which is much admired by practical lumbermen who have seen it in operation. The firm's enterprise has been rewarded by the sale of this particular carriage to Messrs. McRae Bros., of Ottawa, who are placing it in the Calabogie mills on the Kingston and Pembroke railway. The Company have gone extensively into the manufacture of saw mill machinery, and are sole makers of the celebrated "Allis" band mill, and also W. H. Hill's specialties, such as steam niggers, log kickers, &c. They had also at work two No. 3 Champion portable engines, driving a number of agricultural implements.

A. R. Williams, Soho Machine Works, Toronto, had at the Industrial Exhibition, Toronto, this year one of the largest and most varied exhibitions in Machinery Hall, consisting largely of iron working machinery, lathes, planers, drilling machines, etc. His radial drill drilling to the centre of 50", and drilling at any angle without changing the position of the work, attracted special attention. He also showed a large assortment of the celebrated "Reeves" wood-split pulleys, a shaft loaded with these pulleys being constantly in motion. These are claimed to be the strongest wood-split pulleys manufactured, being nailed and glued throughout and the arms being built into the rim giving them great firmness at this joint. The quartered bush in these pulleys gives great adhesion to the shaft, while the arm is so constructed as not to fan the air and to be easily bolted to the shaft. Another attractive feature was a row of the celebrated Pickering Governors, also in operation in front of his exhibit, the name "A. R. Williams" being artistically worked in twist drills of the celebrated Cleveland make. He also displayed two cases of brass goods and machinist tools very neatly and tastefully arranged, while his Sturtevant heating and ventilating apparatus was in full blast, the engine driving the same being attached to the shaft of the fan; the effect of this blast was neatly shown by red, white and blue ribbons attached to the discharge of the fan. This celebrated heating and ventilating apparatus may be seen in operation in the Massey Music Hall, the Massey Mission Hall and in dry kilns in various parts of the city and province. He also had in operation one of his celebrated duplex Worthington pattern steam pumps supplying the water for the cascade at the east end of the building. He also showed one of the Barnes foot power lathes which are so much in demand among the manufacturers and repairers of bicycles; while in the rear on a table was a fine display of lathes and drill chucks of the best American makers. The same exhibitor showed at the east end of Machinery Hall outside of the building a wood-yard apparatus, consisting of a portable engine and boiler, swing cross-cutting wood saw machine, and the Hildrith patent single wood splitter, cutting and splitting the wood used by the various engines on the ground. This exhibit very justly attracted great attention, and the exhibitor deserves credit for his enterprise, and his men credit for the taste displayed in arranging and operating the machinery on exhibition.

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TALKS WITH WOOD-WORKERS.

A BRANCH of wood-working that calls for some idea of taste and nicety in the performance of the work is that of veneering. A bad piece of veneering is an eye sore to the most unskilled eye and it is unbearable to the practised eye. A contributor to Carpentry and Building tells us that to treat a door with a thin veneer and do it right is a pretty hard job for one who is not used to the business, and the veneer is apt to let go from the core and blister. The best veneer for doors, etc., is ¼ to ⅝-inch thick. It is much easier to work than thin veneer, and gives greater satisfaction in all cases. In order to veneer a door the operator needs clamps, cauls, hot irons or water cans for moving over the surface of the veneer to keep the glue from setting too fast, and until the cauls and clamps are in place and screwed up tight; a few veneer tacks and sufficient extra weight handy to put on the cauls where the clamps do not give it an even pressure on the lock rail. Use good glue and cook it well—until the water is boiled out of it. Get out the veneer of the proper size for stiles and rails, making allowance, however, on the stiles, for mitering the veneer on the outer edges of the door. The shop should be at a high temperature when veneering is to be done. Stand or lay the pieces of veneer close to the stove so they will become very warm, while the door is placed on the bench and the tools gathered together. Have the irons hot, or if water cans are used, fill them with water which is boiling hot. We now veneer the door. The latter can be glued up like a "regular" or driven together, trued up and cleaned, but not sand-papered. Drive it apart and veneer each piece separately, after which the door can be glued and wedged before the edges are veneered. The cauls should be made to suit the width of the stiles and of sufficient length to fit the parts where used. They should be true and straight on the surface next the veneer. Everything being ready heat very hot the piece of veneer to be put on; then with a brush quickly spread the glue on the core, after which lay on the veneer, tack it in place, put on the cauls and clamps, set them up hard and make sure that all parts of the veneer are pressed tightly down to the core. Take up the next piece and treat it in a similar manner, and so continue until all the pieces are veneered on one side. When the glue is hard on the first piece reverse it and veneer the other side in the same manner, so continuing until all the work is done. Drive and clamp the door and clean the veneer, using a sharp scraper, but no sandpaper. A No. 0000 glass paper can be used after the scraping is done. Do not rub across the grain. In fitting the doors allowance must be made for twice the thickness of the veneer and the plate for hinges, etc. Strong dark glue is the best. In order to tell good glue take a piece between the fingers and bend it. If it does not crack or fly to pieces, but bends tough, showing no signs of snapping, it is a glue that will hold if properly cooked. A copper steam heater is, in my estimation, the best for glue. A little vinegar added to the glue will prevent its setting too fast, but it dries slowly.

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In the present day of changes in the manufacturing of building materials, as in the world of manufacture generally, the intelligent workman is interested in following up developments along this line. The Northwestern Lumberman, in a recent issue, describes a new building material made of ¼-inch strips of wood, from ¾ to 1¼ inches wide, placed between two sheets of heavy strawboard and united under heavy pressure with a strong cement. The process of manufacture is peculiar. Into the machine that moulds the board are run two sheets of the strawboard from rolls, one from above and one from below a table onto which are fed from a feeding device the strips of wood. A roller running in a tank of the liquid cement rolls upon the inner surface of the sheets of strawboard, and the three layers of material run together between rolls and into a hydraulic press capable of exerting a pressure of 120 tons to the square inch. Ten feet of the board is stopped automatically for a few seconds in the press, then run out upon a table fitted with cut-off saws, where it is sawed to the desired length. It is then run upon trucks, placed in the dry kiln, and when taken out is trimmed to 18 inches in width. The strength of the board as compared with its weight is marvelous. The ends of an 18-foot board can be brought together without breaking or warping it. No conditions can warp it. Wall paper is put upon the board, and the finish is as fine as upon any plastered wall. The strong points claimed for the board are: It is not more expensive than first-class plastering. It forms an absolutely air-tight wall. It stiffens a building much more than any coat of mortar and lath can. It is quickly put on, and produces no dampness, thus causing no swelling and shrinking of floors and castings. It is light, thus avoiding the dragging down of the house frame, the consequent cracking of walls and the warping of door frames. It forms a solider, cleaner, warmer, drier wall at no more expense than is involved in the old way.

JAS.

AUCTION SALE OF TIMBER LIMITS.

THE auction sale of Canadian timber limits that had been announced for the Board of Trade rooms, Toronto, on August 29th, brought together a considerable number of lumbermen from various parts of Ontario and Quebec, and among these were a fair sprinkling of United States lumbermen. Prominent among those present were: J. Bryson, M. P., Pontiac; C. McLachlin, Arnprior; C. Leduc, J. C. Brown, Peter McRae, Wm. Charleson and others from Ottawa; Alex. Barnett, Renfrew; R. O. McConnel, Mattawa; Robt. Klock, Mattawa, Thomas Hale and T. Mackie, Pembroke; William Little, Montreal; Mossom Boyd, Bobcaygeon; J. B. Miller, Parry Sound; R. Thompson, Hamilton; Dr. Spohn, Penetang; T. Conlin, Thorold; W. D. Gladman, Parry Sound; P. C. Whitney, Minneapolis, Minn.; Morris Quinn, Saginaw, Mich.; "Archie" McKinnon, Saginaw, Mich.; J. Vincent, Saginaw, Mich.; E. M. Fowler, Detroit; William Peter, Columbiaville, Mich.; Matt Slush, Mount Clemens, Mich.; besides such well known local lumbermen as John Waldie, Joseph Oliver, Thomas Meaney, the Messrs. Campbell, of the Muskoka Mill and Lumber Co., William Smith, (J. B. Smith & Co.), Geo. Bertram, John Drynan, James Tennant, W. Cook and Nicholas Garland.

The limits offered for sale had an area of 1864 square miles, of which 817 were in Ontario and 1047 in Quebec, and altogether embraced the following lots: 36 miles in Caldwell Township; 36 miles in Dill; 22¼ miles in Butt; the Latour limits on the Upper Ottawa, 230¼ square miles in extent; the Kippewa berth, 64 miles on the Upper Ottawa; berths, 23 and 6, 34¾ miles in the Township of McClintock; berth 5, in Livingston, 8⅜ miles; berth 71, in Snider, 27 miles; berth 1, in Livingston, 13¼ miles; berth 2, in Finlayson, 10¾ miles; berth 3, in McCraney, 11½ miles; berths 19, 20, 21, 25, 27, 65, 67 and 68, Rainy River district, 50 miles; berths in South and North Burleigh, 34 miles; berths 2, 3, and 4, Thunder Bay District, 22 miles; berth 8, Thunder Bay district, 37½ miles; berth 7, Lake Expanse, Upper Ottawa, 16¾ miles; berths 51 and 43, Lake Huron district, 72 miles; the Lauzon limits, comprising berths 597, 598, 599, 601, 602, 603 and 604, in the Upper Ottawa district, 145½ miles; berths 591, 592, 593, 594 and 600, Upper Ottawa, 126¾ miles; berths, 394 and 395, 100 miles, on the Black River, Upper Ottawa; berths 512, 513, 514, 515, 516 and 517, Upper Ottawa, 300 miles in all; berth 3, in McMurrich, 5 miles; berth 3, in Perry, 3½ miles; berth 1, in Pringle, 23¾ miles; berth 205 in McMahon, 36 miles; berth 200, in Morin, 36 miles; berth 193, in Houghton, 36 miles; 28½ miles in Striker, 36 miles in McGivern, 15½ miles in Mississagua reserve, 3¾ miles in Cobden, 10½ miles in Township 155, and the Blind River mill.

The sale was under the management of Mr. Peter Ryan, trade auctioneer, whose success in connection with the last government sale, as also with other lumber sales in the province, gave expectations of a successful sale in the present case. These hopes, however, were early blighted, whatever the cause may have been. The list of properties embraced many desirable limits in the Georgian Bay territories, along the Ottawa, and in certain parts of Quebec. But neither the ability of the auctioneer, nor his good nature, nor enthusiasm, could get business moving with any degree of encouragement. As a matter of fact only one limit was sold, namely, 36 square miles in the township of Caldwell, district of Nipissing, the buyer being Mr. Nicholas Garland, of Toronto, who started the lot at a "sporting bid," to use the auctioneer's phrase, of $100 a square mile, and he made the final bid of $140. With the other lots on the list it was either impossible to get bids approaching nearly to the reserve bid or else there were simply no bids at all. Mr. Ryan at one time of the sale announced that he was "waiting with patience and with that christian fortitude, of which I am so famous" for further bids, but the bids did not come. Again he endeavored to start the steam going by remarking: "You don't seem to be aware that the Cleveland administration has allowed the tariff bill to be passed without the President's signature. You don't seem to have read the newspapers. Let us have a bid!" Still the bids did not come. Lot 20, which was purchased for $555 per square mile at the government sale of 1890, did not find a single offer. "So much for the reputation of a decent government," facetiously added Toronto's registrar-auctioneer. No one seemed to take an interest in a virgin limit, heavily timbered with superior white pine in the township of Livingston, "where $17,500 a square mile was bid for a limit not one whit better," said the auctioneer, "at the Government sale." At the close of a little more than the first hour the sale was brought to an end, no business really being done.

In view of the adoption of free lumber by the United States government the result of the sale was a surprise to many, and yet as one studied the complexion of the audience assembled, and there were at least 150 lumbermen in the rooms, it did not look as though anyone had come with a very serious determination to buy lumber. Mr. Ryan was, of course, disappointed, but viewed the matter philosophically, and to-day has as great confidence in lumber as an asset, as the most sanguine lumberman in the country. The LUMBERMAN'S representative talked with leading lumbermen present at the sale after the business of the afternoon was ended and he certainly did not find anyone in the dumps. Mr. Quinn, of Saginaw, remarked: "There is one thing I have always observed at sales of limits, and I have attended them since 1881. In a sale of private limits like the present prices did not rule nearly as high as when the limits are owned by the government. Your Ontario Crown Land Department get right along higher prices than the limits are worth and I am blessed if I know how it is. If these limits had been government limits there would have been a lot of sales." Mr. E. E. Lauzon, of Ottawa, was of the opinion that people were a little timid because of the unsettled state of affairs. "The banks", said he, "have lots of money but are afraid of it. The sellers are rich and can afford to wait for their price." One lumberman plainly said that the sale was a bluff, the object being to determine values. Mr. Little, of Montreal, did not think the result of the sale could be taken as indicating in any way the real condition of the lumber market. "The truth is," said he, "times have been so depressed for the past year that whilst lumber is a good asset, the banks are yet chary of giving out any large amount of capital until business commences to get around once more to something like normal conditions." Mr. J. Bryson, M. P. argued that owing to the taking off of $1.00 a thousand from white pine those having limits to sell have made big increases in prices at which they are willing to sell. "A number of Ottawa lumbermen," he said, "attended the sale prepared to buy but owing to the way in which the limits were bid up by the agents of the parties selling they bought nothing." The concensus of opinion was perhaps summed up in the remark of a shrewd local lumberman, that "everybody had all the lumber on hand just now for which they could readily find a sale, and they were not in a buying humor. No doubt later not a few of the limits that had been offered for sale by auction would find buyers by private sale and at satisfactory prices."

SOUND GOSPEL.

IT is the prompt attention to little things that makes the successful engineer. The careless man is dropped at a convenient moment, and he has hard work to get another "job." The greater dangers are seen by all, and almost anyone can make the proper provisions. The engineer who scents danger, which may result in two or three day's "shut down," or a possible explosion, is the one who gains his employer's confidence and finally lands on top.—Safety-Valve.

VIEWS AND INTERVIEWS.

A Camphor Tree.

While camphor was formerly produced in Sumatra, Borneo, and other parts of the East Indies, says the Scientific American, all now known to the trade comes from Japan and Formosa. The camphor tree is a large evergreen of symmetrical proportions, somewhat resembling a linden. It bears a white flower, which ripens into a red berry. Some of the trees are fifteen feet in diameter and live to a great age. A group of trees in province of Toosa, about a century old, are estimated to be equivalent to about 40,000 pounds of crude camphor. The camphor is extracted from chips taken from the roots or from the stem near the root, the wood yielding about five per cent of camphor, and the root a larger proportion. The annual export of Japan camphor averages about 5,000,000 pounds. The forests in Japan owned by the people are now almost denuded of timber, but the government still possesses large woods of camphor trees, which, it estimated, will maintain a full average supply of the gum for the next 25 years. Plantations of young trees are also making and are well taken care of, and, although camphor has not hitherto been extracted from trees less than 70 or 80 years old, it is expected that under the present intelligent management equally good results may be realized in 25 or 30 years. The Japanese Department of Forests, which has the control of these woods, is under good management.

Big Wages.

One of the difficult things to hammer into the head of the average workman is that labor done in a perfunctory manner never pays anyone—never the workman. Conscience thrown into work will in the end bring its return. Writing on this line a contemporary sensibly says: "It is common for young persons to determine the quality of their work by the prices which they are paid for it. "I only get," says such a one, "$5 a week and I am sure that I am giving $5 worth of service. If my employer wants more let him pay more; if he wants better let him give better wages." This is a specious reasoning, but it is false, and it is destructive to the best work, and therefore to the best manhood. No man can afford to do anything less well than his best. He who always strives to do his best work, in the very process of striving, will grow better. Not only will he grow more and more skillful in that particular workmanship, but he will be better equipped for workmanship. This is an absolutely universal road to promotion. The man who is careful to give nothing more than he gets, rarely gets more than he gives. The man who works for his own sake, who puts the best part of himself into every blow that he strikes, who mixes all his work with brains and conscience, who studies to render the largest possible service, regardless of the compensation which it brings, sooner or later will find his way on and up. The world learns his worth."

Running Saws.

In a series of ably written papers appearing in the Wood Worker one Junius is discussing what goes to make a successful mill man. In this connection, referring to the matter of running a saw successfully, he says: "It is important for the beginner to learn that a saw can not be run by the guides. A slight inclination one way or the other can be controlled by the guides, but when the saw shows a positive disposition to run "out" or "in," the remedy is not in the guides, but the fitting or shape of the blade must be changed. My rule is to fit the saw square and run in that way. It is bad practice to file a saw "out" or "in" to make it run straight, as it leaves the points in bad condition for swaging the next time, and requires more power to run it. If the tension is right, a few blows of the hammer, placed on the opposite side from the way it inclines to run, and at the proper locality, will balance it up and if the fitting is square the saw will straighten up all right. To find the proper point to place the blows, is the filer's work on the anvil by an examination with his short level. If the saw "snakes," the only remedy is to get it the right tension, and any attempt to hold it with the guides will only aggravate the trouble by heating the rim. Observe closely the actions of your saw, remembering that the same causes produce the same effects, and when your saw acts a certain way you will soon learn to detect the cause—and when you know the cause, it is easy to apply the remedy."

Making an Ice Road.

The operations of the logger and shantyman has always proven a popular theme for magazine writers. In the current number of Cassier's Magazine there is an interesting illustrated article on life in the logging districts, written by one who has evidently a considerable knowledge of the practical side of lumbering. Speaking of the making of an ice road, this writer, Mr. B. W. Davis, says: "The whole outfit necessary for making an ice road consists simply of a water barrel on runners with a stove under it, a four-horse team, and a tool called a marker or rut-cutter. The operation is simple. The first move is to go over the road with a snow plow, making a wide level track, after which the tank on runners is filled with water, the stove under it being kept supplied with dry wood fuel to prevent the water from freezing. The tank has two spouts just over and at the back end of the hind bobs, the entire rig being something like a street sprinkler, except that the water runs out in two solid streams, and the tank is of square section and long to fit a "bob sled." The rut-cutter is attached to the back end of the runner, cutting a groove in the snow and dirt of the road; the water falls into the rut this cut, and Jack Frost does the rest in very short order. The shape of the groove is the reverse of the sled shoes, the runner being convex and the groove concave. By this method it will be readily seen that we have produced a grooved ice railroad in which the logging sleds slip along with very little effort on the part of the horses. As a rule, the logging roads are built beside a brook bottom which flows toward the river, and as a result the loaded sleds are hauled down grade and the empty sleds up grade, making it easy work for the team."

NEW ZEALAND TIMBER.

THE charge has sometimes been made against architects, that whilst they are called upon in their profession to deal largely with the product of the forest, yet few of them have any practical knowledge of timber and timber trees. This is not, however, to be said of all architects. At the meeting of a British Architectural Society recently a paper on the subject of New Zealand timber, and incidently the timber of other countries, showing a comprehensive knowledge of the subject, was read by Mr. C. E. Oliver, F. S. I. Among other things Mr. Oliver said:—

"The architect of the present day must need add largely to the old list of woods of which he should have an intimate knowledge. The fact that the best class of Baltic woods are becoming increasingly difficult to obtain, and the Canadian pine rising to such a high price, together with the extremely low steamer freights now obtained, is bringing many other kinds of wood within our reach, which, but a few years ago, were scarcely known in England outside of Kew Gardens. The British timber market lays under contribution every country in the world—the value of timber annually imported into this kingdom is about £16,000,000—and in London or Liverpool may be found the best stocks of timber ever gathered in any city. From Europe we import some twelve or thirteen different timbers, from Asia about fifteen kinds, Africa twelve or thirteen kinds, North and South America something like fifty kinds, and from Australia and New Zealand six or seven kinds. While as yet there are no signs of that "wood famine" predicted by some, I think that we certainly will be driven further afield for our supplies when quality is of more consequence than quantity. The United States have practically ceased the exportation of yellow pine, and now import immense quantities from Canada. Baltic provinces appear to be simply inexhaustible in point of quantity (but how long can they maintain a supply of the better class of deals is doubtful); however, the huge timber industry of Russia, Finland and Sweeden will for long ensure us in England of having a supply of cheap timber. It is considered by good authorities in the trade that many years will not elapse before lumber will be dearer in America than it will be in Europe, owing to the large increase in the consumption in the United States and Canada itself. The forests of New Zealand, although comparatively small when contrasted with the huge belts of timber land in North America, contain such a large variety of valuable timber trees that they must prove of enormous value in the near future. These forests are said to cover an area of over 20,000,000 acres, about half of which are Crown lands, and the greater part of the remainder is in the hands of the European population. New Zealand is so well watered and so well adapted to the growth of timber, that even when forests are cut down they soon reproduce themselves, but this is no excuse for the wanton waste which often takes place after trees have been felled for timber purposes. The forests are known to contain forty distinct varieties of timber trees, more than twenty of them are suitable for architectural work, cabinet making, and many other purposes. Active steps to promote a large export trade are being taken by the Midland Railway Company of New Zealand and the Kauri Pine Company (Limited), who both possess most valuable concessions of excellent timber lands. For some years past kauri has been imported into this country, and ship builders who are ever pioneers in the use of wood have really acknowledged its splendid qualities. Now it appears to me that if kauri (the most costly of the New Zealand timbers) can be imported here at a price enabling us to use it freely, I think the same might be done with many other woods, such as the red pine, black pine, totara, &c. This, no doubt, you will consider a matter for the timber trade to settle, but I think otherwise. Timber merchants naturally only supply what there is a demand for, but if architects had a better knowledge of the timbers of various lands, and inquired for them no doubt we would soon have a large choice. Of course, shippers will not send woods which are unknown to our profession, and which may have to lie in stock for years before going off. The Colonial Exhibition, and now the Imperial Institute, in London, will, I believe, do a great deal to help this forward, and the day may yet come when our middle-class houses will be fitted with natural woods and the paint pot almost banished. This would be another step towards the "house beautiful." The indigenous forest of New Zealand is evergreen, and the general character of the woods resembles the growth of Tasmani and the Australian continent, most of the woods are harder, heavier, and more difficult to work than the European and North American timbers. They vary, however, very much among themselves, and are mostly very durable. The majority of the trees rise to a height of 40ft. or 50ft. before putting out their branches, a detail which ensures the production of a large amount of clean regular grained wood of great size, an article which is becoming more and more difficult to obtain in Europe and America.

RUSTING OF BOILER SHELLS.

IN a paper read in Germany on the rusting of boiler shells, the author concludes that the most serious cause is the introduction of air with the feed water. If the feed water enters the boiler near the low-water level he concludes that it will soon be expelled with the steam, unless it has a chance to accumulate in pockets. Such pockets rust rapidly. The feeding, he advises, should be completed before stopping for the day, so that the water standing in the boiler over night shall be as free from air as practicable. Faulty construction, the author believes, is the frequent cause of internal rusting. For preventing rusting he recommends: First, while the boiler is working—(1) Removing the air from the feed water before it enters the boiler. (2) Removing air from the water while in the boiler, and preventing its accumulation in pockets, etc. (3) Addition of chemicals to the feed water. (4) Protective coatings applied to the inside of the shell. Second, while the boiler is standing idle—(1) Removing all moisture from the boiler, (*a*) by blowing it off while hot, (*b*) by producing an air current through it, (*c*) by placing hygroscopic bodies inside. (2) Direct protection of the shells, (*a*) by painting with tar, varnish, etc., (*b*) by covering with protecting the shells from varying temperatures by keeping the draft in the flues constant, and so as to prevent moisture alternately depositing and evaporating on the shell. (4) Protecting the shell by completely filling the boiler with water from which all air has been expelled.

CULLERS' EXAMINATIONS.

FOLLOWING is the list of successful candidates in the log cullers' examinations, held at Callender on August 14, and at Parry Sound on August 21. There were in all 66 applicants, of whom 41 were successful: William Adams, Westmeath; J. Armstrong, McKellar; Robert Brown, Starrat; Hugh Beaton, Waubaushene; Arthur Bailey, Parry Sound; J. H. Burd, Parry Sound; Samuel J. Bailey, Orillia; William L. Clarmont, Gravenhurst; Thomas Cahill, Nosbonsing; Manly Chew, Midland; James E. Cooper, Simcoe; L. P. Didrer, Aylmer, Que.; Patrick J. Devine, Sheenboro', Que.; Joseph H. Errington, Sundridge; Henry J. Edgington, Parry Sound; James Eager, Parry Sound; William H. Featherstonehaugh, Penetanguishene; W. H. Gillespie, Cook's Mills; William Greyfire, Huntsville; David Ganton, Trent Creek; William J. Hogg, North Bay; E. P. House, Fabrine; Walter Hawkins, Pembroke; James Howard, Eganville; William A. Johnson, Castleford; Henry Jerris, Wisawasa; John Kendrick, Burk's Falls; John L. Kennedy, Burk's Falls; George F. Loring, Coldwater; Daniel Matheson, Chelmsford; William Milne, Ethel; William McGaw, Callender; L. McMillan, Callender; John L. McDermott, Orillia; Charles M. McDonald, Pembroke; Benjamin McPhee, Pembroke; John E. Magee, Parry Sound; Charles Ramsey, Sudbury; Arthur Rankin, Cache Bay; Gavin F. Turner, North Bay; Joseph Tilson, Burk's Falls.

A CLOSE CALL.

ANOTHER narrow escape by an engineer: He was inspecting one of a pair of boilers. The water had been blown out of one, and he entered it through a small manhole in the head. After finishing his work he called out to his assistant to turn on the cold water, thinking to make his way out immediately. By mistake the fellow turned on the scalding, streaming stream from the other boiler, the hissing and pouring of which made a doubly dense roar in the resounding cylinders, and coming at the entrance of the manhole effectually barred the exit, and made escape from a terrible death almost impossible. Creeping as close as he dared to the seething steam he shouted to his aid to turn off the water. He could hear the fellow moving around among the pipes, but waited in vain for him to come. The man had not heard him. His voice was stopped by the hissing, boiling, mocking water. It was rising among the pipes, at his feet. A few moments more, he thought, and he would have been cooked alive. There was but one chance left opened—to force himself through the scalding water and out the manhole. Delay any longer would be fatal, and he plunged face and hands through the cooking stream into the air beyond. Just then the steam stopped. It had been turned off at last.

A DIFFERENTIAL SPRING GOVERNOR.

A DIFFERENTIAL spring governor for steam engines is among the recent mechanical inventions of note, the device possessing the advantage of being applicable either to control a valve by which steam is admitted to the engine valve chambers, or to directly actuate the cut-off mechanism of any customary type of valve. In its construction there is a fulcrum lever, one arm of which connects the device with the valve or cut-off stem, and the other with a collar sliding upon the governor spindle. The governor balls, or weights, have short arms connecting with a bar fixed to and rotating with the spindle, and other arms extending outwardly on the opposite side connecting with the bar which is slidable upon the spindle and which actuates the movable collar. The angles formed by the levers—which extend out from the opposite side of the balls or weights—are internal angles, so that, as the balls are thrown outward, these balls are brought more nearly into a straight line with each other. A compression spring acts to return the parts when the centrifugal force is reduced.

A NEW material intended to be used as a substitute for leather in covering belt pulleys is made of wood pulp combined with various ingredients for making it tough and pliable. It may be secured to the face of the pulley in such a way that the rivets will not show through the working face.

THE trolley car was put to a new use in a near-by city one morning recently. A thief was escaping in a hack, and a policeman boarded a trolley car, and the motorman let her out in chase. The horse gave out first, and the thief was captured.

AN English lumber trade journal states that the Kauri pine of New Zealand has rapidly established itself in public favor and its consumption bids fair to improve considerably. It is being substituted in place of Californian red wood for several prominent cabinet, coach-building and shop-fitting purposes, and its many intrinsic qualities may improve upon a greater acquaintance. An excellent cargo of logs, planks and boards of Kauri pine was recently landed at Liverpool.

Lumberman

: : : : : We have Special Values in

Japan Teas

a line of Nagasaki just suitable for Camps and prices RIGHT. Drop us a post card for sample. : : : : :

EBY, BLAIN & CO.

WHOLESALE GROCERS - TORONTO, ONT.

Pumps & HYDRAULIC MACHINERY

DUPLEX AND SINGLE STEAM AND POWER

NORTHEY, LD. TORONTO

MAGNOLIA METAL'S IMPORTANT CONNECTIONS.

THE Magnolia Metal Company have just received on order from Messrs. J. I. Thorneycroft & Co., Admiralty Machinery Contractors, of Chiswick, to be used in the Torpedo Destroyers they are building for the British Navy. The following is a list of vessels in the British Navy, in the bearings of which the Magnolia Metal is used: "Fervent," "Ardent," "Zepher," "Hood," "Hawke," "Crescent," "Boxer," "Bruiser," "Edgar."

The following testimonials given by some of the most eminent Marine Institutions of this country, which are builders of the War Vessels of the United States Government, and for Steamers of Private Corporations, show that the Magnolia Metal is used in the highest class of Marine Work, and is more meritorious and successful than any other Anti-Friction Metal for that kind of work.

THE COLUMBIAN IRON WORKS AND DRY DOCK CO.
OF BALTIMORE CITY.

Office and Works, Locust Point. Baltimore, Md., June 8th, 1894.

MAGNOLIA METAL CO., 74 Cortland St., New York, N. Y.

Gentlemen:—In reply to your enqui y of 6th instant, we take pleasure in stating that Magnolia Metal was used in the engine bearings of Cruisers Nos. 9 and 10 "Montgomery" and "Detroit," wherever anti-friction metal was required.

Very respectfully,
The Columbian Iron Works & Dry Dock Co.
Wm. T. Malster, President.

BATH IRON WORKS, LIMITED., Shipbuilders and Engineers.

MAGNOLIA METAL CO. Bath, Maine, June 4, 1894.

Gentlemen:—In answer to yours of June 1st, we used Magnolia Metal on the U. S. Gunboats No. 5 Machias and No. 6 Castine and Harbor Defense Ram No. 1 Katahdin. This metal was used exclusively in the above vessels.

Yours truly,
Bath Iron Works, (Limited,)
E. W. Hyde, Treasurer.

THE MORGAN IRON WORKS.
Foot Ninth St., East River, NEW YORK, June 25th, 1894.

MAGNOLIA METAL CO., 74 Cortland St., N. Y. City.

Gentlemen:—In reply to your inquiry, we take pleasure in stating that we have used the Magnolia Metal on different occasions and so far as we know, it has universally given satisfaction.

Very truly yours, Geo. E. Weed, President.

NORTH RIVER IRON WORKS.
Hudson St., 12th to 14th Sts., Hoboken, N. J., Aug. 30th 1894

MAGNOLIA ANTI-FRICTION METAL CO.,
74 Cortland St., N. Y. City.

Gentlemen:—We have used Magnolia Metal more or less for many years and have always found it good, and can recommend it for general use.

Respectfully,
(Signed) E. R. Mead.

Have this day given order for one (1) ton Magnolia Metal.
(Signed) W. & A. Fletcher Co.
H. W. Fletcher.

All Marine Engineers should use Magnolia Metal in the bearings of their Steamers, as it will last longer and give less heat than any other Metal. Magnolia Metal is in use by Eight Leading Governments, and is declared to be the best Anti-Friction Metal for all Machinery Bearings.

A large lumber and stave mill is being erected at Wheatley, Ont., for the Sutherland-Innes Co., of Chatham. It will be completed in a few weeks.

4

QUARTERLY ANNUAL INSPECTIONS BY AN EXPERT ENGINEER

Our Steam Boiler Policy covers all loss or damage to the Boilers, also to property of every kind on the premises or elsewhere, whether it is the property of the assured or of others for which the assured would be liable in case of explosion.

SUBSCRIBED CAPITAL, $200,000

FULL GOVERNMENT DEPOSIT

THE STEAM BOILER AND PLATE GLASS INSURANCE CO. OF CANADA

Head Office - London, Ontario

J. H. KILLEY, Consulting Engineer. JAMES LAUT, Manager. S. JONES PARKE, Q.C., President.

REAMER LUMBER CO. LTD.

WHOLESALE DEALERS IN

WHITE PINE

AND

HARDWOODS

41 Park Row New York

Lumbermen

YOUR BUSINESS IS HELPED BY ADVERTISING IN THE . .

Canada Lumberman

MANUFACTURERS OF

Robin & Sadler, Oak Tanned Leather Belting,

Montreal & Toronto.

: : For running in damp places, get our specially prepared SAW MILL BELT : :

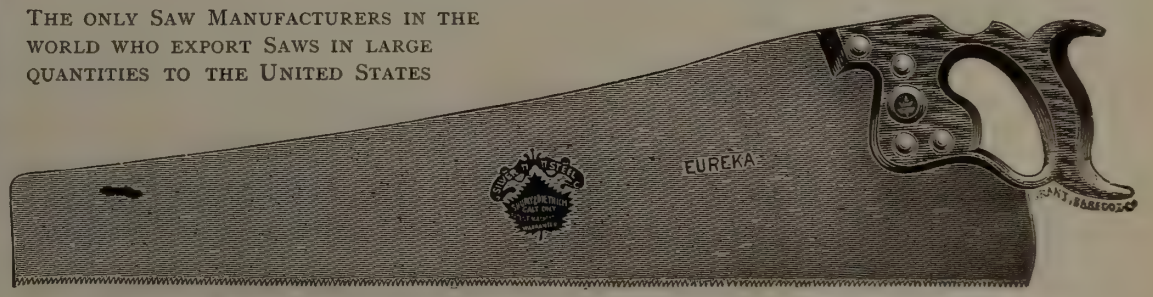
SHURLY & DIETRICH

GALT, ONT.

MANUFACTURERS OF

SAWS

THE ONLY SAW MANUFACTURERS IN THE WORLD WHO EXPORT SAWS IN LARGE QUANTITIES TO THE UNITED STATES



SOLE PROPRIETORS OF THE SECRET CHEMICAL PROCESS OF TEMPERING : : Our Silver Steel Saws are Unequalled

OAK TANNED BELTING

TORONTO
20 FRONT ST EAST
TELEPHONE 475

THE J.C.McLAREN BELTING Co MONTREAL

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 24th of each month to insure insertion in the following issue.

FOR SHINGLES IN CAR LOTS WRITE FOR prices. McEACHERN & CARR, Trout Creek P. O., Ont.

WANTED

FOR HEMLOCK, DIMENSION LUMBER, hardwood flooring, cedar shingles, pi es, sawdust, etc., write J. E. MURPHY, lumberman, Hepworth Station, Ont.

WANTED

AGENCY of some good firm to sell lumber on 5% commission in the United States, mostly eastern trade; understands all grades and markets. "Lumberman," Room 26, Tower Block, Grand Rapids, Mich.

THOROUGHLY EXPERIENCED AND RELIABLE inspector to purchase for an extensive eastern manufacturing concern, stocks of ash, birch, elm, maple, etc., lumber and also piece-stock, from 2 inch and up wide, 18 inch and up long, 1 inch thick, kilndried if possible; specifications upon application. Splendid chance to work up low grades Give full particulars of stocks ready for shipment and references. Addre s CANADA LUMBERMAN.

FOR SALE,

DUNDALK SAW, SHINGLE AND PLANING Mills, two and a half acres for mills and yards; Machinery all in good order. Mills sided and painted. Also three dwelling houses. All will be sold at a bargain. Closing pa tnership. Also a few cars of lumber, elm, rock and soft bass wood, black ash, spruce, birch. For particulars apply to PRENTICE & JORDAN, Dundalk.

FOR SALE OR TO LET

TWO-STOREY FRAME PLANING MILL AND Carpenter Shop—Vine Avenue, Toronto Junction, including boiler and engine, with or without machinery; size of building, 40x120 ft.; steam heated; stable, storehouse, office, and large yard in connection; can be utilized for any manufacturing business. Apply, J. P. WAGNER, Toronto Junction.

FOR SALE

LABERGE MILL, WITH WOOD LAND, over 400 acres, near St. Faustin, County of Terrebonne, P. Q., on Montreal and Western Railway, comprising two H. P. boilers, one 65 H. P. engine, and saw mill co plete—only one year in use—with clapboard machine and planer and log lathe, shingle machine, Champion planer and matcher, &c.; side track; with or without over 200,000 feet of sawed birch and spruce. Good reduction made on cost price. Address to J. LABERGE, 1571 Notre Dame Street, Montreal.

FOR SALE

ACCOUNT REMOVAL—ALL GRADES AND thicknesses of excellent stock of dry Poplar, entire stock of walnut rejects and culls, all thicknesses, principally inch old dry Indiana lumber, mostly kilndried. Splendid for cutting up purposes. Special prices.

P. O. BOX 2144, NEW YORK.

FOR SALE,

STEAM SAW MILL, WITH 60 H. P. STEEL Boiler. new, and 50 h p engine, and 500 acres of land, with a heavy cut of birch and other timber, also a large quantity of black birch, to be had convenient to mill. G. T. R. switch on the premises For further particulars, apply to

JAMES McCARTNEY,
SOUTH RIVER, ONT.

RAILS FOR TRAMWAYS

NEW AND SECOND-HAND STEEL AND iron rails for tramways and logging lines, from 12 lbs. per yard and upwards; estimates given for complete outfit.

JOHN J. GARTSHORE,
49 Front St. West, Toronto.

Sole Canadian Agents :-: Prices Reduced.

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Obtained in Canada.

UNITED STATES AND FOREIGN PATENTS A SPECIALTY.

Engineering Drawings Furnished.

W. J. GRAHAM, 71 Yonge St.
Toronto

TIMBER LIMITS AND MILL FOR SALE

MILL consists of 50 h. p. engine and suitable boiler. One small size Waterous Band Mill with all necessary tools, long carriage, heavy three-saw edger, endless chain, bull wheel rig, 60 inch cut off saw for shingle blocks; two "Dunbar" shingle machines, one combined planer and matcher, and small saws, etc., etc., usually found in mills. The whole in first-class condition, having only been in use a short time and well looked after. Situated at Gaspe Basin, Province of Quebec. Deep water right at mill. Excellent point for shipment to Prince Edward's Island, Cape Breton, and New England ports.

Timber limits consist of 68 square miles on the Dartmouth river, extending one and a half miles back from said river, on either side; always plenty of water for driving. An estimate was given after careful survey on these limits that there are between sixty and seventy millions of spruce and pine and from seventy to eighty millions of cedar. The greater part of these limits have never had an axe on them. As this property must be sold to liquidate an estate it is a rare chance for an investment. For further particulars apply to A. A. BENSON, 718 Craig Street, Montreal; Waterous Engine Works Company, Ltd., Brantford, Ont., or RUPERT J. LOUNDES, Assignee, Gaspe, Que.

.... THE ....

CANADA MACHINERY & SUPPLY CO.

OF BRANTFORD, ONT.

are offering the following

SECOND-HAND MACHINERY

FOR QUICK SALE AT LOW PRICES.

ONE heavy Waterous saw mill, iron saw frame, with a three block carriage, with two intermediate blocks, complete with 67 inch inserted tooth Hoe saw.

THREE complete three block saw mills, with any size saw wanted; two heavy, double planer, matchers and beaders, with eight inch feed rolls; one heavy planer and matcher; one complete heading and stave mill outfit; one complete set of butter tub machinery (American make); one do ble Excelsior cutting machine

BOILERS.—One 60 inch by 14 feet; one 50 inch by 12 feet; one 48 inch by 14 feet; one 48 inch by 12 feet; one 44 inch by 14 feet, and a large number of smaller sizes.

ENGINES.—One 15½x20; one 12½x20, Goldie & McCulloch make; one 12x18, Waterous double cut off; one 11½x18, Thomas; two 9x12, Waterous; one 8½x12, Beckett, and a large number of smaller sizes.

WATER WHEELS.—One 42 inch, Leffel; one 40 inch, Leffel; one 36 inch, Leffel; four 30½ inch, Leffel's; one 20 inch, Barber and Harris, in case; one 17½ inch, Leffel; one 17½ inch, Little Giant; five 15½ inch, Leffel's.

WE also carry a Complete Stock of all kinds of WOODWORKING MACHINERY, IRO WORKING MACHIERY, GRIST MILL MACHINERY, Shafting Hangers, Pulleys, Belting, Etc. Write us particulars of what you want. Address THE CANADA MACHINERY AND SUPPLY CO., Brantford, Ont.

Send for Catalogue.

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ILLUSTRATED CATALOGUE FREE
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TORONTO, CANADA.

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.. Sail, Tent and Awning Maker ..

251 George St. and 154 King St.
PETERBOROUGH

Canoe, Yacht and Boat Sails made to order. Perfect Fits Guaranteed.

Every description of Lumbermen's Supplies and Waterproof Clothing.

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FLINT & PERE MARQUETTE RAILROAD

FROM

Port Huron and Detroit

Is the Short Line to

SAGINAW AND BAY CITY

(Centres of the vast lumber interests of Michigan)

MT. PLEASANT, CLARE, REED CITY
BALDWIN, LUDINGTON, MANISTEE
AND
MILWAUKEE, WIS.

The last-named place reached by the Company's line of steamships across Lake Michigan.

The line thus formed is a short and direct route from

MONTREAL TORONTO
and all Canadian Territory
To ST. PAUL, DULUTH and Pacific Coast Points.

This road traverses a section of Michigan with unrivalled advantages to settlers. Cheap lands, thriving villages and towns, well watered with streams in all directions: a market for every product of Forest and Field.

The policy of the "F. & P. M." is known to all travellers and settlers.

A. PATRIARCHE, Traffic Manager.
GENERAL OFFICES: - SAGINAW, MICH.

Representative Lumber Manufacturers and Dealers

TOWN	Railway, Express, or nearest Shipping Point	NAME	BUSINESS	Power, Style and Daily Capacity
Ottawa, Ont	Ottawa	**Booth, J. R.**	Lumber, Wholesale and Retail	Steam, Circular and Band Mill
Ottawa, Ont	Ottawa	**Bronson & Weston Lumber Co.**	2 Sawmills, White and Red Pine, Wholesale	Water, Gang and Band, 450m
Parry Sound, Ont	Utterson	**Conger Lumber Co.**	Lumber, Wholesale and Retail	
Parry Sound, Ont	Parry Sound	**Parry Sound Lumber Co.**	Saw, Shingle and Lath Mills, Pine, Wholesale	Water, Gang, Circular, Saw 90m, Shingles 70m, Lath 30m
Muskoka Mills, Ont	Midland	**Muskoka Mill and Lumber Co.**, Head Office, Arcade, 24 King st. w., Toronto	W. Pine Lumber, Lath and Bill Stuff, all lengths.	2 Mills, Water, 1 Band, 2 Gangs and 3 Circulars.
Alexandria, Ont	Alexandria	**McPherson, Schell & Co.**	Cheese Box Factory, Pine, Spruce, Cedar	
Almonte, Ont	Almonte	**Caldwell, A. & Son**	Sawmill, Pine, Lumber, Hemlock, Hardwoods	Circular, 3m
Barrie, Ont	Barrie	**Dyment & Mickle**	Sawmill, Pine, Spruce, Cedar, Hardwoods	Steam, Circular, 40m
Barrow Bay, Ont	Wiarton	**Barrow Bay Lumber Co., Limited**	Saw, Shingle and Heading Mill, Pine, Cedar Oak, Oak Railway Ties, Paving Blocks	Steam, Circular, 16m
Blind River, Ont	Blind River	**Blind River Lumber Co.**	2 Saw, Sh. and Lath Mls., Pine, Hem., Bl. Birch	Stm., Band, Cir., S. 75m, Sh. 60m
Bobcaygeon, Ont	Fenelon Falls	**Boyd, Mossom & Co.**	Lumber, Wholesale and Retail	
Barrie, Ont	Barrie	**Burton Bros.**	Lumber, Wholesale and Retail	
Waubaushene, Ont	Waubaushene	**Georgian Bay Consolid. Lumber Co.** Hd. office arcade 24 King st. w., Toronto	Pine only.	Waubaushene mill, stm., 200m; Pt. Severn mill, water, 120m
Calabogie, Ont	Calabogie	**Carswell, Thistle & McKay**	Lumber, Wholesale and Retail	
Callander, Ont	Callander, G.T.R.	**John B. Smith & Sons** Head Office, Strachan Ave., Toronto	White and Red Pine Lumber, Bill Stuff, Lath and Shingles	Steam, 2 Circular, 80m
Collins Inlet, Ont	Collins Inlet	**Collins Inlet Lumber Co.**	Lumber, Pine, Oak, Ash, Birch, Whol. and Ret.	
Glammis, Ont	Pinkerton	**McIntyre, N. & A.**	Saw, Shingle and Lath Mill, Timber Lands, Hemlock, Pine, Lumber, Hardwoods	Steam, Cir., Saw 14m, Sh. 20m
Hamilton, Ont	Hamilton	**BRADLEY, MORRIS & REID CO.**	Lum., Tim., Pine, Hem., Hwds., Whol. and Ret.	
Huntsville, Ont	Huntsville	**Heath, Tait and Turnbull**	Sawmill, Pine, Spruce, Hemlock, Hardwoods	Steam, Circular, 25m
Hamilton, Ont	Huntsville and Katrine	**Thomson, Robert & Co.**	Sawmill, Pine, Spruce, Hardwoods	Steam, Circular, 4m
Keewatin, Ont	Keewatin	**Dick, Banning & Co.**	Sawmill, Pine, Hardwoods, Wholesale	Steam, Circular
Keewatin, Ont	Keewatin	**Keewatin Lumber & Mfg. Co.**	Saw, Lath, Sh. and Pl. Mill, Moving Posts, Pine	Water, Band and Circular, 100m
Lakefield, Ont	Lakefield	**Lakefield Lumber Mfg. Co.**	Lumber, Wholesale and Retail	
Little Current, Ont	Sudbury	**Howry, J. W. & Sons.**	Lumber, Wholesale and Retail	
London, Ont	London	**Gordon, James**	Exp. and dlr. in Am. Hwds, made to specification	
Longford Mills, Ont	Longford	**Longford Lumber Co.**	Saw and Plan. Mill, Tim. Lands and Logs, Pine	Steam, Band and Circular, 100m
Norman, Ont	Norman	**Minnesota & Ontario Lumber Co.**	Lumber, Wholesale and Retail	
Louise, Ont	Elmwood, G.T.R.	**S. B. Wilson & Son**	Hardwoods, Shingles, Lath, Handles.	Steam, Circular, 20m.
Toronto, Ont	Warren, C.P.R	**The Imperial Lumber Co., Limited.**	Pine	80 M. per day, Stm., 2 Cir. Saws
Toronto, Ont	Cache Bay, Ont.	**Davidson, Hay & Co.**	W. Pine, Lath, Shingles, Dim. Timber, Car Sills	Stm, 2 Band, Cir. & Gang, 140m
Toronto, Ont., Mill: Stony Lake	Lakefield	**S. J. Wilson & Co.**	Pine and Hardwood, Wholesale	Steam, Circular, 15m.
Toronto, Ont	Toronto	**F. N. Tennant**	Lumber, Wholesale	
Toronto, Ont	Toronto	**Donogh & Oliver**	Lumber, Wholesale	Com.
Toronto, Ont	Toronto	**Victoria Harbor Lumber Co.**	3 Saw, Shingle and Lath Mills, White Pine, Whol.	Stm., Cir., Gang and Band, 140m
Toronto, Ont	Toronto	**W. N. McEachren & Co**	Lumber, Wholesale	Com.
Toronto, Ont	Toronto	**James Tennant & Co.**	Lumber, Lath, Shingles, etc., Wholesale	Com.
Toronto	Toronto	**DeLaplante & Bowden**	Pine and Hardwood Lumber, Whol. and Retail.	
Toronto, Ont	Toronto	**James McBain Reid.**	Ry. and Ship Timber, any required dimensions	
Wiarton, Ont	Wiarton	**Miller, B. B.**	3 Sawmills, Lumber, Barrel Heads	Stm., Wr., Cir., Port. & Sta., 10m
Montreal, Que	Montreal	**Dufresne, O. Jr. & Frere**	Sawmill, Pine, Spruce, Hemlock, Hdwds., Whol.	Steam, Circular and Band, 50m
Montreal, Que	Montreal	**SHEARER & BROWN**	4 Sawmills, Oak, Ash, Elm, Pine, Hem., Dim.	2 Stm., 2 Wat., Band, Cir., 40m
Moodyville, B.C.	New Westminster	**MOODYVILLE SAWMILL CO.**	Sawmills, P. Fin, Spruce, Cedar, Hardwoods	Steam, Circular, 20m
New Westminster, B.C.	New Westminster	**Brunette Sawmill Co.**	Saw and Planing Mills, Sash, Doors and Blinds. Fir, Cedar, Spruce, Hardwoods	Steam, Gang and Circular
Canterbury, N.B.	Canterbury Stn.	**James Morrison & Son**	Sawmill. Pine, Hardwoods	Steam, Circular, 38m
Bridgewater, N.S.	Bridgewater	**DAVIDSON, E. D. & SONS**	5 Saw, Shgle. and Lath Mills, Pine, Spr., Hwds.	Water, Circular and Gang, 200m
South River, Ont	South River, G.T.R.	**South River Lumber Co., Ltd.**	Pine, Spruce, Birch, Hemlock, Shingles	Stm., Cir., 40m, Shingles, 35m, Lath, 15m

Lumbermen desirous of being represented in this Directory can obtain information in regard to rates by communicating with the Publisher.

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The Montreal Car Wheel Co.

.... MANUFACTURERS OF ....

Charcoal Iron Chilled

RAILROAD WHEELS

OFFICES:

NEW YORK LIFE INSURANCE BUILDING, MONTREAL

WORKS: LACHINE, QUEBEC

We make a specialty of Wheels suitable for the requirements of Lumbermen and Street Car Service, and can supply them Bored, Finished and Balanced.

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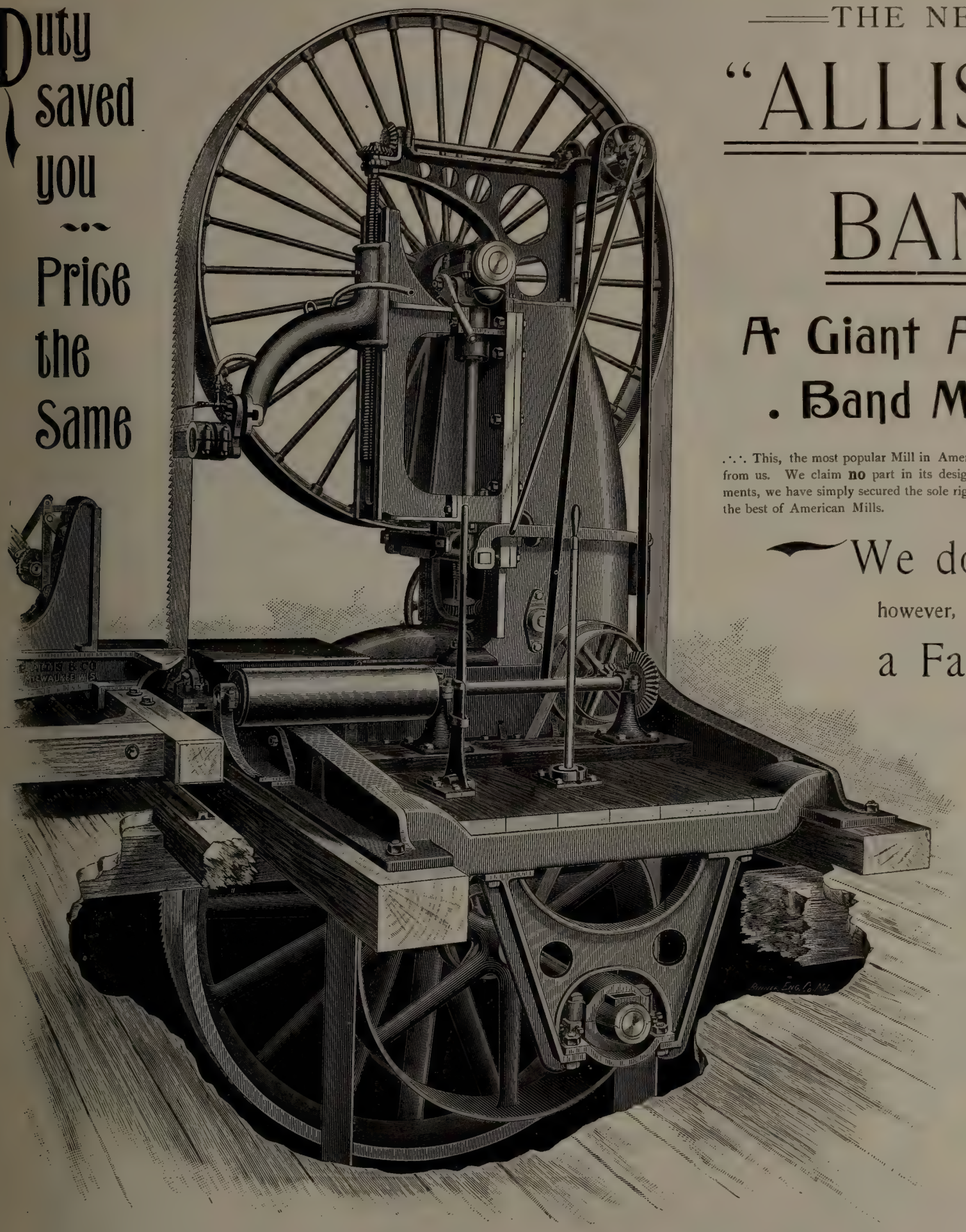
Duty saved you — Price the Same



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"ALLIS BAND"

A Giant Among . Band Mills .

.·.·. This, the most popular Mill in America, requires no eulogies from us. We claim **no** part in its design, invention or improvements, we have simply secured the sole right to build in Canada this the best of American Mills.

We do Claim however, to Build a Fac-Simile

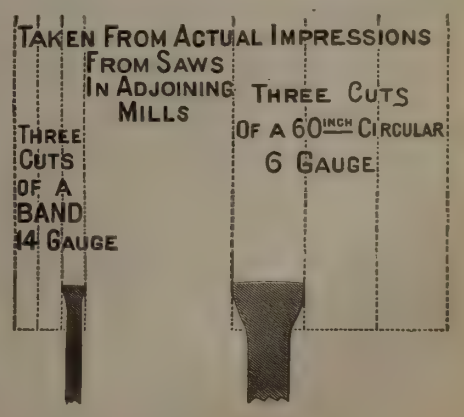
of the Band Mills built by Allis & Co., of Milwaukee, ...

With all up-to-date Improvements

and Guarantee in the strongest manner desired that.....

Our Allis Band Mills are the equal in every respect . . . . of the American built Allis Mills.

WITH THIS GUARANTEE why hesitate to change. The **saving** is enormous. Without practical demonstration you can scarcely realize it. **Saving in Kerf—Saving in Cutting** nearer to size—Saving in cutting to suit quality—Increase in value in medium and very wide lumber—Improved appearance—**Increased Output of Mill**. We guarantee the "Allis Band" to cut equally as fast or faster than the circular mill it replaces. Anticipating a large demand for these Mills during the next 8 months, we offer special inducements for immediate sales—delivery to suit purchasers' convenience. Write us.



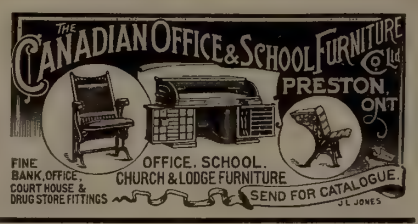
WATEROUS, BRANTFORD, CANADA.

J. D. SHIER

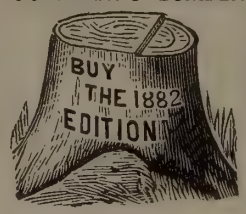
MANUFACTURER OF

Lumber, Lath & Shingles

BRACEBRIDGE, ONT.



SCRIBNER'S LUMBER AND LOG BOOK



Has had a sale of ***over one million copies,*** and is the most complete book of its kind ever published. Gives measurements of all kinds of Lumber, Logs, Planks, Timber; hints to lumber dealers, wood measure, speed of circular saws, care of saws, cord-wood tables, felling trees, growth of trees, land measure, wages, rent, board, interest, stave heading bolts, etc.

. . . PRICE, 35c., POST PAID . . .

Orders have been received for this book from nearly all parts of the civilized world, viz.: United States, Canada, Australia, Cuba, Nova Scotia, South America, West Indies, South Africa, England, Germany, and France.

G. W. FISHER, Box 238, ***Rochester, N. Y.***

F. E. DIXON BELTING CO.

MANUFACTURERS OF

Star Rivet Leather Belting

WRITE FOR DISCOUNTS **70 King St. East, Toronto**

Every Lumberman wants it — **35** cents buys it

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SAVES TIME SAVES MISTAKES SAVES MONEY

BRIMFUL OF EVERY-DAY, PRACTICAL INFORMATION

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J. W. MAITLAND — H. RIXON J. G. AINSLIE — W. STODART

MAITLAND, RIXON & CO.

OWEN SOUND, ONT.

Saw Millers and Lumber Dealers

All kinds of Building Material kept in stock

WE MAKE A ... ... SPECIALTY OF **LONG BILL STUFF IN ROCK ELM, PINE, CEDAR AND HEMLOCK**

Quotations furnished on application

H. P. ECKARDT & CO.

WHOLESALE GROCERS

Lumbermen's Supplies a specialty.....

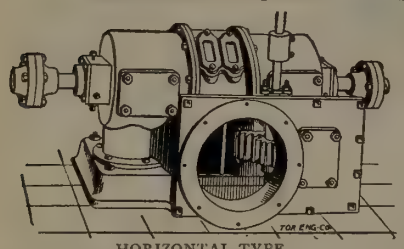
..... Correspondence solicited

H. P. ECKARDT & CO. - 3 FRONT ST. EAST, TORONTO

Little Giant Turbines

WATER WHEELS FOR ALL PURPOSES,

HORIZONTAL OR VERTICAL



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WATER WHEEL GOVERNORS
MACHINE DRESSED GEARS,
PULLEYS, SHAFTING,
. . . . HANGERS, ETC.

Write for Catalogue and Gear Lists.

J. C. WILSON & CO., - Glenora, Ont.

WHY BAND SAWS BREAK

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Being instructions to filers on the care of large band saw blades used in the manufacture of lumber.

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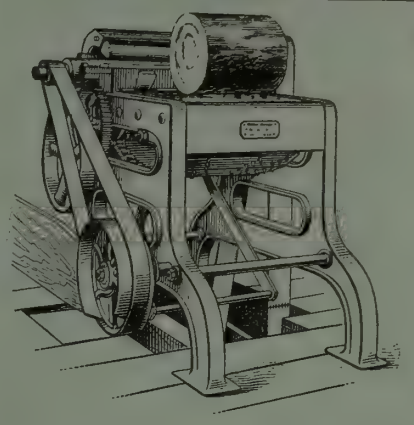

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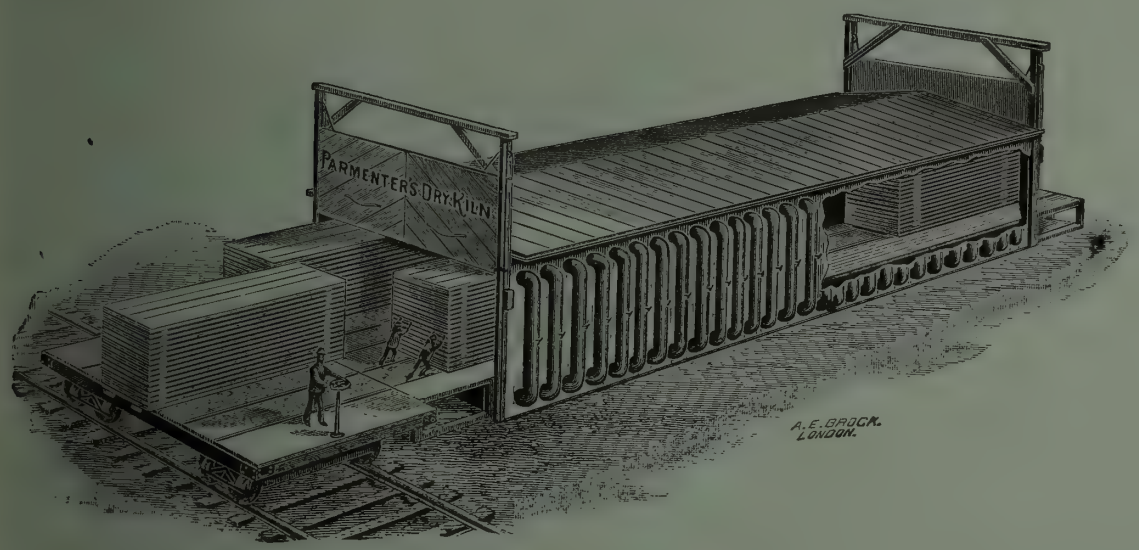

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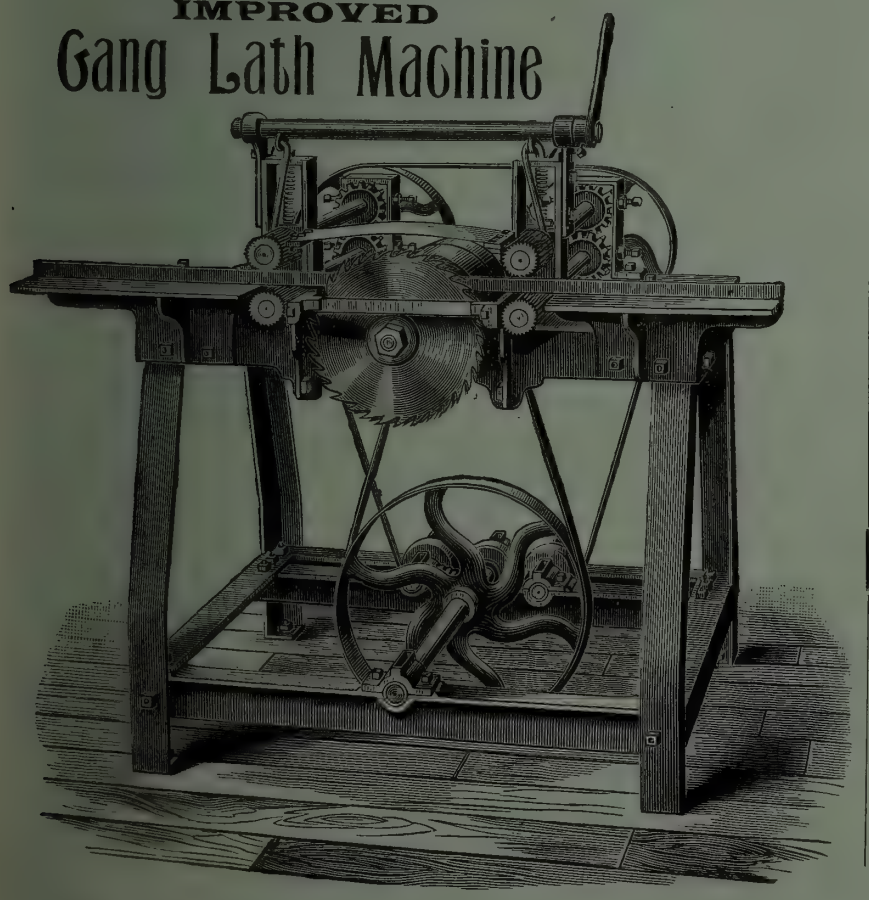

By means of the hand lever shown at top of machine the feed can be stopped instantly. The machine is provided with supports for the lath between the saws; these supports prevent any short pieces of lath from breaking off and becoming stuck between the saws. This is the principal cause of so many Lath Saws becoming heated and ruined.

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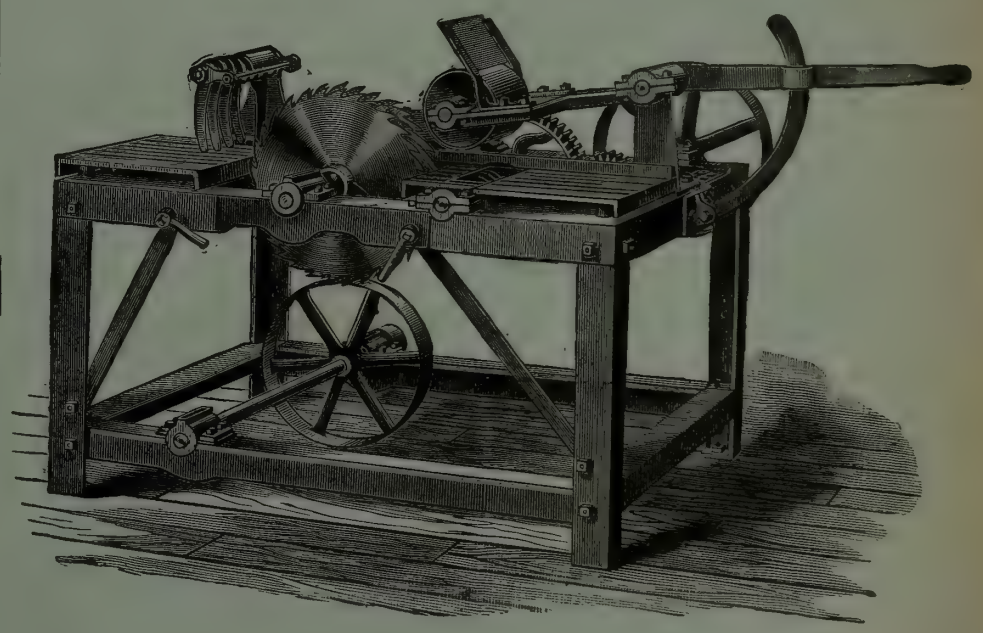

Has solid iron frame, geared feed roller, and heavy binding roll of large size so it will adapt itself to rough or uneven slabs. Heavy steel saw arbor with three bearings. The outer bearing is made with a slight taper, and the box is easily removed for the purpose of changing saws. The drive pulley is 10 inches diameter, 13 inches face. Weight, 1,200 lbs. Speed of saws, 2,500.

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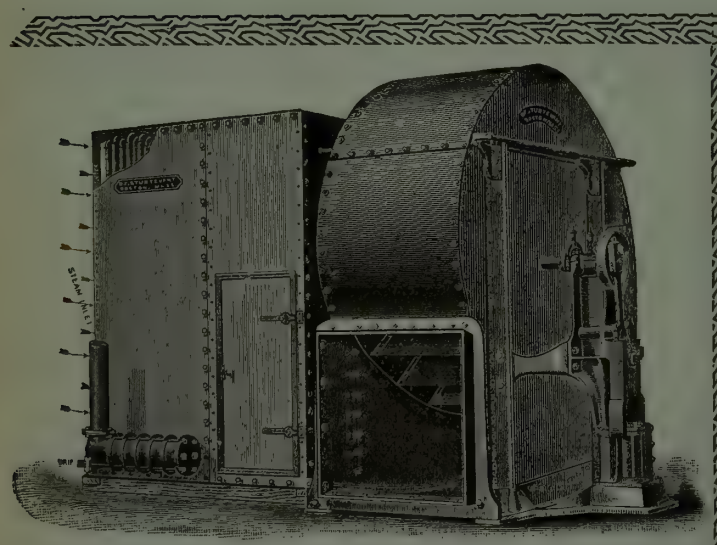

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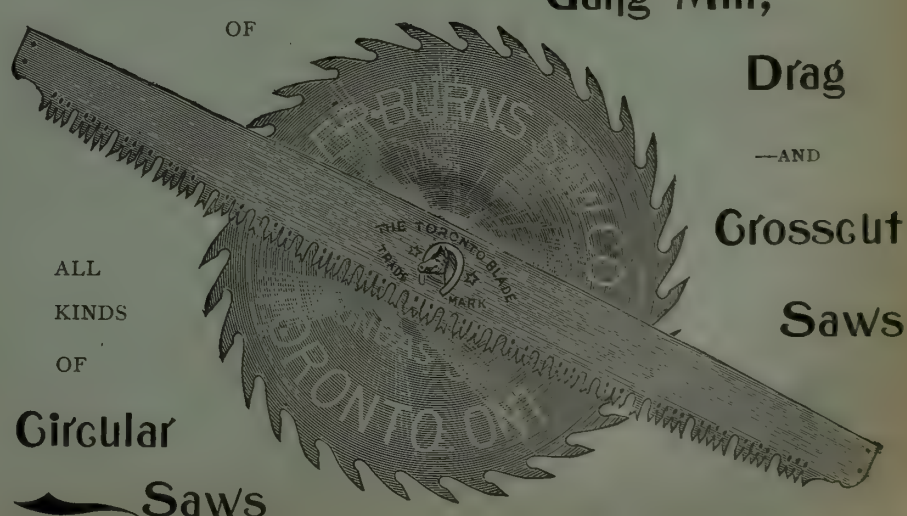

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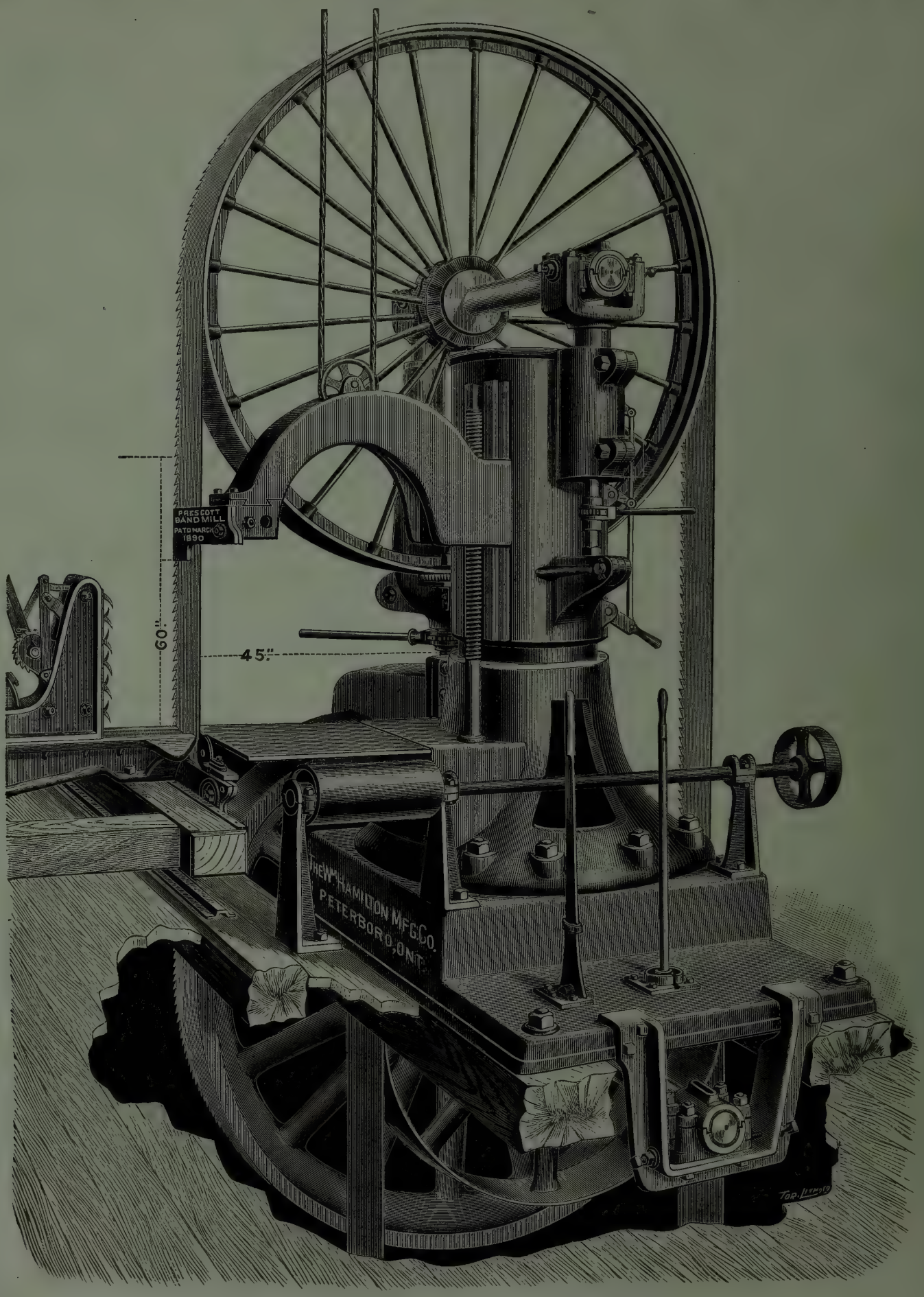

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Yours truly, J. W. Howry & Sons.
Per L. H. Swan.

Ottawa, Sept. 13, 1894.

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Yours truly, W. C. Edwards & Co.
Per G. Gilroy.

Hawkesbury Mills, Sept. 3, 1894.

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Gentlemen: We have had one of your Prescott Band Mills (manufactured at Peterborough) in use at our mills here for two seasons, and beg to say that we are fully satisfied with the work done by it, and we would recommend it to intending purchasers as being in our opinion equal to or superior to any other mill that we know of. You are at liberty to use our testimony, or we will cheerfully answer any references made to us directly.

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SIXTEEN
REASONS,
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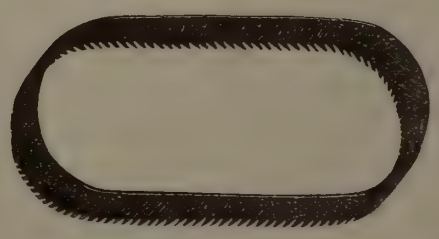

Being instructions to filers on the care of large band saw blades used in the manufacture of lumber.

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THE CANADA LUMBERMAN

VOLUME XV. NUMBER 11. } TORONTO, ONT., NOVEMBER, 1894 { TERMS, $1.00 PER YEAR SINGLE COPIES, 10 CENTS

BY THE WAY.

THERE are various sides to free trade in lumber. Only some three months have passed over since the Wilson Bill actually became law, and within that period, discussion and speculation on the question has sometimes waxed warm, and certainly has been voluminous. In other ways, and elsewhere in LUMBERMAN columns, we have within these three months, discussed the more serious and larger phases of the question. Let us, by the way, look at some of the side lights that reflect their rays upon the larger subject.

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When free lumber was a subject of agitation, but had not become law, our friends to the south of us, saw nothing but ruination to the lumber business, and perhaps it is that Canadian lumbermen were lop-sided in their vision, seeing only the benefits that would come to the trade here, not some of its drawbacks. Now things are commencing to work out practically, and we find there are two sides to the shield in this case, as there are in almost every case. Mr. Meaney, of Robt. Thompson & Co., states in the Eli page that his firm at the Windsor office, are bringing supplies from Michigan, in place of, as had been their custom, having the lumber forwarded to them, from their mills in the north. There is enough difference in freight rates to make it pay this firm better to get their supplies in this manner for their western Ontario trade, than to follow the old line. Business of this character is not being done alone by the one firm. Word reaches us, that a Bay City firm has made a sale of 1,000,000 feet of lumber for shipment to Canada, the logs from which this lumber was manufactured, having been cut in Michigan. Another Windsor concern, who have been buying in this manner, for their Canadian trade, is Piggott & Sons. Mr. Piggott was interviewed about the transaction, and made the following statement: "Heretofore, I have got all my lumber from the Canadian mills on the Georgian bay, but as the duty has been taken off I thought I could do better in Michigan, and I find that I can. We now have free trade in lumber. In my opinion this will be a splendid thing for both countries, as we dealers can now buy either logs or lumber in the cheapest market and sell in the dearest." There seems to be, no doubt, that a good deal of Michigan lumber will come into western Ontario in this manner.

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Again, lumber is coming into Canada from the Duluth territories. We are told of red pine from Duluth that is already on the market in competition with white pine from our own mills. At Grand Marais, 110 miles from Duluth, lumbering operations are more active this fall than usual. 3,000,000 feet of logs are being got out there by a local firm, and these are coming over to this country to Port Arthur mills. Since lumber and logs were made free into Canada, the Duluth people say there has grown up a business of no small importance in this direction, and not less than thirty-five million feet of logs have been towed across the lake from Ashland and other points in Duluth to Port Arthur mills. Manitoba has always drawn its supplies to some extent, from northern Minnesota, in many respects, this being their natural source of supply, and with free lumber, there is no doubt, but that there will be considerable lumber brought into this province in that manner. Quoting the Mississippi Valley Lumberman: "It is a fact, that Minnesota lumbermen are selling lumber in Manitoba this fall, since the removal of tariff on lumber. This seems to be a result of free trade, directly opposite of universal expectation."

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We go further west to British Columbia, and we find a sort of see saw business going on there. British Columbia mills are, in some cases, finding it an advantage to import their logs from Washington territory, and instances of the kind are recorded in our news columns this month. The shoe, on the other hand, if that is not a paradox, is pinching the lumbermen of San Francisco, as British Columbia mills find free trade is going to give them a good opportunity to do business in California. Three British Columbia mills have already established agencies in San Francisco, and they will push trade in that territority. The California market, is, according to the Puget Sound Lumberman, the most important the mill men of Washington and Oregon cater to. It took from the state of Washington in 1893, 195,874,060 feet of lumber, or 14,101,622 feet more than was shipped by rail and to foreign points combined. This market takes many of the commoner grades of lumber which cannot be shipped east or to foreign points, and which would be unsaleable but for the California demand. Puget Sound people accordingly are squealing at this turn in affairs. Contrariwise, it is among the possibilities, if free lumber is to be considered a fixture, that some time in the future United States lumbermen may cross over from Washington territory and elsewhere, and establish mills in British Columbia, just as Michigan men have come into Ontario.

× × × ×

There is a phase of the tariff question, as effecting British Columbia, that is not very pleasant to the people there. Our correspondent from New Westminster notes the fact that a Customs officer has decided that Canadian cedar going into the United States is subject to a duty of 25 per cent. The particular clause on which this decision rests reads: "Except boards, plank, deals and other lumber of cedar, lignum-vitae, lance wood, ebony, box, granadilla, mahogany, rosewood, satin wood, and all other cabinet woods." So good an authority as the Timberman, of Chicago, says: "It is evident, of course, that the cedar referred to in this clause is, or should be the cabinet wood cedar and not the red cedar of the Pacific coast, which is a building wood of similar quality and value to white pine, spruce, fir, and not a cabinet wood at all; but the Custom house officials do not propose to exercise any such discretion in the interpretation of the paragraph, and take it literally, and therefore are imposing the duty." The funny part of the business is, and it gives strength to the view of the Timberman, that cedar lumber was formerly under the McKinley Act, dutiable at 15 per cent., while this new tariff interpretation increases instead of diminishes the duty. Both Washington and Ottawa are being communicated with in regard to the matter and in a little time the decision will be known. In the meantime the Puget Sound lumbermen are doing all they can to see that the present decision of a local Customs man shall be made final.

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THE item embodied in our Ottawa correspondence of this month, that the dues charged by the Quebec government on spruce logs are to be levied indiscriminately, whether for home use or for export, will be welcome news to the lumber trade as removing one possible cause of interference with the new United States tariff. It is in order for the Controller of Customs to arrange his part of the house so as to make things pleasant, and legislators at Washington will be doing the correct thing to make the tariff re. British Columbia cedar read as it was intended to read, applying only to the cabinet wood cedar, without reference to the red cedar of the Pacific Coast.

PROBABLE CUT IN DULUTH.

ONE opinion given forth as to conditions in Duluth and Minnesota, the coming season, and their effect on Canada, is this: "There will be no lumbering of consequence done this coming winter in the territory north of the height of land in this state for Canadian mills. Heretofore the quantity of timber cut and floated down the streams northward into Rainy River and across the Lake of the Woods to the mills at Rat Portage and vicinity has varied from 20,000,000 to 40,000,000 feet annually. This season the only work done in this region will be the cutting of 6,000,000 feet that is under contract made years ago, and so is forced on the market. It is stated that by reason of the low price of wheat and other products of the Canadian Northwest, the combined mills of Rat Portage and neighborhood, which cut from 60,000,000 to 80,000,000 feet a year, have marketed so far this season only about 22,000,000 feet. The timber in the district from which these Canadian mills got their supply is the best in Minnesota, and therefore it has gone only to them. The present dullness in the trade there, however, will have a direct influence in opening a permanent market for it in this state."

A PIECE OF ANTIQUE OAK.

A SMALL block of white oak on the editor's desk, says Hardwood, suggests possibilities in the direction of added beauty and variety to this princely wood. The block in question is one and one-quarter inches thick, and three inches wide by six inches long with vertical grain. It is over 200 years old, and is a piece of a war ship built by King Christian IV, of Denmark, and named Trefoldigheden, (The Trinity). In the naval battle of Kolbergerheide, July 1, 1664, the Trinity was King Christian's flagship, he commanding the fleet. The king was a pugnacious, doughty old fighter and a terror on the sea. The fight was hot and the old sea dog forced it with all his usual vigor. During the hottest part he engaged two of the enemy's ships at once with the Trinity, and while on the deck bare headed and powder stained, urging on his gunners, a shot from the enemy tore off a splinter from the mainmast which struck him in the right eye, completely destroying the sight. Stunned for but a moment, he rallied, and binding a handkerchief over his torn and bleeding eye, he went on with the fight more ferociously than ever. The ship was finally badly damaged, and, setting the example our own Perry followed nearly two centuries later, he launched his boats and transferred his flag to another ship and won the battle and sailed to Copenhagen in triumph, taking the crippled ship Trinity with him. The ship was repaired and served in many a fight thereafter, and survived for more than a hundred years, when, in 1792 worn out and battered, the game old hulk was burned to the water's edge and sunk in the harbor of Copenhagen. There the stout oak timbers and planks remained in a fitting grave for such a gallant thing until in 1881 it was discovered while repairs were being made to the docks of the city, and it was raised and taken to pieces and portions preserved. One of these venerable relics is the piece of oak here referred to. It is as sound as when cut in the northern forest more than 250 years ago, and the grain and texture are as though cut but yesterday; but the color is as black as ebony, and the weight is fully one-half more than that of newly cut white oak. It is evidently susceptible of a very light polish, and ornamented with the monogram of the grim old king, it makes a handsome paper weight.

KIND WORDS.

Knox Bros., Gladstone, Man.: "We consider the CANADA LUMBERMAN the best publication to which anyone engaged in the lumber trade can subscribe."

Jos. Bedford, Richmond, Que.: "I am pleased to tell you that the CANADA LUMBERMAN is improving every year. The subscription of $1.00 is far too low for all the good information we get from it."

A SUCCESSFUL MILL MAN.

By JUNIUS IN "WOOD WORKER."

A MAN has much to learn after he can place the log on the carriage and gig it back and forth to the saw, before he is a sawyer. He must practice the three A's (alertness, activity, accuracy) for both himself and the saw; the saw will be accurate enough if the sawyer knows how to be on the lookout for it and make it do accurate work.

The saw should have nothing to do (that is, no force to overcome) but to saw lumber. I have been in mills where the saws would not make an accurate line for hours at a time, but the sawyer (?) seemed to think it was running all right. The lines might all be about parallel, but none were straight, the saw being subjected to hundreds of pounds side strain at every line. This is true more particularly of band saws, as the circular will generally make such vigorous protest if there is any considerable side friction, that some one about the mill must find the trouble if the sawyer does not know; but the band saw will stand it a while, until it cracks all to pieces or the planer foreman makes a "kick" against the "scoops" and lumps on the lumber. Then, as frequently happens, the filer gets "jacked up" by whoever is in authority, and he in turn lays the blame on the sawyer, and if the foreman is not capable of deciding who is at fault he says the saws are "no account" (and they cannot deny it); but it generally ends in the filer or the sawyer, or both, "taking a walk."

It seems to me an easy matter to fix the responsibility for bad sawing where it belongs. There need be no controversy about it. The sawyer and filer should both be able to tell by the kind of lines the saw makes whether it is properly fitted and tensioned or not, and by its behavior and the noise it makes while in the cut, whether it is the fault of the saw, track, guides, head-blocks, set-works, or from any other cause it makes uneven lines. It is the sawyer's duty to know how to put his track in line and level across, and to properly adjust the mill and guides and keep them in perfect condition, so that if a saw does not "saw wood and say nothing," he can say to his filer: "Here are the levers; if you will take hold and prove the fault is in the machine, or my handling of it, I will gladly admit it." The filer should be able to tell when his saws are all right, and be capable of taking hold of the mill and proving it.

If the sawyer and filer work in harmony they can aid each other very materially, as sometimes a difficulty comes up that is new to one or both of them, and if they are "at outs," each one laying the blame on the other, they are not likely to find the trouble very soon; but if both are trying to locate the cause, there is a good chance of finding it.

Some time ago I called the sawyer's attention to some thick and thin lumber that I found on the truck, and suggested that the set-works were not correct, as each board was of even thickness from end to end and the lines straight, but some of the boards were of proper thickness and others too thin. I also spoke to the filer about it, although it was evidently not the fault of the saw. They were warm friends and both interested in having the lumber correct. One would saw while the other watched. The filer soon detected the offset in making the uneven lines. It was a poorly-devised affair connected by a belt, which, unless kept very tight, would slip at one time and not at another. The sawyer, being used to running a circular mill where the off-set is not used, did not think to look for the trouble there, but the filer, having had experience with off-sets on band mills, knew they sometimes did not work right, and readily found the cause of the uneven lines. My friends accuse me of making a hobby of this work of keeping the track and mill in perfect condition, but as I have ridden it to success on more than one occasion, I may be pardoned for believing it very essential.

I will relate my experience on one of these occasions, as it may help some poor filer out of difficulty, and the beginner may learn to avoid it. Some years ago I had some correspondence with a firm with a view to running its mill by the thousand, and finally went to see the firm and the mill. I found a band mill in a bad shape. It had been running about a year "off and on" (more "off" than on I would judge, from the looks of the saw book, which I afterwards looked over) and had "frozen out" some dozen or more filers and half as many sawyers (that is, they recommended themselves as such to the firm). The building had been put up by contract and the machinery put in on a guarantee of 40,000 feet per day, but so far have failed to come up to it by 10,000 ft., and had resulted in a compromise price being paid for it.

The filer I found at work was about ready to "pack his kit," as he claimed the sawyer was trying to "down" him and that there was nothing fit to work with in the filing room—which was true, as he had it arranged. I told him I was something of a filer myself, but was not looking for work of that kind. He remarked that I or any other man could have his job, as he did not want to lose his reputation on the old trap. It was a question with me whether he would not have been better off without that article, such as it was, but as he was a large man and in a bad humor, I said nothing, as I was not looking for a sore head either. The superintendent was

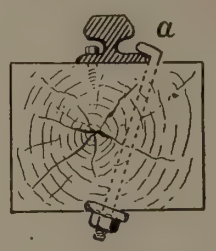

FIG. 1.

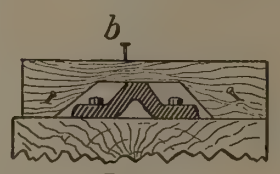

FIG. 2.

an excellent man (and is at present a personal friend of mine) and had been successful with circular mills for the company, but confessed to knowing nothing of band mills. We failed to agree on running the mill by the thousand. As I was leaving, the head of the firm asked me how I would like to take the filing room, stating that the man they had was then on trial and they wanted to give him a fair chance to show what he could do, but rather thought he would not stay long. I arranged with him to let me know if the filer quit and I would name a price that I would come for. In a few days the filer left and I engaged to take his place for one month.

I went out to the mill and found it shut down for want of saws, all of them being cracked more or less and only one good braze in the lot. I tentioned the one and brazed two others the first day, which gave me a "set" to work with. The superintendent came into the filing room the first evening and remarked that he supposed I "would want to change everything around in the filing room, as all the rest of the filers had done," to which I assented. He wanted to know if I had enough saws ready to start up in the morning. I replied that so far

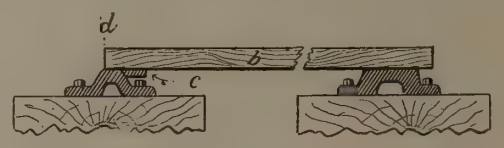

FIG. 3.

as the saws were concerned we might make a start, but I wanted to look over the mill and track before I put on a saw to start. He thought the mill and track were all right, as the millwright had lined them up a short time before, but I told him I preferred to see for myself and I would try and get ready to start Monday morning (this was Thursday evening).

They had just employed a new sawyer, who proved to be a competent man, and under my directions he went to work the next morning to put the mill in good shape. I found the track timbers were 6 × 12 inches, in spans of ten feet, so I put in 6 × 1 inch "shores" from the ground up to the middle of each timber, to prevent springing down from the weight of the carriage and log, and also put in side braces to prevent side spring. The steel T-rail track was so loose it was about ready to fall over, so I put in longer lag-bolts and in addition put in angle-head bolts through the timbers to help hold the rail solid (see *a*, Fig. 1).

I found the track crooked sidewise from ¼ inch to ⅜ inch and "in wind" up and down as much or more. The back end of the lower wheel shaft (eight feet long) was 1¼ inch farther away from the track than the front or wheel end, and to overcome this "lead" the guides were set straight with the track, causing the saw to run in a twist; and as the guide liners were hardened steel, it was easy to account for the cracked saws and broken brazes. (I replaced the steel liners with brass ones in a short time). One who knows any thing about a band mill can imagine how this mill must have run, and there is no trouble to account for the frequent changes of filers and sawyers. I have no doubt that among the lot of filers there were some who knew how to tension and fit the saws, but they missed it sadly in not knowing the condition of the mill. The putting up of the mill frame was a shoddy piece of work—not a mortise or tenon, and the braces nailed in so that it was necessary to line up about every two weeks. I remained my month out and two more, as filer, when the company started a circular mill at another location, placing the superintendent of the band mill in charge of it. I took charge in his place, at his earnest solicitation, and run it satisfactorily for a year.

My success in this case was due as much to having the mill, guides and track in good shape, as it was in having properly-fitted saws. Do not be too hasty to lay the blame on the saw when it makes a bad line; be sure that your part of the work is all right before you condemn that of the filer. It is a simple job to put a track in line and level if it has been properly put down (I will give my plans for putting down a track in a chapter on millwrighting.) It is two straight lines, level across and parallel with each other, and square with the mill, if a band mill, or with the front of the saw a little nearer the track than the heel, if a circular mill. This is called "lead." The amount of "lead" necessary is a matter of opinion. Some successful sawyers run with ⅛-inch in 20 feet, and others equally successful run without any.

In levelling up a track the "shims" or wedges used should be put in between the track timbers and the cross-sills, and should be the full width of the track timbers. I have found it a good plan to use wide shingles when it requires much of a raise, starting one in from each side, allowing them to meet or lap in the middle of the cross-sill. After the low places are all wedged up level, drive a six-penny nail into each wedge just outside of the cross-sill and up into the track timber, leaving it out ¼-inch so as to get a hold on it with a claw-hammer when necessary to again move the wedges. These nails prevent the wedges working loose and coming out.

To line the track, take a fine fishing line (a knitted silk or linen line is best) and stretch tightly from one end of the V track to the other, from nails placed in a cleat as shown at *a*, Fig 2, the cleat toe-nailed to the track timber. If the iron does not extend to the end of the track timbers, a spike can be driven at the end of the iron to attach the line to, and the cleats will not be necessary. To the under side of the straight edge (*b*, Fig. 3) nail a block to fit the bevel of the V track at *c*, the end of the straight-edge just even with the outside edge of the iron top, as shown at *d*, and just touching the line. It is evident if you adjust the track along so that the end of the straight edge just comes up to the line, that the track will be in perfect line. The end of the straight-edge should be tapered to almost an edge up and down, to adjust the line nicely. As I have said, this is all very simple, so much so indeed that I had almost concluded to not mention it in these papers, but I have seen such clumsy attempts at lining up tracks with coarse lines (twine strings and other botching contrivances) that perhaps this description of a neat and accurate way of doing it will not be space misused.

A BROKEN TOOTH.

TO mend a cast gear having a broken tooth the proper method is to dovetail in an iron, taking care not to sink the tooth into the rim deeper than can possibly be avoided, as it weakens the wheel very much. Cut the dovetail wedging from one side to the other to give a chance to fit the tooth and then coat it over with red lead and oil, and set it in solid with a hammer. Three rivets should be used in securing the tooth in place, as every form of a screw will work loose; then the tooth can be faced off with the wheel and brought to its true form by means of a template. But alas! how many are patched up by drilling three radial holes into the rim and setting in pins as tight as possible, and the wheel set going, after they have been pointed off a trifle.

LUMBERING IN NEW BRUNSWICK.

[Special correspondence CANADA LUMBERMAN].

WHEN New Brunswick people speak of the North Shore they generally have in their mind the north-eastern portion of the province, or, to be more exact, that portion contained in the counties of Restigouche, Gloucester and Northumberland. It is in these counties that the most extensive lumbering operations in the province are carried on, so that the expression "North Shore lumbermen" has come to be pretty well known throughout the maritime provinces. Along the Miramichi, the Restigouche and the Nepisiguit rivers, and their numerous tributaries, are situated a number of the largest and best-equipped saw mills in Eastern Canada. Then there is a large number of smaller mills scattered all over the country, some stationary, many portable, a number sawing boards and deals, others manufacturing shingles and laths exclusively. Every winter the owners of these mills send hundreds of men and teams into the woods. They are there from about the first of November until the last of March or the first of April. Many of them are never home during this time. Their supplies are brought by regular supply teams and the five months are given up to lumbering in the strictest sense of the word. So soon as the ice breaks up in the streams the men are re-engaged for the drives, and so eight or ten weeks are spent in getting the logs to the mills or into the booms or ponds, or wherever the owner desires them to be placed. Sawing generally begins along the latter part of May and continues until the supply of logs is exhausted, or until navigation closes. This year the larger number of the mills closed down early in the season, having no more stock on hand. The lumber cut last winter was much smaller than usual. All the old logs having been used, the booms and ponds are practically empty. This is an abnormal condition of affairs, and because of it the lumber cut along the North Shore will be larger this winter than it has been for several years. There is another reason why these operators will carry on a larger business this winter than they did last. The United States market now stands open to them. While the recent tariff changes will not benefit them directly they will indirectly. It is thought that the Quebec and Ontario lumbermen will take advantage of the new law respecting Canadian lumber and find a market for their product in the large American cities, instead of shipping to Great Britain as they have been doing. This action on the part of the Quebec and Ontario operators will give the North Shore lumbermen an opportunity to sell in the British market.

The North Shore mills can quite properly be grouped under three heads, viz: those on the Miramichi river and its tributaries, those on the Nepisiguit river, and the mills situated along the Restigouche river.

Probably the most extensive operations are carried on along the Miramichi. The greater number of mills are situated along this river, the annual cut is larger, and the amount of lumber shipped from than port is larger than that sent out from any other North Shore port. Wm. Richards is one of the largest operators in the province. He has a mill at Chatham on the Miramichi, another at Boisetown on a branch of this river and a third mill at Campbellton on the Restigouche. He ships about 30,000,000 feet annually.

Senator J. B. Snowball owns a large mill at Chatham. He gives employment to 650 men here. A short time ago he purchased the old Sweeney mill at Tracadie. The senator has had this mill thoroughly repaired and has cut some. He expects to cut 8,000,000 feet next year in this mill. It has been idle for several years.

Clarke, Skillings & Co. have a large spool factory at Newcastle on the Miramichi. This firm has shipped 1,000,000 feet of birch to Scotland this year. James Aiton owns a spool factory at Bartibogue on this river; he probably does about half as much business as the other firm.

There is at Chatham a sulphite fibre mill that has been running for five years. It has a capacity of 40 cords of wood or 20 tons of pulp daily. The wood is obtained near the factory. The pulp is sold in the United States. This factory employs 150 hands.

The old Stewart mill at Black Brook, six miles from Chatham, is owned by the Bank of Montreal. They are trying to sell, and it is not known whether or not it will run next year. Some of the other mills on the Miramichi are Hutcheson's at Douglastown, Burchill, Flepp, and Sergeant at Nelson and D. & J. Ritchie and Hickson at Newcastle. These are all large operators. Alex. Gibson has extended the Canada Eastern Railway to Black Brook, so that the mills there can now ship by rail across the province to the United States or by water to England.

The bulk of the lumber cut on the Miramichi is shipped to the British market; a portion, however, goes to France, Africa, and a few odd cargoes to the Canary Islands. About the only thing shipped to the United States is laths.

At Bathurst, on the Nepisiguit river, are to be found the headquarters of the St. Lawrence Lumber Co., of which Senator K. F. Burns is the managing director. This company is registered in London under the English Joint Stock Companies Act. Besides its offices at Bathurst and at Bersimis on the St. Lawrence, it has others at London and Liverpool, and agencies at Paris, Marseilles and Bordeau, France, and at Carthagena, Spain. Its most important property is on the north shore of the St. Lawrence, near Bersimis. Here it controls 775 square miles of timber lands, including what Senator Burns declares is the largest and best spruce property in the world. The Company's New Brunswick property embraces some 300 square miles of timber lands, with a mill at Bathurst and another on the line of the Caraquet Railway. The aggregate cut is about 12,000,000 feet in a season. It is shipped principally to the British Islands. About three-fourths of the Bathurst export is spruce and one-fourth pine. The pine is said to be the finest produced in the province.

This company's Bathurst mill has a capacity of 65,000 feet daily; as it runs both day and night the total output for the 24 hours is about 120,000 feet. The company employ here and at the Burnsville mill some 200 men. J. P. Burns is manager of this mill. There are first-class wharves near the mill and large three-masted schooners can load at the mill without any difficulty. On account of a bar square-rigged ships cannot get in to the wharf, and the lumber has to be scowed out to them. The cut of lumber in this county will be very little if any heavier than last season. The shingle makers have large stocks on hand and the demand is slow. O. F. Stacey has a shingle mill at Bathurst that cuts 5,000,000 annually.

A. E. Alexander, K. Shines, David Richards, A. G. Wallace, Wm. Currie and J. P. Mowat are the largest operators on the Restigouche. The Ontario Lumber & Milling Company has purchased large tracts of timber limits in the Restigouche region and talk of building large mills at Campbellton. It is not yet determined whether or not they will proceed with this work.

By this article it will easily be seen that lumbering along the North Shore assumes large proportions, and is the chief industry in that part of the province. Hundreds of men and teams are employed the year round; many others are employed six or seven months out of the year. The land is not generally adapted for agriculture and it has not been carried on on anything like an extensive scale; in fact, agriculture has been neglected. The inhabitants depend upon the lumber industry almost exclusively.

There was a sale of crown lands at Fredericton the other day, when twelve berths were sold. The upset price is $8 per square mile. A six mile berth was knocked down to F. Stancliffe, Montreal, at $53.50 a mile. F. B. Coleman purchased a 4½ mile berth on the Miramichi at $56.50 a mile. A 4½ mile berth on the Restigouche was sold to Jas. H. Moores for $30.50 per mile. From the above it will be seen that timber lands along the North Shore are rapidly increasing in value.

A. H. MCCREADY.

ST. JOHN, N. B

A prominent buyer and handler of staves said not long ago that there was plenty of money lost to stave manufacturers by carelessness in putting the staves in shape for the market. He said that staves which were put up neatly and compactly in bundles sold for more and sold quicker than those which came into market loosely tied and lacking in tidy appearance.—Coopers' Journal.

TALKS WITH WOOD-WORKERS.

HOW to treat the face of hardwood joinery, says a writer in Timber Trades Journal, frequently requires much consideration and deserves a passing notice. In the case of oak the action of the atmosphere would tone it down admirably; but this takes time and the first appearance of newness is often removed by the fumes of ammonia, which can be regulated to produce any desired shade, and the treatment is a good one when the work is not subject to much handling; where it is, however, beeswax and turpentine are generally applied afterwards, as otherwise the damp heat of the hands will leave dark marks; care must, however, be taken that as much of the wax is rubbed off as possible, or the work will very probably turn yellow in time. After this application the oak will cease to darken, as the wax fills up the pores and prevents any further action of the air. Beeswax and turpentine alone also produce good results on most hardwoods when well rubbed in and a pleasant surface is the result, much the same as the light polish seen on an egg-shell. This treatment is also particularly useful for floors. These, however, require periodical attention. Simple oiling is never satisfactory. French polishing is a very general treatment, but is too well known to need any description. It is of the most vital consequence to remember that damp plays havoc with seasoned woodwork, causing it to swell and warp. It is therefore fatal to put it against damp walls; when it is impossible for these to have time to dry, the wood should be well coated at the back with a damp-resisting preparation and not be fixed close against the wall.

× × × ×

A good preparation for preserving tools from rusting is made by the slow melting together of six or eight parts of lard or one of resin, stirring until cool. This remains semi-fluid, ready for use, the resin preventing rancidity and preventing an air tight film. Rubbed on a bright surface ever so thinly, it protects and preserves the polish effectually, and it can be wiped off nearly clean if desired, as from a knife blade, or it may be thinned with coal oil or benzine.

× × × ×

Only a born genius, says "Job" in London World, can put a fine edge on a woodcutting tool invariably. This truth is not known to many foremen and owners, most of whom take it for granted that, because an operator uses wood-cutting tools, he naturally and necessarily knows how to do all that is required to be done to keep them in the best possible condition for work. The owner or foreman who would like to know whether all such tools are properly and perfectly edged has an interesting bit of investigation before him. He may rest assured that a thorough examination of the edged tools in his plant will startle him.

× × × ×

Embossing machines are jumping to the front in woodworking in a way that must surprise the moss-backs and old fogies, as well as those very remarkable faddists and high-industrial-art purists who contend that any change from the old, slow, irregular and expensive hand-carving is a degredation of art and should be frowned down. There will always be a demand for hand-carved woodwork of the finest sorts. Wealthy people can and will pay for such work, and there is no danger that fine carving will soon become a lost art. In that view of the situation it is not exactly plain that so fine and so cheap a substitute for carving as embossing really is should be called a "degradation of industrial art." On the other hand, embossing really is a movement upward for the majority of the people of this country. The people on the whole are beginning to admire and desire finer furniture and woodwork. Unable to buy the expensive hard carved work, they can satisfy their awakened and elevated tastes with the beautiful work done by the embossers. What possible "degradation of art" is there in this.

JAS.

Burnt boiler plates are due to "low water," to a deposit of sediment or scale, to continue impact of flame caused by leaks of air through the masonry, and when a seem is just back of a bridge wall; but sometimes it is caused from an incrustation, or soap formed from oily matter.—Power.

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Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

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Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

THE DUTY ON BOOM LOGS.

ATTENTION has been directed again to the question of the duty on boom logs, through a letter sent out by Mr. Wallace, Controller of Customs, instructing collectors to collect duty on boom logs and chains, used in the towing of logs from the Georgian Bay waters to Saginaw. This matter caused some irritation, it will be remembered, between the governments of the United States and Canada in May and June last, with the result that the order to exact duties was withdrawn. The supposition was that the order had been rescinded and that we would hear no more about the matter. This, however, does not seem to have been Mr. Wallace's intention. He states that he simply suspended the order and referred it to the Department of Justice. In the interval he has been engaged in other duties and for a time was out of the country. Now, that he has returned, the matter comes before him again with the decision from the Department of Justice that the regulation is quite legal, whereupon Mr. Wallace has taken steps to see to its enforcement. In an interview on the subject the Controller took the ground that it was a simple matter for United States lumbermen to escape payment of duty by complying with section 14 of the customs act, which reads partly as follows: "Any goods or packages being the growth, produce or manufacture of Canada, and having been exported therefrom and intended to be returned, may be admitted free of duty on being reimported into Canada, provided such goods or packages are branded or marked by the collector of customs on being exported." Logs being cheaper in Canada than in the United States, Mr. Wallace suggests that lumbermen make their booms out of Canadian logs. So far as the duty on the chains used in their construction is concerned these are subject to a duty of only 5 per cent., which is not a serious matter. It has been pointed out by an Ottawa correspondent of the Globe: "That as the regulation works both ways the owners of the tugs and booms will be between two fires, because if they comply with section 14 of the Canadian customs regulations they will render themselves liable to pay customs duty on the United States side, so that if they got rid of their American made booms to escape Canadian duty they would bring themselves under the dutiable list of the United States. Under the Wilson Bill the booms would be subjected to the duties imposed on iron chains, because where an article was made of two or more materials it is assessed at the highest rate at which the same would be chargeable if composed wholly of the component material of the cheap value. As iron is material of greater value than wood the iron duties would probably be applied."

It is unfortunate, in connection with tariff affairs, that there should constantly be some trifling matter of this kind cropping up. Commerce at the best is tenderly sensitive and does not usually benefit by the application of irritating forces. It will be a happy day, and one which will, perhaps, as much as anything else, bring commercial prosperity, when governments will learn the lesson that in tariff legislation, above all other classes of legislation, when conditions are fixed they should remain fixed. Whether one may have held to the opinion, prior to the passage of the Wilson Bill, that an export duty should have been placed on logs going out of Canada, or that these should have remained free, there was only one opinion among the level-headed men of the lumber trade, irrespective of political leanings, that an injury was done to the trade in Canada at the time that the Minister of Finance, without saying anything more, stated that he was seriously considering the question of reimposing the duty on logs.

A similar view is taken of the present movement on the part of the Controller of Customs. At the most, the matter is not of any great moment, and the order having been withdrawn at the time, should have remained in that position for all time. The towing season, of course, is practically over for the present, so that it is hardly likely that immediate trouble will ensue. But the Controller's action will remain as a sort of challenge throughout the coming months to the United States government, and in place of helping to solve any differences of opinion that may exist in regard to the details of the tariff, as applied to lumber, and there are yet some points that are not practically clear to the trade, it will serve as a condition to widen these differences.

The temper of United States lumbermen, as reflected through the trade journals of that country, would indicate that at the next meeting of Congress efforts will be made to secure an amendment to the Wilson Bill, which would permit of retaliatory measures from Washington in the case of such action as has at present been taken by Controller of Customs Wallace. One must, of course, take with a grain of salt statements made under circumstances of the kind, but even if modified they go to confirm what we have contended for in these comments that the effort of governments in all such cases should be to allay irritation, rather than to intensify it. The difficulty that exists in British Columbia, through cedar being placed on the dutiable list, and which will probably come before Congress at Washington in some shape will not be helped, so far as Canadian interests are concerned, by this trouble over boom sticks.

LUMBER FREIGHT RATES.

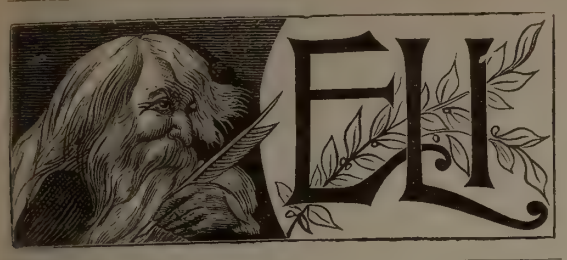
THE reductions that have been made by the Canadian Pacific Railway in freight rates on lumber from Rat Portage and Keewatin to Winnipeg and other points will be acceptable to the lumbermen of that district. Local trade, at least, will be helped. There is room for a general agitation at almost every point for more favorable freight rates from the railways. The burden of heavy freight rates is handicapping the lumber trade of this country. At a conference of the boards of trade of New Brunswick, held at St. John, N. B., within the month a resolution was passed calling for a special lumber rate on the Intercolonial railway from the North Shore points during the winter season to the open winter ports of the Maritime provinces as a means that would add greatly to the business of the railways, and would largely develop the export lumber trade and enable that section of our province to participate in the Canadian export lumber trade to the United States, West Indies, and South American ports in the winter season. In the Ottawa district, were it not for the Canadian Atlantic Railway, and other local lines built largely by lumber capital, the shipping trade there, would be handicapped even further than it is to-day. The complaint comes to the LUMBERMAN from one of the largest lumber shippers in the east, that it would be a sorry position for the lumber trade if they were dependent absolutely on our two great railways. This is a condition of affairs that calls for a determined protest from the commercial interests of the country. The country has richly endowed these railways and enabled them to occupy the position that they do to-day. It is about time that a measure of gratitude was shown and rates made favorable to large shippers. The answer is at hand, of course, from the railways, that their rates are as low to-day as the extent of the traffic that comes to them will permit. A reduction of these rates will extend that traffic, expand the business of the country, widen the outlet in many different ways, and in the growth of commerce through these means no one interest would ultimately be more benefited than our large railway system. The reduction in the Northwest alluded to represent 5½c. per 100 lbs. on C. P. R. rates on lumber from Rat Portage to Manitoba points, and 11c. per 100 lbs. from Fort William on the same commodity.

EDITORIAL NOTES.

THE adage is an old one that with the majority of men, the stable door is not usually locked until after the horse is stolen. After the number and extent of the losses suffered during the past summer through fire, the advice to lumbermen to keep well insured seems rather foolish. But it is by bitter experience, only, sometimes that human nature profits, and the severity of the losses in this manner should emphasize the necessity for every lumberman going at once into the matter of insurance; figure how this compares with the value of his plant and then having fixed his insurance, henceforth watch carefully as the premiums come due, and do not get caught with a fire twenty-four hours after a policy has expired. We write these lines in the interests of the lumbermen, and without a brief from any insurance company.

A STRONG company is that which has been formed under the title of the New York and Canada Lumber Co., Ltd., with Mr. Geo. E. Dodge, president; Mr. Titus B. Meigs, vice-president; Mr. Robt. M. Cox, of Liverpool, Eng., director, and Mr. Guy E. Robinson, general manager and treasurer. The offices of the Company are at 18 Broadway, New York. The thoroughly cosmopolitan character of the lumber business is shown in just such announcements as this. Its international character is indicated by the number of lumber concerns to-day operating in Canada and the United States, composed jointly of Canadian and United States capitalists. In the case of the new company named, we have a well-kown English lumberman constituting one of the company. The size of the average lumber transaction and the fact that lumber finds its way into almost all parts of the world ought to constitute it a missionary agent of considerable influence in making the people of one country acquainted with those of other countries, and it will, no doubt, have a tendency to broaden the views of all who have anything to do with this important commercial product. At the time of the World's Fair, a year ago, we had occasion to note the visit to Ottawa of three prominent lumber merchants from Turkey, whose mission was to inspect the lumber of that district, having learned of its excellent quality, with a view of forming a business connection. Last month a visitor to our lumber markets was here from South America, and so it is, that through its lumber resources this country becomes widely known abroad and the conditions that apply here, as we have intimated, also apply elsewhere. The term of ridicule that in times past had been applied to Canada, as a "blawsted wooden country" is one that can be borne with good grace under all these conditions.

An Ottawa lumberman says: As much speculation has been indulged in as to the value of lumber piles, an expert's opinion might be given. Each complete lumber pile contains variously between from 16,000 to 20,000 feet, and the value of the contents ranges from $7, the lowest grade, to $30 per 1,000 feet of the very highest grade.



IT is amusing to note how opinions vary regarding the probable outcome of tariff changes. Here is what a large manufacturer across the line has said: "The duty on pine and hemlock is only $1 per thousand, and $2 on spruce; but, even with this removal, the way prices are now, the Canadians cannot do anything here. Prices are $3 below what they were a year ago, attributable to the business depression largely and the consequent falling off in the building trade. I do not think it will affect the car mills much, if any, at present at least. The Canadian people, you know, have been educated to deal sawing. They have been catering largely to the export trade, which calls for certain lengths and widths of lumber. These are cut to different schedules from ours. Take one of our schedules into Canada, and they would go crazy, as we are used to cutting the exact measurements down to the inches. The Canadians may adapt themselves to this market, but it will take considerable time, and by that time the old tariff rate may be restored, and I do not believe, with that uncertainty, that capitalists will put their money into Canadian mills to cater to this market."

* * * *

In my travels the other day, I dropped into the office of Jas. Tennant. Mr. Tennant was, at that time, out of the city, but when talking to one of the "men of the road," I was told, that the trade was meeting some competition in lumber from the States. This representative of the grip sack, confirmed what Mr. Meaney has stated in another column, that considerable white pine was coming in from Michigan. He also said that a good deal of Red pine was being brought in from Lake Superior, and that it was cutting a larger figure in competition with white pine than many dealers might suppose. It cannot fill the place of white pine for the better classes of work, but it would, in his view, prove quite a rival to the commoner grades of pine.

* * * *

"We are just moving along quietly," said John Donogh, of Donogh & Oliver. "Business is more healthy in lumber than it was before the tariff was finally passed, but the volume of trade has not increased very much. I do not anticipate that there can be much activity in trade this side of spring. While it is the case that at some lumber centres stocks on hand are somewhat large yet among the trade this is not generally the case. The fact is that dealers have for some time been pursuing steadily a hand-to-mouth policy of buying and no one has large stocks. There is this about the tariff that it is just too soon yet to know how wide will be its benefits to Canadian lumber. None of us know exactly how things are going to turn out, and capitalists are cautious in investing in lumber. What the ultimate outcome will be I have no fears. The trade is going to mend, but this will only come about gradually."

* * * *

In the opinion of Mr. Page, of the firm of Page and Mallett, of Fort Kent, the cut on the American side, at the headwaters of the St. John, N. B., will be smaller than last year. There will be more lumber got out on the Canadian side, however. The stumpage in the province is cheaper, which accounts to a very considerable degree for the bigger cut on this side of the line. Mr. Page says the following will be the quantities of lumber got out on the American side this winter: Page & Mallett, two millions for Randolph & Baker; C. H. Dickey, a million and a half for Stentson, Cutler & Co.; John Sweeney, a million for S. T. King & Sons; Neil McLean, a million for Miller & Woodman; W. H. Cunliffe, two and a half millions; J. A. Lavertie, a million for Randolph & Baker; A. Cushing & Co., two millions; J. L. Stevens, a million and a half for E. L. Jewett; J. A. Morrison, a million and a half for Hale & Murchie. C. A. Nason reports Dunn Bros. & Co., will get out five millions on the Aroostock. Mr. Nason says the cut on the Penobscot, will be larger than it was at first thought it would be. Capt. J. R. Warner is authority for the statement that there were 5,000,000 feet of logs in the St. John river below the falls. There were about 3,000,000 feet in the booms which were being rafted and would be brought to Indiantown this autumn if the water rises sufficiently. An effort would also be made to get into the booms, the lumber which is lying in the river. G. G. King, of Chipman, Queens Co., was asked to state his opinion with reference to the recent regulations in the United States tariff as affecting Canadian lumbermen. Mr. King said, he was aware that a number of provincial lumbermen gave it as their opinion that these regulations would be of no benefit whatever to Canadian operators. He did not think they knew what they were talking about. Personally he felt certain that the benefit would be very great. North Shore lumbermen are making preparations for the woods. Several cars of horses have been imported from Prince Edward Island for the winter's work. The Albert county lumber operators are also preparing extensively for the winter's work. So much for lumber opinion down by the sea.

* * * *

"It is the case," said Mr. Thomas Meany, manager here for Robt. Thompson & Co., "that considerable white pine is being brought in from Michigan into Western Ontario. We have, as you know, an office at Windsor, and it pays us better to bring pine from Michigan than to freight it all the distance from our northern mills to Windsor. This is one of the amusing features of the tariff. In fact you know it has been said that we have been sending our pine to Michigan and that some of this very same pine is now coming back into our hands in the way that I indicate. How correct this statement is I am not prepared to say. We are, at least, getting pine from Michigan, wherever it may chance to have been grown. The man who expected that the new tariff was going to work only one way finds out his mistake. As Canadian lumbermen we are not at all alarmed at this form of competition. The markets of Canada and the States are now open to lumbermen of both countries and we are prepared to have the benefit of the markets of the eastern states even though a certain measure of local trade may be lost to us as a result of this privilege." Mr. Meany says trade this fall is slow. Whilst there is more confidence and a more hopeful outlook since the change in the tariff, he does not anticipate that there will be any great activity in the lumber business until spring. The question of the grading of lumber came up in our conversation. It is one of these questions that, so far as the Canadian trade is concerned, does not settle very easily. Mr. Meany says that there are very few dealers who make any pretense of buying lumber according to inspection. Every man practically inspects his own lumber. The stuff is placed before him; he can use his own eyes and exercise his own judgment as to the quality, and if the price asked is satisfactory and he has got the money to pay for it, that is an end of the transaction. At one point lumber may be offered for sale and called common. Some other man will have lumber equal in quality and he will call it by some other grade, a little better, perhaps, or a little worse. I remarked to Mr. Meaney that this was a drawback to the trade and was suggestive of the necessity of lumbermen getting together and endeavoring to adopt a uniform system of inspection. As a careful lumberman he recognizes the need for this, but was not sure just how easily the matter could be handled.

* * * *

I have been interested as a fellow scribe in the impressions of Canadian lumbering as recorded recently by Mr. John E. Williams, of the Northwestern Lumberman. Brother Williams, of the Windy City, has been taking a trip through Ontario, visiting Toronto, Ottawa, and some other lumber points, with the object of ascertaining what has been, or is likely to be, the effect of the Wilson tariff in putting lumber on the free list. Mr. Williams is a Republican in politics, and of course has his own notions of how a tariff should be constructed, and it is fair to say these do not run parallel with the ideas of the Democratic party, though it is not an easy matter to say where that party stands on the tariff. Mr. Williams also represents a journal, which is in strong sympathy with his own political views, and which lead the "On to Washington" movement in the interest of "American lumber for Americans," when the tariff fight was at its hottest. Knowing these things, and remembering the big bugaboo that free lumber appeared to show itself to our Chicago friend—for the warning was oft and long repeated, "the goblins will catch you, if you don't watch out"—the goblins being none other than those naughty and greedy Canadian lumbermen. Knowing these things, I say, I was interested to see how Chicago opinion would shape after a representative of our contemporary had rubbed shoulders for a brief period with these people who had hitherto been best painted in hobgoblin picture. Well Mr. Williams has returned to his home carrying in his grip sack the assurance to United States lumbermen that they need not scare any more over Canadian lumber. He says in fact to any incoming Republican Congress that they might do worse than leave undisturbed the Wilson bill should power be again given Governor McKinley to formulate and direct tariff legislation. "I am of the belief, after the enquiries I have made," says Mr. Williams, "that we rather over-estimated the importance of the Ontario and Quebec contributions to our market. When you consider that the total export to the United States from these provinces in the year ending June 30, 1893, was only 747,710,000 feet and the total export something over a billion feet, while the Chicago market alone handles annually two billion feet, you will see that the effect upon the trade of the United States cannot be very disturbing." So far as dressed lumber is concerned, this opinion is expressed: "I inquired of some of the Ottawa lumbermen whether they were not looking for some trade in dressed lumber. But they seem to be in doubt as to the fate of the dressed lumber part of the new tariff if the Republicans win at the next election. In the meantime while the uncertainty lasts they do not care to incur the expense necessary to push that part of the trade. For myself I think there is good cause for caution, and that dressed lumber, as it was more than your lumbermen expected, will be found to be more than will meet the approval of the next Government in power at Washington. As for sawn lumber, it is a raw material, and in sympathy with the general feeling favorable to the free entry of raw products the Republicans would have put it on the free list, and now will leave it there." Mr. Williams views, however, are qualified to some extent when he writes of conditions in the Georgian Bay districts, as distinct from the Ottawa and Quebec region. The reduction of the duty on box shooks from 30 to 20 per cent, while it will serve, he thinks, to keep out manufactured shooks, it will not prevent the introduction of planing mills in the Georgian Bay region for the dressing of box lumber for export. The consequences to the Saginaw Valley, will, he argues, in this connection be serious. Mr. Williams goes so far as to say—as a sort of saw-off, perhaps, to his satisfaction with conditions elsewhere—that Canadians are so zealous in their efforts to secure the transfer of both saw and planing mills to the British side, "that customs appraisers are instructed to practically shut their eyes to all such imports notwithstanding that the duty is 35 per cent ad valorem. This circumstance discloses another phase of the insincerity of Canadian professions of indifference previously referred to in these articles. The average Canuck may not be as agressive as his Yankee contemporary, but when it comes to a show-down of comparative guile, the latter is not the worst sufferer." Now Brother Williams there can be no doubt where you hail from. When it comes to a show-down of down-right unmitigated gall, recommend me to Mr. Yank. There is an abundance of contradiction, and not a small quantity of bare-faced impudence all through Mr. Williams' treatment of this free lumber enquiry, indicating that what has been written has not been in the shape of a fair, open enquiry into actual conditions, but is written for a particular constituency, and doubtless with a purpose. The quotation we have given in regard to Canadian customs officers winking at the duty on American saw and planing mill equipment coming into Canada is one sample.

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE anxiety in lumber circles for a time regarding the possible outcome of the Quebec regulations discriminating against pulp-wood operators, who might export out of the province, has been set at rest by the withdrawal of the obnoxious clause by the local government. The order-in-Council, of course, was aimed at United States importers of pulp-wood as a retaliation against the duty imposed on pulp-wood, mechanically ground, or chemical, when imported into the United States from Canada. Some day this phase of the tariff will, no doubt, be fought out, as pulp manufacturers feel that it is a great injustice to them. However, this is neither here or there, so far as present matters are concerned with lumbermen.

The exodus of shantymen from the vicinity of Ottawa is still at its height, and large numbers of young men are being sent up the Gatineau and Ottawa valley to do work in the lumber camps this winter. It looks, and this opinion is entertained by many, as though the cut the coming winter would extend beyond the average, but whether this will be the case it is hard yet to say. There may be a good deal of activity in the shanties in the early part of the season. Whether this will continue throughout the winter, will depend, no doubt, on developments later.

Large quantities of lumber are being sent out from here on the Canada Atlantic Railway, a result of the stimulus to trade through the change in the United States tariff.

Though practically out of the lumber business, everyone here is interested in the undertakings of E. B. Eddy, of Hull, and the preparations he is making for the extension of his paper manufacturing business are just now being watched with interest.

The last of the season's logs taken down by the Upper Ottawa sweep are now in Fort William boom. The towing season is said to have been the heaviest on record.

Two steamers have been chartered by the Export Lumber Co. to carry white pine to South America, each vessel having the capacity of 1,500,000 feet. The lumber is sent to Montreal for loading on the boats.

Thomas Murray, ex-M.P.P., of Pembroke, is having litigation with his former partner, John Loughrin, M.P.P., of Mattawa, regarding a timber limit on the Upper Ottawa. The query is, who owns the limit. In the meantime Mr. Murray has obtained an injunction against his old associate in business.

OTTAWA, CAN., Oct. 23, 1894.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

SOME concern exists here in lumber circles over the ruling of the collector of customs at Port Townsend, that cedar in the log, squared by sawing, is dutiable at 25 per cent. ad val., and that other cedar lumber is dutiable at the same rate as other manufactures not specially provided for. There can be no doubt that this is the result of an oversight by Congress, but whether it can be repaired now is something that we will need to wait and see. When the bill was reported to the Senate a change appears to have been made, the paragraph reading as follows: "Sawed boards, planks, deals and other lumber, rough or dressed, except boards, plank, deals and other lumber of cedar, lignum vitae, lancewood, ebony, box, granadilla, mahogany, rosewood, satin and other cabinet woods." It is the intention of British Columbia lumbermen to test the question by sending a carload of cedar east, and if it shall be declared at the port of export, an appeal to the treasury department will be made. At the same time they will likely petition the government at Ottawa to have the United States withdraw the impost.

COAST CHIPS.

The Brunette Saw Mills expect to make a shipment to a southern port.

The death is recorded of John White, proprietor of the Sidney saw mill.

The firm of Hamilton & McLeod, sash and door factory, Armstrong, has been dissolved.

Julius Berger, a lumber merchant of Valparaiso, South America, has been here making purchases.

Several booms of logs are being brought along from the Brunette Saw Mills, Royal City Mills and others.

A purchase of 1,000,000 feet of spruce from a British Columbia mill has been made by a San Francisco firm.

The first cargo of lumber from British Columbia for San Francisco is about to leave here per the American schooner Sadie.

The British Columbia Logging Co., Ltd., is a new corporation. Capital stock $50,000. Trustees: J. S. Taylor, J. Cook and E. Evans.

A shipment of lumber from the Hastings mill has gone to Calais, France, being the first shipment from a British Columbia port to that country.

A development in free lumber is indicated by the fact that three British Columbia mills have already established agencies at San Francisco, Cal., intending to make a vigorous push for this trade. The shingle business is as unsatisfactory as ever, stocks being heavy and the demand light.

James McKim, one of the best known loggers of the Pacific coast and a resident of this province for about 9 years, coming here from Nova Scotia, met with his death a week ago while superintending the running of some logs at Howe Sound. He was struck by a heavy log bounding from the shute.

Lumber freights from ports here are quoted as follows: Valparaiso for orders, 35s.; Sidney, 37s. 6d.; United Kingdom calling at Cork for orders, 45s.; Melbourne, Adelaide or Port Pirie, 36s. 6d. to 37s. 6d.; Shanghai, 42s. 6d.; Tientsin, 55s.; nominal South Africa, 60s.; Noumea, 40s.; Calais, 63s. 6d.

Lumber for foreign points is being loaded as follows: At Hastings mill—Italian bark Cavour, 1,389 tons, for Callao; British ship Lismore, 1,598 tons, for Buenos Ayres; American bark Imgard, 628 tons, for Iquipi; British bark Alexander, 1,297 tons, for Calais; American schr. Moodyville; British ship Ballachulisch, 1,806 tons, for Valparaiso. Total, 6 vessels, 7,213 tons.

The Moodyville Saw Mill Co. have constructed a logging railroad at Grief Point. By this means some of the best timber limits in the province, yet untouched, will be opened out, among which is some fine Douglas fir, which it would be impossible to take out by the old method of ox teams. It is calculated that the limits cover about 8,000 acres, which will be represented by probably 300,000,000 feet of timber. The contract for logging the claim has been awarded to the Union Logging Co., of New Whatcom, Wash., at $3.10 per 1000ft. for ten years. Perhaps 200,000,000 feet of cedar and spruce will be found on the claim. The step is an important one for the province, and if successful will likely lead to the building of other logging railroads and prove an important means of expanding the lumber trade of the province.

NEW WESTMINSTER, B.C., Oct. 18, 1894.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN.]

A LUMBERMAN'S convention for the Provinces of New Brunswick and Nova Scotia has been called to meet at Moncton, N. B., Nov. 20. This is a new move for lumbermen here, as it will mark the first convention of the kind, perhaps, that has ever been held.

Alexander Gibson lost $3,300 a fortnight ago, through his store at Marysville being burglarized.

The mills are practically at the end of their season's work. Some firms, including Snowball, Richard and Hickson, are still cutting, but this will not last any great length of time. It is anticipated, if navigation remains open pretty well along into the season, that there will be very little in the shape of stocks carried over.

Steps were taken at a conference of delegates of the different boards of trade held here during the month to secure special freight rates on lumber on the Intercolonial Railway from North Shore points to St. John's in winter. It is argued, if the rates are made favorable the trade here will be in a good position to compete with the United States for business in the West Indies and South America. The harbor of St. John's is always open to navigation.

As a sequel to the control secured by the Dominion Coal Co in the Cape Breton coal mines, it is likely that the lumber interests of Nova Scotia will pass largely into the hands of the same capitalists. Offers, it is understood, have been made, and just so soon as parties concerned can arrive exactly at terms the transfer will take place.

The business of E. D. Davidson & Sons, of Nova Scotia, has been transferred to a joint stock company.

ST. JOHN, N. B., Oct. 20., 1894.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

LUMBERMEN here are not just sure where they stand as a result of the changes in the tariff. Speculation as to the ultimate outcome continues and the changes in conditions and individual experience as they develop from week to week are having their influence in shaping opinion. It is felt by some that Saginaw has seen its best days as a wholesale lumber centre, and the trade of the future will be done in the yards. Michigan is also feeling the effect of competition from the Duluth and Superior districts, where the stumpage rates are much more favorable. It is stated that the average cost of stumpage of the lumber cut in the Saginaw district in the last ten years is about $7.00, whereas $3.00 would cover the Lake Superior stumpage. Lumbermen here are keeping up prices, and this fact, of course, is doing something to make trade slow, as lumber at other points is being sold at a lower figure. But our people here have confidence in the outcome of the trade and are not disposed to break prices. The decision, it is recognized, is a wise one, if our people can hold on long enough.

BITS OF LUMBER.

W. C. McClure, who has been up in the Duluth section, is one authority for the statement that prices are lower there than at Saginaw.

Large numbers of shantymen have left this state for work in the Canadian woods, which is something of a turn-about in conditions in this respect.

Shipments from Bay City for the first two weeks in October were 10,766,000 feet of lumber and 735,000 shingles. Lumber freights are showing a downward tendency.

It is stated that the cut of cedar in Michigan the coming winter will be very small, as cedar is a drug on the market just now, and large quantities are being shipped into the American markets.

Lumber freights have advanced 25c. per 1000 all round, and are now as follows: Bay City to Tonawanda, $1.50; Saginaw to Tonawanda, $1.62½; Bay City to Ohio, $1.25; Saginaw to Ohio, $1.37½.

The Emory mill at Midland, Ont., that has been purchased by James Playfair & Co., of Sturgeon Bay, Ont., is to be stocked by Arthur Hill & Co., of Saginaw, for seven years. It will have a capacity of 25,000,000 feet.

A sale of 7,000,000 feet of lumber cut from Canadian logs by the Green, Ring & Co. mill here is recorded, and the lumber is piled on the docks. It is thought that the price has ranged about $15 to $15.50. The sale was made by Merrill, Ring & Co.

S. O. Fisher, of Bay City, will, together with the other concerns with which he is associated, put in about 50,000,000 feet of logs in the Georgian Bay waters the coming season. Mr. Fisher, who is a candidate for governor, is stumping the state just now.

Among several important sales of lumber made during the month the following are reported: Merrill, Ring & Co., 7,000,000 feet to Chicago parties, representing a total of over $100,000; Geo. B. Jackson, of Bay City, 2,500,000 feet, amounting to about $35,000; W. L. Churchill, of Alpena, 1,000,000 feet, at $12.50 straight; S. M. Gates, of Bay City, about 2,000,000 feet, and F. B. Bradley, about 1,000,000 feet. So that some lumber is selling here.

Ben Boulette, of the Saginaw Bay Towing Association, which rafted 150,000,000 feet of logs from Canada during the season just closed says: "If the Dominion government insists on imposing the duty on boom sticks, its effect would be to put a stop to the towing of logs from Canada, and that would mean the closing down of nearly every saw mill along the Saginaw river. If such a duty was collected only once during the season it would not materially affect the business, but the intention of the Canadian government, as I understand it, is to tax the towing companies every time they place a boom stick in Canadian waters. This would involve an enormous expenditure during the course of the season, and it would be impossible for the owners of the logs to pay it, for towing rates would increase accordingly. We have thirteen sets of boom sticks at Spanish river now, although the season has ended, and if this rule is carried out we will be compelled to pay duty on them when we bring them across to this side."

SAGINAW, MICH., Oct. 19, 1894.

DON'T.

DON'T wait till the grindstone only hits the tool three times in a revolution before you true it up again. Keep a piece of a half-inch gas-pipe handy and show the boy how to turn it off as soon soon as it begins to show a low spot. Turning off a sixteenth may make it true, but if you wait until to-morrow it may take a quarter of an inch. It is economy to turn "little and often."—Machinery.

A THREE CENT STAMP DOES IT.

ON receipt of a three cent stamp we will mail free to any address a copy of our little hand-book entitled "Rules and Regulations for the inspection of pine and hardwood lumber," as adopted by the lumber section and sanctioned by the Council of the Board of Trade, of Toronto June 16, 1890. Address, CANADA LUMBERMAN, Toronto, Ont.

THE NEWS.

—John White, sawmill, Saanich, B. C., is dead.

—Francis Wood, lumber, Welsford, N. B., is dead.

—James Jestur, lumber, Icelandic River, Man., has assigned.

—James Langford has disposed of his saw mill at Lucan, Ont.

—Alfred W. Colley, lumber, Coldwater, Ont., has assigned to Thomas Lafferty.

—Secord Brothers are erecting a new saw mill at Edgar Mills, Ont.

—The Keewatin Lumber Company's saw mill, at Keewatin, Ont., has been closed down.

—Price Bros. saw mill at St. Thomas, Que., has been rebuilt and has resumed operations.

—Leigh & Son, planing mill, Victoria, B. C., have been succeeded by Grey & Alley.

—Lemay & Kyle, lumbermen, Vancouver, B. C., are reported to have made an assignment.

—Shaw, Cassils & Co., of Huntsville, Ont., desire to purchase 100,000 feet of hemlock logs.

—A. W. Hepburn, Picton, Ont., is rebuilding his planing mill which was recently burned.

—The estate of A. A. Mabee & Co., planing mill, St. John, N. B., has been sold to A. A. Mabee.

—Eugene Lavigne, a dealer in hemlock bark, railway ties, etc., at Ste. Gertrude, Que.. has assigned.

—Capital stock of the Brunette Saw Mill Co., Victoria, B. C., has been increased from $200,000 to $300,000.

—Mr. Currie, of Portlock, has purchased machinery for a saw mill and will have it running in the early spring.

—A new saw mill has been started at Venosta, Que., on the line of the Gatineau Valley railway, by John Holmes.

—D. Sprague, of the Winnipeg saw mills, has commenced cutting logs on his timber limits on the Rosseau river.

—Thos. Conlon's saw mill at Little Current, Ont., is being rebuilt. It will have a capacity of 125,000 feet per day.

—The Emory Lumber Co. will get out upwards of seventy million feet of logs the coming winter in the vicinity of Orillia.

—Bateman & Chapin, lumber dealers, Hartney, Man., have dissolved partnership. The business will be continued by F. Chapin.

—The firm of Beland & Martineau, lumber merchants, Quebec, have assigned, with liabilities of $115,000 and assets about $70,000.

—The extensive saw mill of Moore & Macdonald, at Prince Albert, Sask., was closed down about the 1st of October for the season.

—Chew Bros., of Midland, have disposed of their limit in the township of Wells to Mr. Maetby, of Saginaw, who will operate this winter.

—C. & I. Prescott and Geo. D. Prescott have purchased the milling property in New Brunswick, of Kinney & Co., on Saw Mill Creek.

—Messrs. Davison have commenced the erection of a furnace for consuming sawdust at their lower mill, at Bridgewater, N. S. It will cost about $6,000.

—Joseph Pariseau, of Plantagenet, Ont., who last fall built a saw mill at St. Jovite, Que., has been compelled to assign. He owes $7,000, and claims a surplus of $2,000.

—Andrew Somerville and Daniel Boyd, sash and door manufacturers, of Huntingdon, Que., are reported to have been committed to stand their trial for misrepresenting their financial position.

—Quebec takes the lead in the supply of timber, her output of sawlogs amounting to 5,000,000,000 feet board measure, and of square timber to three and a quarter million cubic feet.

—The Whitney Lumber Company, of Minneapolis, have begun the erection of a large saw mill at Barry's Bay, Ont. It is expected that the mill will be in readiness for next season's cutting.

—Graham, Horn & Co., of Fort William, Ont., will operate what is known as the Ontario Bank timber limits this winter The logs will come out via Pine river. Supplies and outfit are being sent in.

—A log of mahogany weighing 15 tons was recently unloaded from the steamer Matadi at Liverpool, Eng. It was brought from the west coast of Africa, and is said to be the largest ever brought into that port.

—R. & W. Conroy, of Duschene Mills, Que., have recently installed an electric plant, whereby the water power of their saw mills is transmitted to their farm buildings about one mile distant and utilized for cutting corn.

—The Montmagny Manufacturing and Electric Co. has been incorporated, with a capital of $10,000, to manufacture lumber. The chief place of business will be Montmagny, Que. Mazaire Bernatchey, M. P. P. is one of the incorporators.

—We understand that the C. Beck Manufacturing Co., of Penetanguishene, are about to establish a new planing mill, and have purchased one of the largest planing mill plants in Tonawanda, which they will move over at once, and have ready for operations by next spring.

—The R. H. Smith Saw Manufacturing Co. are said to be considering the erection of a branch factory at Ottawa. Mr. Bingham, of Toronto, and Mr. Feemey, of Philadelphia, are also starting a factory at the same place for the manufacture of saws, and have announced the fact that they expect to be in operation about the 1st of November.

—G. Vandyke, a lumber king of Boston, Mass. recently purchased 5,000 acres of timber land in the vicinity of Weedon, Que., on the line of the Quebec Central Railway. The property was owned by P. M. Partridge, of Mento Park, California, the sale being made through W. A. Richardson, of Ottawa.

—Tyler Robinson and James Arnold were recently fined, in the Police Court at Windsor, Ont., for stealing timber from the property of Cameron & Curry, in Colchester South. It was claimed that the practice had been carried on quite extensively, and that the men were hired by mill-owners to cut the timber.

—The Fredericton, N. B. Boom Company has rafted 96,005,245 feet of logs and 262 tons of timber. The logs are divided as follows: Spruce, 87,282,435 feet; pine, 4,441,120 feet; cedar, 4,271,240 feet; hemlock, 10,450 feet. There are 10,000,000 more to come in. Last year the company rafted 10,000,000 feet.

—W. Peter's mill at Parry Sound, Ont., has resumed operations. During the coming winter it is the intention of Mr. Peter to thoroughly overhaul the mill, put in a band saw and new machinery throughout. He has also made arrangements for putting in an electric light plant and will have the lumber cars operated by electricity.

—It is said that as the result of litigation between two of the principals of the Ontario and Minnesota Lumber Company, the appointment of a receiver has been asked for. The company own a saw mill at Rat Portage and extensive timber limits in Northern Minnesota. It has been stated that the affairs of the company are considerably involved.

—A suit to recover the sum of $100,000 was recently commenced at Windsor, Ont. The action was brought by Hugh A. Holmes, lumberman, of Detroit, against the Blind River Lumber Company for the specific performance of an agreement, by the ignoring of which the plaintiff claims to have suffered a loss of the amount stated. Mr. Holmes claimed that he procured an option for the mills and timber limits belonging to the Blind River company, and before being given a chance to pay the purchase money, the sale was made to a company of Essex county lumbermen, who are now in possession. The mills of the Blind River Lumber Company are situated near North Bay, in Algoma, and the timber limits are said to be the finest in Ontario.

FIRES AND CASUALTIES.

FIRES.

—J. J. Wood, sash and door factory, Maxville, Ont., has been burned out; no insurance.

—Romain Landry's saw mill at Upper Caraquet, N. B., was destroyed by fire a fortnight ago. Mr. Landry will rebuild.

—A quantity of lumber and shingles at Collingwood, owned by Wilson Bros. and valued at $600, was consumed by fire a fortnight ago.

—The saw mill of D. G. Cooper, at Collingwood, Ont., was visited by fire the early part of last month. Several hundred thousand feet of lumber and more than a quarter of a million shingles were destroyed, together with the lumber sheds. The loss will reach $5,000, which is mostly covered by insurance.

CASUALTIES.

—J. F. Moorehead, of McNab, an employee of Gillies Bros., of Braeside, was killed in the woods by a log rolling over him.

—While working in a saw mill near Sudbury recently, Herbert Lankin was caught in a circular saw, which cut off his right arm.

—W. H. Barnes, foreman at the W. C. Edwards mill at New Edinburgh, died from the injuries received mentioned in our last issue.

—Wm. J. Berkinshaw, of Gravenhurst, was recently engaged by Mickle, Dyment & Co., to work in the lumber woods. After working about an hour he cut off an overhanging hemlock log, after which he tripped and fell in front of the log, which passed over him, instantly crushing him to death.

PERSONAL.

Mr. John E. Williams, of the editorial staff of the North-Western Lumberman, Chicago, recently paid a visit to Toronto and other Canadian cities.

The marriage is announced on the 17th of October, of Mr. Benjamin Langford, saw mill proprietor, of Lucan, Ont., to Miss Maggie Fairburn, of the same place.

On the 10th of October, Mr. A. A. Wright, secretary of the Victoria Harbor Lumber Co., was united in matrimony to Miss Lillian E. Miller, a popular young lady of Toronto. The LUMBERMAN extends its congratulations to Mr. and Mrs. Wright.

Mr. John A. Garvin, editorial writer on the Montreal Herald, and a former resident of Toronto, was united in marriage a fortnight ago to Miss Florence Cameron, daughter of Mr. John A. Cameron, the millionaire lumberman of Ottawa. The honeymoon was spent in New York and Washington.

We record with much regret a fatal accident which a fortnight ago befell the family of Mr. Scatcherd, the well-known lumberman, of Buffalo. The carriage in which Mr. Scatcherd's sister and two daughters were riding, was struck by a locomotive at an unguarded level crossing, and the occupants instantly killed. Mr. Scatcherd has the sympathy of his many friends in the great bereavement which has fallen upon him.

TRADE NOTES.

Maitland, Rixon & Co., of Owen Sound, have recently been given an order for 400,000 feet of cedar construction timber for the Grand Trunk Railway.

Darling Bros.. of Montreal, have recently shipped twelve complete Morse valves to S. R. Gartman, London, Eng., and have an order for twelve more, to be shipped at an early date.

The F. E. Dixon Belting Co., Toronto, who have carried on business as manufacturers of belting for many years at 70 King street east, have removed to larger and more suitable premises at 39 Front street east.

The well-known leather belting manufacturers, Robin & Sadler, Montreal, and the Haworth Belting Co., of Toronto, have merged into one concern, and will carry on business in future under the firm name of Robin, Sadler & Haworth.

FACTS ABOUT TREES AND WOODS.

Sycamore is a favorite lumber for tobacco-boxes. The wood is not only strong and capable of holding nails firmly, but its character is such as to impart no woody taste or odor to the contents.

In the park of Tortworth Court, Gloucestershire, England, the seat of Lord Ducie, is the celebrated Spanish chesnut, which is said to have been the first tree that was ever planted in Great Britain by man. This chesnut is now over twelve feet in diameter and was an old tree in the reign of Stephen. The Darley yew of Derbyshire is about 1,350 years old, while the Ankerwyke yew, near which the Magna Charta was signed, is about 1,100 years old; the yews of Fountains Abbey existed at its founding, over 760 years ago; the yew tree of Fortigal churchyard is said to be the oldest tree of its kind in the world, and the Greendale oak of Welback, through which in 1724 a way was cut and a carriage and four horses were driven, is about 1,500 years old.

Here is an old English ryme, in which trees are made the prophets of either drouth or flood:

If the ash is out before the oak,
All Summer will be dust and smoke;
But if the oak before the ash,
In Summer their will be a splash.

The Japanese make false teeth, taking an impression of the mouth by means of a plate of wax, and then carving a plate of some hard wood. The plates are well made, frequently an exceedingly neat fit, but the substitutes for teeth are crude, being copper or brass-headed nails driven through the plate, the heads being left for masticating purposes. The apparatus is very rude, but it seems to answer the purpose well enough to suit the Japanese. A dentist ranks with a carpenter and is called "tooth carpenter."

In Ceylon the tree fere reaches the height of twenty feet, and on the highest ground the Rhododendron attains the size of timber trees. The Coral tree, Eurythrina Indica, is among the most magnificent of their flowery trees. There are estimated to be not less than 20,000,000 of the cocoa palms in Ceylon. Among their timber trees the satin wood holds the first rank.—Lumber World.

TRADE REVIEW.

Office of CANADA LUMBERMAN,
Oct. 25, 1894.

THE GENERAL SURVEY.

A PRUDENT and conservative survey of the lumber situation at the present time, whilst it does not reveal any large measure of activity, as compared with corresponding seasons of the past year or two, it yet shows many evidences of improvement. It must be remembered that for the best part of a year the lumber trades of Canada and the United States have suffered severe depression. Only one thing could be written of the business during that time, and that was covered by the one word "stagnation. Hope was revived when tariff matters with our neighbors across the border finally became fixed, but it must not be forgotten that business does not move from one condition to another in quick jumps, and that a settlement of the tariff, when it did come, came too late in the year to permit of any large or important undertakings in building directions. It could prove the means of settling plans that had been pigeon-holed for months and to this extent was an evidence of confidence.

In all the reports that come to the LUMBERMAN as to the conditions of trade, one uniform opinion is vouchsafed, that present trade continues dull, but the remark is made in an altogether different tone to that which has characterized a somewhat similar reply in the months that have passed. The trade see the rift in the cloud and know that light is behind. The belief is that the spring will open out with a decided improvement in the movement of lumber.

So much for conditions generally. Immediate trade has improved during the month. Shipments of lumber from the Ottawa district are much more active than for some time and in fact are in some respects quite large. If we glance at the situation in the Georgian Bay and North Shore districts, even though the present movement of lumber may not be very remarkable, there are abundant signs of activity in lumber circles. Let our readers study other columns of this month's LUMBERMAN and they will learn of new mills building, and mills that had remained idle being put in operation with, in some cases, assured business ahead in the shape of contracts, as in the case of J. S. Playfair & Co., extending over several years.

It is difficult to say just what will be the size of the cut the coming winter, but this is apparent just now that shanties on no inconsiderable scale are being established and if the activity that will quite surely mark the commencement of operations in the woods this winter, be continued throughout the season, a good sized cut will be the result. However, on this point, it is not safe to write with too great positiveness at present.

In Quebec and New Brunswick the season is drawing to a close with the evidence before us that trade has not been completely sapped of all energy, and with assurances that there, as in this province, the outlook for the future is encouraging. It is hard to write of any present activity on a large scale in British Columbia. To quote a correspondent: "If business does not appear to have improved much, since the passing of the new U. S. tariff there is more enquiry. It is also felt that foreign business will increase shortly."

The shingle business of all parts of Canada, and in the United States is a demoralized branch of the lumber business. Writing of conditions across the border a lumber contemporary has said: "If anyone be enquiring as to what is the matter with shingles, it is sufficient answer to say that there too many of them made." The same thing can be written of shingles here. More shingles are being made here than are wanted, and the result is that when you talk shingles to a lumberman you can't find anyone who has an encouraging word to say. This is one trouble that can only be remedied by time and the exercise of abundance of good sense during that period.

UNITED STATES.

Viewing trade conditions in the United States as they have shown themselves from week to week throughout the month, the conclusion is reached that business is showing several accurate indications of revival. This is seen in the movement of lumber at Albany. The market is being lighted up with faces of well-known buyers, and shipments are being sent forward to New England points and into New York. The fact that the advance in spruce, which, when it occurred, was quite phenomenal, continues firm, is another evidence of bettered conditions. Allowance must be made for some of this activity because of the near approach of winter, as everyone likes to make things as snug as possible before the cold season absolutely sets in. It is being remarked that Michigan is feeling competition from the Duluth districts, where prices are lower, whereas Michigan lumbermen maintain firmly the policy of holding to good prices. All throughout the northwestern white pine field the information comes of anxiety to unload stocks at cut prices. Speculation is being indulged in as to the effect of the damaged log supply on the coming season's cut. The district most seriously affected by fire is northwestern Wisconsin and eastern Minnesota. It is not thought, however, reviewing the whole situation carefully, that the supply of damaged logs that will be cut will affect values to any noticeable extent.

FOREIGN.

A measure of sameness so marks the British lumber trade that it is a hard matter to say anything that has not already been said of conditions in the United Kingdom. If it is not a strike among one class of workmen in the mother land it is a strike among another class, that is constantly helping to retard commercial progress. The Scotch colliers strike still drags its slow length along and has a depressing influence on trade. Whatever the cause is, there is no getting behind the fact that business does not revive very much. As Denny, Mott & Dickson remark in their trade circular, a strike like that of the Scotch coliers "offers a serious obstacle to revival in the iron, railway, shipbuilding and allied industries." The market for oak and choice waney pine has shown a slightly improved demand, and it is suggested that if shippers could moderate their pretensions for these woods the consumption would be quickly stimulated and assume larger proportion than of late. A fair amount of stocks continue to go forward to South American markets, and the reports from there seem to tell of an improvement in trade. Business in Australia is yet a long way off from having returned to its old conditions.

TORONTO, ONT.

TORONTO, October 25, 1894.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		1 90
XX shingles 16 inch		1 40
Lath, No. 1		2 15
Lath, No. 2	1 80	1 85

YARD QUOTATIONS.

Mill cull boards and scantling	$10 00	
Shipping cull boards, promiscuous widths	13 00	
stocks	16 00	
Scantling and joist, up to 16 ft	14 00	
" " " 18 ft	15 00	
" " " 20 ft	16 00	
" " " 22 ft	17 00	
" " " 24 ft	19 00	
" " " 26 ft	20 00	
" " " 28 ft	22 00	
" " " 30 ft	24 00	
" " " 32 ft	27 00	
" " " 34 ft	29 50	
	23 50	
" " " 36 ft	31 00	
" " " 38 ft	33 00	
" " 40 to 44 ft	37 00	
Cutting up planks, 1 and thicker, dry	25 00	28 00
" board	18 00	24 00
Dressing blocks	16 00	20 00
Picks Am. inspection.		30 00

F. M.		
1 1-2 in. flooring, dres'd	26 00	30 00
" " rough	18 00	22 00
" " dres'd	25 00	28 00
1 1-4 in. flooring, undressed, B.M.	16 00	18 00
1 1-4 in. flooring, dres'd	18 00	20 00
" " undres'd	12 00	15 00
Beaded sheeting, dressed	20 00	35 00
Clapboarding, dres'd		12 00
XXX sawn shingles per M.	2 00	2 10
Sawn lath		2 60
Red Oak	30 00	40 00
White "	37 00	45 00
Basswood, No. 1 and 2	28 00	30 00
Cherry, No. 1 and 2	70 00	90 00
White ash, 1 and 2	24 00	35 00
Black ask, 1 and 2	20 00	30 00

HARDWOODS—PER M. FEET CAR LOTS.

Ash, white,	1	to 2 in.	$16 00	$18 00	Elm, soft	1	" 1½	$10 00	$11 00
" "	2½	to 4..	18 00	20 00	" "	2	" 3..	10 00	11 00
" black,	1	" 1½	15 00	17 00	" rock	1	" 1¼	14 00	16 00
Birch, sq.,	1	" 4..	17 00	20 00	" "	1½	" 3..	15 00	18 00
" "	4x4	" 8x8	20 00	22 00	Hickory	1½	" 2..	28 00	30 00
" red	x	" ½	20 00	22 00	Maple	1	" 1½	15 00	16 00
" "	2	" 4..	22 00	25 00	"	2	" 4..	16 00	17 00
" yellow	1	" 4..	14 00	15 00	Oak, red, p'n	1	" 1½	20 00	22 00
Basswood	1	" 1¼	15 00	16 00	" "	2	" 4..	22 00	25 00
"	1½	" 2..	16 00	17 00	" white	1	" 1½	25 00	30 00
Butternut	1	" 1½	20 00	21 00	" " "	2	" 4..	25 00	30 00
"	2	" 3..	22 00	23 00	" quart'd	1	" 2..	45 00	48 00
Chestnut	1	" 2..	22 00	25 00	Walnut	1	" 3..	85 00	100 00
Cherry	1	" 1½	40 00	45 00	Whitewood	1	" 2..	29 00	34 00
"	2	" 4..	50 00	52 00					

OTTAWA, ONT.

OTTAWA, Oct. 25, 1894.

Pine, good sidings, per M feet, b.m	$32 00	40 00
Pine, good strips, " " "	27 00	35 00
Pine, good shorts, " " "	20 00	27 00
Pine, 2nd quality sidings, per M feet, b.m	20 00	25 00
Pine, 2nd quality strips, " " "	18 00	22 00
Pine, 2nd quality shorts, " " "	15 00	18 00
Pine, shipping cull stock, " " "	14 00	16 00
Pine, box cull stock, " " "	11 00	13 00
Pine, s.c. strips and sidings " " "	11 00	14 00
Pine, mill cull	8 00	10 00
Lath, per M	1 60	1 90

QUEBEC, QUE.

QUEBEC, October 25, 1894.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	14 @	18
For fair average quality, according to average, etc., measured off.	16	20
For good and good fair average, " " " " "	23	27
For superior " " " " "	28	30
In shipping order " " " " "	29	35
Waney board, 18 to 19 inch " " " " "	30	36
Waney board, 19 to 21 inch " " " " "	37	40

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	45	51

ELM.

By the dram, according to average and quality, 45 10 50 feet	30	
" " " " 30 to 35 feet	25	

ASH.

14 inches and up, according to average and quality	30

BIRCH.

16 inch average, according to average and quality	20	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $37 to $42 for 3rd quality.

Bright spruce, according to mill specification, $40 to $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality,

SAGINAW, MICH.

SAGINAW, MICH., Oct. 25.—More lumber is accumulating here than can be offset by what is going out. There is a feeling that there will be no remarkable change in conditions until the spring. As has been noted from Saginaw Valley before, the stocks of lumber on hand are large, and it would look as though there would be a heavy stock carried over the winter. Business is undoubtedly better than it was three months ago, but it might improve a great deal more and still not be over lively.

FINISHING LUMBER—ROUGH.

Uppers, 1, 1¼ and 1½	45 00	Fine common, 1 in	35 00
2 in	46 00	1¼ and 1½ in	36 00
Selects, 1 in	40 00	2 in	37 00
1¼ and 1½	40 00	C, 7, 8 and 9 in	30 00
2 in	40 00		

SIDING.

Clear, ½ in	24 00	C, ½ in	19 00
⅞ in	48 00	⅞ in	34 00
Select, ½ in	21 00	No. 1, ½ in	13 00
⅞ in	40 00	⅞ in	23 00

TIMBER, JOIST AND SCANTLING.

2x4 to 10x10, 12, 14 and 16 ft.	$11 00	20 ft	14 00
18 ft	13 00	22 and 24 ft	15 00

For each additional 2 ft. add $1; 12 in. plank and timber $1 extra; extra for sizes above 12 in.

BOX.

1x10 and 12 in. (No 3 out)	14 00	Narrow	13 00@14 00
1x6 and 8 in (No. 3 out)	13 50	1¼ in	15 00 18 00
1x13 and wider	15 00 17 00	1½ in	15 00 18 00
		2 in	15 00 18 00

SHINGLES, 18-IN.

Fancy brands, XXXX	3 45	Standard brands. river made, XXXX	3 00
Clear Butts	2 25	Clear Butts	2 00

WHITE PINE LATH.

No. 1	1 50	No. 2	1 25
		Hemlock	1 00

NEW YORK CITY.

NEW YORK, N. Y., Oct. 25.—The expected boom in lumber has not struck this market with any great force yet. Caution marks all transactions, and the stocks that will be carried throughout the winter will be by no means large. White pine is moving but slowly. Yellow pine is not sharing any large demand. Hemlock is steady.

WHITE PINE—WESTERN GRADES.

Uppers, 1 in	$44 00@45 00	Coffin boards	20 00 22 00
1¼, 1½ and 2 in	46 00 47 00	Box, in	$17 00@17 50
3 and 4 in	55 00 58 00	Thicker	17 50 18 50
Selects, 1 in	40 00 41 00	Ccil'g, base, fig. No. 1	40 00 42 00
1 in., all wide	41 00 43 00	No. 2	35 00 37 00
1¼, 1½ and 2 in	43 00 44 00	No. 3	24 00 26 00
3 and 4 in	52 00 53 00	Shelving, No. 1	30 00 32 00
Fine common, 1 in.	36 00 37 00	No. 2	25 00 27 00
1¼, 1½ and 2 in	38 00 40 00	Molding, No. 1	36 00 37 00
3 and 4 in	46 00 48 00	No. 2	34 00 36 00
Cutting up, 1 in. No. 1	28 00 30 00	Bevel sid'g, clear	22 50 23 00
No. 2	21 00 23 00	No. 1	22 00 22 50
Thick, No, 1	29 00 32 00	No. 2	20 00 20 50
No. 2	24 00 26 00	No. 3	16 00 17 00
Common, No. 1, 10 and 12 in	22 00 23 00	Norway, c'l, and No. 1	23 00 25 00
No. 2	20 00 21 00	No. 2	20 00 22 00
No. 3	17 00 18 00	Common	18 00 19 00

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N. Y., Oct. 25.—Stocks continue to grow in size, and there is very little outgo of lumber. Some demand is reported for export and we hear of one considerable sale of pine to a point in the eastern part of the state. Prices are quite unsettled, in fact, in some respects, are demoralized. The remark has been made that some day somebody will be sorry for this cutting of prices. The Lumber Exchange, of Buffalo, will meet next month and the trade are hoping something will be done to fix prices.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in	$46 00	48 00	Shelving, No. 1, 13 in and up, 1 in	31 00@33 00	
2½ and 3 in	52 00	55 00	Dressing, 1¼ in	25 00	26 00
4 in	54 00	56 00	1¼x10 and 12		26 00
Selects, 1 in.	38 00	39 00	1½ in	24 00	25 00
1¼ to 2 in		42 00	2 in	26 50	28 00
2½ and 3 in	47 00	50 00	Mold st'ps, 1 to 2 in	33 00	35 00
4 in		52 00	Barn, No. 1, 10 and 12 in	21 00	23 00
Fine common, 1 in	35 00	38 00	6 and 8 in	20 50	22 00
1¼ and 1½ in	37 00	38 00	No. 2, 10 and 12 in.	18 00	19 00
2 in	39 00	40 00	6 and 8 in	18 00	19 00
3 in		45 00	No. 3, 10 and 12 in.	14 00	16 00
4 in		45 00	6 and 8 in	13 50	15 50
Cut'g up, No. 1, 1 in.	27 00	29 00	Common, 1 in	16 00	18 00
1¼ to 2 in	32 00	33 00	1¼ and 1½ in	18 00	20 00
No. 2, 1 in	17 00	18 00	2 in	19 00	22 00
No. 2, 1¼ to 2 in	21 00	23 00			
No. 3, 1¼ to 2 in	18 00	19 00			

BOSTON, MASS.

BOSTON, MASS., Oct. 25.—No great rush, by any means, is to be remarked of the lumber trade here, but there is a fair activity that is encouraging. The advance made in car spruce a month ago is being well maintained, and this forms also an indication of a better feeling in the trade. Hemlock is slow. Shingles are easy.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards		$12 00	¾ inch	$ 9 25	9 75
Coarse No. 5		16 00	11-16 inch		9 00
Refuse	12 00	12 50	⅝ inch		8 50
Outs	9 00	10 00	Clapboards, sap ext.	45 00	50 00
Boxboards, 1 inch	10 75	11 00	Sap clear	43 00	45 00
⅞ inch	9 75	10 00	Sap, 2nd clear	35 00	40 00
			No. 1	25 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in	$50 00@51 00		Fine com., 3 and 4 in	42 00	46 00
1¼, 1½ and 2 in	52 00	53 00	No. 2, 1 in. Fine com.	28 00	30 00
3 and 4 in	54 00	63 00	1¼, 1½ and 2 in	29 00	31 00
Selects, 1 in	43 00	45 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in	45 00	47 00	No. 2	36 00	37 00
3 and 4 in		51 00	No. 3	28 00	30 00
Moulding boards, 7 to 11 in. clear	36 00	38 00	Cut ups, 1 to 2 in	24 00	32 00
60 per cent. clear	34 00	36 00	Coffin boards	19 00	20 00
Fine common, 1 in	38 00	40 00	Common all widths	22 00	26 00
1¼, 1½ and 2 in		42 00	Shipping culls, 1 in	15 00	15 50
			do 1¼ in.	15 50	16 50

SPRUCE.

Random cargoes, large sizes	12 00@12 50		Mill random	11 00@12 50	
Ordinary	11 00	11 50	Northern, random boards	11 50	12 00
Narrow	10 00	10 50	Second boards		10 00
Shippers	13 00	13 25	Northern No. 1 stock boards, 12 feet	20 00	23 00
Planed, coarse		12 00	No. 2	13 50	14 00
Rough, coarse, narrow	10 00	11 00	Planed, narrow	10 50	11 00
Rough, coarse, wide	12 50	13 00	Wide		14 00
Spruce frames, cars ordinary	12 50	13 50	Clapboards, 4ft. extra	28 50	30 00
12 in	13 50	14 50	Clear	26 00	28 00
14 in	15 00	16 00	Second clear	20 00	24 00
Yard orders	12 50	13 00	No. 1	10 00	13 00
			No. 2	8 00	9 00

HEMLOCK.

Boards, rough	9 00@10 00		No. 2	7 00@ 9 50	
Planed	11 00	11 50			

LATH.

Spruce			By cargo	1 80@ 1 90	
By car	1 80@ 2 00				

ALBANY, N.Y.

ALBANY, N. Y., Oct. 25.—The activity in lumber at this point, noted last month, continues. Shipments are going forward to New England and other points in good order. The season for shipping by water is, of course, drawing to an end and this accounts, to some extent, for the increase in shipments, as many are anxious to wind up their transactions before navigation closes. The improvement generally in the market may not be as large as most people would like, but contrasted with the dullness that has prevailed for many months, it is hopeful.

PINE.

2½ in. and up, good	$56	$60	10-in. common	$15	$16
Fourths		58	12-in. dressing and better	28	34
Selects		50	Common	15	17
Pickings		45	1¼-in. siding, selected, 13 ft.	40	45
1¼ to 2-in. good	52	55	Common	15	17
Fourths	47	50	1-in. siding, selected	38	42
Selects	42	45	Common	15	17
Pickings	37	40	Norway, clear	22	25
1-in. good	52	55	Dressing	16	18
Fourths	47	50	Common	11	15
Selects	42	45	10-in. plank, 13 ft., dressing c.		c.
Pickings	37	40	and better, each	42	55
Cutting-up	22	27	10-in. plank, 13-ft. culls, each	23	25
Bracket plank	30	35	10-in. boards, 13 ft., dressing and better, each	28	32
Shelving boards, 12-in. up	30	32	10-in. boards, 13-ft. culls	17	21
Dressing boards, narrow	19	21			

LATH.

Pine	$2	40	Spruce	$2 30	$2 40

SHINGLES.

Sawed Pine, ex. xxxx	$4 40	$4 50	Bound butts, 6 x 18	$5 90	$6 00
Clear butts	3 15	3 25	Hemlock	2 15	2 30
Smooth, 6 x 18	5 50	5 60	Spruce	2 20	2 30

OSWEGO, N.Y.

OSWEGO, N. Y., Oct. 25.—The lumber trade here is not possessed of any features that call for particular mention. Shipping by water is probably improving in anticipation of the approach of closing navigation.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$47 00@48 00
Pickings, " "	39 00 40 00
No. 1, cutting up, " "	34 00 35 00
No. 2, cutting up, " "	24 00 25 00
In strips, 4 to 8 wide, selected for moulding trips, 14 to 16 ft.	32 00 34 00

SIDING.

1 in siding, cutting up		1¼ in selected	38 00@43 00
1 icks and uppers	32 00@39 00	1¼ in dressing	20 00 22 00
1 in dressing	19 00 21 00	1¼ in No. 1 culls	15 00 17 00
1 in No. 1 culls	14 00 15 00	1¼ in No. 2 culls	14 00 15 00
1 in No. 2 culls	13 00 14 00	1 in. No 3 culls	11 00 12 00

1X12 INCH.

12 and 16 feet, mill run	21 00 24 00
12 and 16 feet, No. 1 and 2, barn boards	19 00 20 00
12 and 16 feet, dressing and better	27 00 31 00
12 and 16 feet, No. 2 culls	15 00 16 00

1X10 INCH.

12 and 13 feet, mill run, mill culls out	21 00 23 00
12 and 13 feet, dressing and better	26 00 28 00
1X10, 14 to 16 barn boards	18 00 19 00
12 and 13 feet, No. 1 culls	16 00 17 00
12 and 13 feet, No. 2 culls	15 00 16 00
14 to 16 feet, mill run mill culls out	21 00 23 00
14 to 16 feet, dressing and better	26 00 28 00
14 to 16 feet, No. 1 culls	17 00 18 00
14 to 16 feet, No. 2 culls	15 00 16 00
10 to 13 feet, No. 3 culls	11 00 12 00

1¼X10 INCHES.

Mill run, mill culls out.	$22 00@25 00	No. 1 culls	17 00 18 00
Dressing and better	27 00 35 00	No. 2 culls	15 00 16 00

1X4 INCHES.

Mill run, mill culls out	17 00 21 00	No. 1 culls	14 00 15 00
Dressing and better	24 00 30 00	No. 2 culls	13 00 14 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20 00 25 00	6, 7 or 8, No. 1 culls	16 00 17 00
6, 7 or 8, drsg and better	25 00 30 00	6, 7 or 8, No. 2 culls	14 00 15 00

SHINGLES.

XXX, 18 in pine	3 70	3 90	XXX, 18 in. cedar	3 50	3 70
Clear butts, pine, 18 in.	2 70	2 90	Clear butt, 18 in. cedar	2 50	2 70
XXX, 16 in. pine	3 00	3 20	XX, 18 in. cedar	1 90	2 00
Stock cedars, 5 or 6 in.	4 50	5 00			

LATH.

No. 1, 1¼	2 30	No. 2, 1¼	2 25
No. 1, 1 in.	1 80		

LUMBERMEN'S SUPPLIES

SUGAR.

	c.	per lb.
Granulated	4 30	4 40
Extra bright refined	4	4⅛
Bright Yellow	3¾	3⅞
Medium Yellow	...	3⅝
Dark Yellow	3⅜	3½
Raw	...	...

SYRUPS AND MOLASSES.

SYRUPS.	Per gallon bbls.	½ bbls.
Dark	25	30
Medium	30	35
Bright	35	40
Very Bright	50	00
Redpath's Honey		40
" " 2 gal pails		1 25
" " 3 gal pails		1 50

MOLASSES.

	Per gal.
Trinadad, in puncheons	0 32 0 35
" bbls	0 36 0 37
" ½ bbls	0 40 0 40
New Orleans, in bbls	0 30 0 32
Porto Rico, hdds	0 38 0 40
" barrels	0 42 0 44
" ½ barrels	0 44 0 46

RICE, ETC.

	Per lb.
Rice, Aracan	3½ 3¾
" Patna,	... 4¾
" Japan	... 5
" Imperial Secta	... 5½
" Extra Burmah	3⅞ 4
" Java Extra	6¼ 6¾
" Genuine Carolina	9½ 10
Grand Duke	6¼ 6½
Sago	4¾ 5½
Tapioca	4½ 5½
White Beans, per bushel	1 50

FRUITS.

FOREIGN.	c.	per lb.
Currants, Provincial, bbls.	3½	4
" " ½ bbls	3⅝	4⅛
" Filiatras, bbls	4	4½
" " ½ bbls	4½	4¾
Currants, Patras, bbls	5	5½
" " ½ bbls	5¼	5¾
" " cases	5	6½
" Vostizzas, cases	6½	7½
" " ½ cases	6¾	7¾
" 5-crown Excelsior (cases)	8	8½
" " ½ case	8¼	8¾
Dates, Persian, boxes	5	5½
Figs, Elemes, 10lb. boxes	...	...
" 7-crown	...	...
" Natural Figs, 28lb bxs	...	...
Prunes, Bosnia, casks	4	4½
" " cases	5½	7
" " bags	...	...
" Anchor C, bags	...	...
" " E, "	...	...
" " G&J, cases	...	5½
Raisins, Valencia, off-stalk	4¾	...
Selected	5½	6

CANNED GOODS.

	Per doz.
Apples, 3's	$1 00 $1 10
" gallons	2 65 2 80
Beans, 2	0 85 0 95
Corn, 2's	0 90 0 95
" Epicure	... 1 15
Peas, 2's	0 85 0 95
" Sifted Select	... 1 45
Peaches, 2's	2 00 2 25
" 3's	3 00 3 25
Plums, Gr. Gages, 2's	1 85 2 00
" Lombard	1 50 1 60
" Damson Blue	1 50 1 60
Pumpkins, 3's	0 90 1 00
" gallons	2 10 2 25
Tomatoes, 3's	0 85 0 90
'Thistle' Finnan Haddies	1 35 1 40
Salmon, talls	1 25 1 35
" flats	1 35 1 40

CANNED MEATS.

(CANADIAN.)

Comp. Corn Beef 1lb cans				$1 50	$1 60
" " 2 "				2 60	2 65
" " 4 "				4 80	5 00
" " 6 "				7 50	7 75
" " 14 "				17 25	17 50

COFFEE.

GREEN.	c.	per lb.
Mocha	28	33
Old Government Java	25	35
Rio	20	22
Plantation Ceylon	29	31
Porto Rico	24	28
Guatemala	24	26
Jamaica	22	20
Maracaibo	24	24
Caffaroma, 1 and 2lb tins, asstd		33

DOMESTIC.

Apples, Dried, per lb	5½	6
" Evaporated	8	10

TOBACCO AND CIGARS.

British Consols, 4's; Twin Gold Bar, 8's	59c
Ingots, rough and ready, 8's	57
Laurel, 3's	49
Brier, 7's	47
Index, 7's	44
Honeysuckle, 8's	56
Napoleon, 8's	50
Victoria, 12's	47
Brunette, 12's	44
Prince of Wales, in caddies	48
" in 40lb. boxes	48
Bright Smoking Plug Myrtle, T & B, 3's	60
Lily, 7's	47
Diamond Solace, 7's	50
Myrtle Cut Smoking, 1lb. tins	70
¼ lb. pg., 6 lb. boxes	70
oz. pg., 5 lb. boxes	70

The Toronto Machinery Supply Co. have recently commenced business at 164 King street west, Toronto, with A. J. Lindsay as manager. The new firm propose to deal in general machinery and supplies.

LUMBER POSSIBILITIES IN MANITOBA.

THE projectors of the Southwestern railway in Manitoba, which is planned to connect Winnipeg with the Lake of the Woods, are circulating a petition for signature, which is to be presented to Parliament, asking for government aids. This will not be the first attempt in this direction, a former effort having failed. In the petition the advantage of the proposed road to the lumber interest of the Prairie Province, is set forth in the following terms :

"A look at the situation proves that the lumber manufacturers between the red river and Lake Superior must seek a location within the prairie country where their only market exists, or they must soon be driven out of this market by competition from the United States. Honest intentions are always surest of being carried out when necessity compels them and such is the position of these lumber manufacturers at the present time. Further, now that free lumber has become law in the United States, lumber manufacturers on the Red river could open a valuable export market in northern Minnesota and North Dakota, which could never be supplied from the Canadian Lake of the Woods mills. To be plain in this matter, we consider your objections, doubts and fears in this projection are groundless in almost every point and we therefore humbly request that you reconsider the question of aid to the Manitoba Southwestern project as in our opinion it would prove one of the most valuable roads penetrating the province."

Continuing, the petition states that the completion of the road would insure for all time a lumber market in Manitoba where lumber could be purchased at prices close to those obtainable at other lumber points, instead of the excessive prices that have been charged, and that it would result in the locating within the province of a great industry. It would also give a supply of cheap fuel for Winnipeg. In conclusion, the point is made that Manitoba must choose between drawing its lumber supply from the United States and be as its people were twelve years ago, at the mercy of foreign railroads from the south, or the province can, by carrying out the building of the road, manufacture its own lumber and be in a position to export lumber to the United States.

STEAM NOT POWER.

IN selecting a boiler, the layman or manufacturer who has paid but ordinary attention to this feature of his business, is at a decided disadvantage. Upon information more or less reliable, he has made up his mind that he wants a certain horse power. A boiler produces steam, not power. With a given amount of steam one engine will produce four or five horse power, where another would produce one. Engineers have simplified the matter for themselves by adopting a certain amount of water evaporated into steam under given conditions per hour as the unit of a boiler's capacity, but our layman knows nothing of this, and cannot be expected to master all the complexities of equivalent evaporations, etc. Even if he did, the amount of water which a given boiler will evaporate will be widely different under different conditions. Some will advise him to buy twice as much boiler as he needs and just let them barely stew. Others will tell him that he can get better economy with a smaller investment by burning his fuel briskly, and parsimony may lead him to carry this advice to the extent of burning too little boiler surface and forcing it disastrously. In considering the claims of the various applicants for his patronage, it will be well for him to look well into what each man is offering for his money. One may offer him a horse power for ten dollars, where another man wants eighteen. But perhaps the cheaper man has only eight square feet of heating surface to a horse power, where the other man has fifteen. Suppose the heating surface to be equally efficient and the boilers equally desirable in other respects, how much does he gain by patronizing the cheaper man? Perhaps the low-priced boiler will produce a horse power with eight feet; many will, and with less, but the other would do proportionately more, and the man who has been generous in his rating is placed at an apparent disadvantage.—Power.

Bret Harte is writing a story of American life and incident for The Ladies' Home Journal.

VIEWS AND INTERVIEWS.

Creosote.

Creosote has for many years been known as a most effectual wood preservative. It was first introduced into England in 1838, and in America in 1865. It is extensively used in all parts of the world for this purpose. It is a product of coal tar, that wonderful and prolific source of so many useful and beautiful products. The distilling process gives us several grades of the article creosote, containing various hydro-carbons. The odor is unpleasant, pungent and strong, but soon disappears upon exposure to the fresh air. An idea of its remarkable penetrative power may easily be obtained by placing some of it upon a thin board. In a little while it may be detected upon the opposite side by its odor.

Silk from Wood Pulp.

At Bradford, England, silk has been made from wood pulp so much like the real thing that it bids fair to occupy a like place in commerce and use. It is produced by subjecting vegetable fibre to the action of various acids, the result being a product said to be identical with the filament of the worm, having its lightness, lustre, and all its qualities including that of durability. Commercially speaking the importance of the discovery can hardly be over estimated, and it is possible that it will produce the most revolutionary consequences in the trade in that commodity everywhere. The world's stock of silk, both woven and raw, is immense, and has always held a stable value likely to be much shaken and disturbed by the intrusion of a new supply which can be cheaply and abundantly produced. Samples of yarn, fringe, braid, gimps, sewing silks, hankerchiefs, brocades and other fabrics, dyed in various colours, have been exhibited by the Bradford makers to the trade and pronounced all right and up to the commercial standard in all respects. With artificial silk and artificial diamonds and rubies such as are now being turned out in great abundance, modern society will doubtless take on a style of splendor hitherto unknown, outshining the courts of Solomon or the Queen of Sheba, or the retinues of Mahmond of Haroun Al Raschid.

Bees as Woodworkers.

Woodworkers of the human stripe are not all aware that they have predecessors and superiors among woodworkers of the insect stripe. There are "carpenter bees" says a writer in the Lumber World, that do some neat jobs of carpentry regularly. Numbers of the members of this insect class are enormous and very beautiful. "Yylocopa violacia," whose generic name signifies a woodcutter, larger than the largest bumblebee, exhibits choice contrast of color in its brilliant, velvety black body and its rings of a rich violet. England has no specimens of these creatures. Their tasks are as interesting as themselves. They show partiality for old posts and palings, or the woodwork of houses, which is soft, because commencing to decay; but apparently they do not form fresh tunnels, save when old ones are not to be had. The bee usually begins boring obliquely across the grain of the wood, about two days being taken to make the workman's own length; but this may not be so easily done as the remainder, which runs parallel with the sides of the wood for from twelve to eighteen inches. Sometimes an excavation or two will suffice, which generally take opposite directions from the opening; sometimes the bee cuts extra galleries, one above the other, using the same opening. Sharp jaws, moved by powerful muscles, are its only tools; and, as it descends into the heart of the solid wood, the tunnel is swept clean and regular with stiff brushes of hair on the legs, and all raspings made in eating the burrow out are cast forth from the entrance. The sawdust expelled becomes of subsequent use. One by one successive partitions of the chippings, caused to adhere with some sticky fluid, probably saliva, are constructed, dividing the entire tunnel into cells somewhat less than an inch long. Each is supplied with an egg and a compound of pollen and honey; the door is closed; but before deserting her bevy finally, the bee forms a lateral opening from the outside to the bottom of the cells and chokes it with sawdust paste; and through this the young escape when the time for their emergence arrives.

UNCONSIDERED USES OF WOOD.

THERE are countless ways in which wood is being consumed, besides the larger uses for fuel, building purposes and the like; and in the aggregate these unconsidered uses amount to a serious drain on the forests, while little or nothing is done to insure a supply for future demands. The enumeration of the special uses of wood in the arts forms a very interesting chapter. One of the principal uses of the wood of the holly, dyed black, is to be substituted for ebony in handles of metal teapots, etc., and the strong straight shoals, deprived of their bark, are made into whip handles and walking sticks. The limetree forms the best planks for shoemakers and glovers, upon which to cut their leather, and is extensively used in the manufacture of toys and Tunbridge ware, and by the turner for pill boxes, etc.; and the inner bark is made into rope and matting. The sycamore furnishes wood for cheese and cider presses, mangles, etc., and when the wooden dishes and spoons were in common use they were mostly made of this wood. It is now used in printing and bleaching works for beetling beams and in iron foundries for making patterns. The yew is used by the turner and made into vases, snuff boxes and musical instruments, and it is a common saying that a post of yew will outlast a post of iron. Where it is found in sufficient quantities to be employed for work underground, such as water pipes, pumps, etc., the yew will last longer than any other wood. Gate posts and stakes of yew are admirable to wear, and in France the wood makes the strongest of all wooden axletrees. Of beech are made planes, screws, wooden shovels, and common fowling pieces and muskets are also stocked with it, and beech staves for herring are not unknown. The sweet or Spanish chestnut furnishes gates and other posts, railing, barrel staves, hop poles, and other matters, such as strong and good charcoal, though scarcely equal to that of oak for domestic purposes, but considered superior to that of any other for forges.

Hornbeam is the best wood that can be used for cogs of wheels, excelling either the crab or the yew; but its application in this manner is about at an end. As a fuel it stands in the highest rank, emitting much heat, burning long, and with a bright, clear flame. In charcoal, it is highly prized, not only for culinary purposes and the forge, but also for the manufacture of gunpowder, into which, on the continent, it enters in large proportions.

In Russia, many of the roads are formed of the trunks of Scotch pine, trees from six inches to one foot in diameter at the larger end being selected for the purpose. These are laid down side by side across the intended road, the thick of one alternately with the narrow end of the other, and the branches being left at the end to form a sort of hedge on each side of the road. When thus laid, the hollows are filled up with earth, and the road is finished, being analogous to the corduroy roads of North America. In Germany, many casks are made of larch, which is almost indestructible, and they allow of no evaporation of the spirituous particles of the wine contained in them. In Switzerland larch poles are much used for vine crops; they are never taken up, and see crop after crop of vines spring up, bear their fruit, and perish at their feet without showing symptoms of decay. The uninjured state in which larch remains when buried in the earth or immersed in the water, renders it an excellent material for water pipes, to which purpose it is largely applied in many parts of France. The butternut is esteemed for the posts and rails of rural fences in America, for troughs for the use of cattle, for corn shovels and wooden dishes.

Shell-bark hickory provides caskets, whip-handles and the backbows of Windsor chairs. The pignut hickory is preferred to any other for axletrees and axe handles. The sugar maple is used by wheelwrights for axletrees and spokes, and for lining the runners of common sleds. Dogwood is used for the handles of light tools such as mallets, small vises, etc. In the country it sometimes furnishes harrow teeth to the American farmer, also lining for the runners of sledges. The mountain laurel is selected for the handles of light tools, small screws, boxes, etc. It most resembles boxwood, and is most proper to supply its place. Bowls and trays are made of red birch, and when saplings of hickory or white oak are not to be found, hoops, particularly, those of rice casks, are made of the young stocks and branches not exceeding one inch in diameter. Its twigs are exclusively chosen for the brooms with which the streets and country yards are swept. The twigs of the other species of both being less supple and more brittle, are not proper for this use. Shoe lasts are made from birch, but they are less esteemed that those of beech.

Immense quantities of wooden shoes are made in France from the wood of the European alder, which are seasoned by fire before they are sold. The wood of the locust is substituted for box by the turners in many species of light work, such as salt cellars, sugar-bowls, candlesticks, spoons, and forks for salads, boxes, and many other trifling objects, which are carefully wrought into pleasant shapes and sold at low prices. The olive is used to form light ornamental articles, such as dressing cases, tobacco boxes, etc. The wood of the roots, which is more agreeably marbled, is preferred, and for inlaying it is invaluable. Of persimmon, turners make large screws and turners' mallets. Also shoemakers' lasts are made of it equal to beech, and for the shafts of carriages it has been found perferable to ash, and to every species of wood except lancewood. The common European elm is used for the carriages of cannon and for the gunwale, the blocks, etc., of ships. It is everywhere preferred by wheelwrights for the naves and felloes of wheels, and for other objects. White cedar serves many subsidiary purposes. From it are fabricated pails, washtubs, and churns of different forms. The ware is cheap, light, and neatly made, and instead of becoming dull, like that of other woods, it grows whiter and smoother by use. The hoops are made of young cedar stripped off the bark and split into two parts. The wood also supplies good charcoal. The red ceadar furnishes staves, cigar boxes, stop-cocks, stakes, and is also used for coffins.

A few special applications of wood in this country are mentioned, separated into trades—namely, sieves, usually of black or water ash for the bottom, and oak or hickory for the circle; whipstocks, white oak; baskets, willow, white oak and shellbark hickory; picture frames, white pine and sweet gum; saddletrees, red maple and sugar maple; screws for bookbinders' presses, hickory or dogwood; hatters' blocks, sour gum; corn shovels, butternut; shoe lass, beech and black or yellow birch.—Illustrated Carpenter and Builder, Eng.

ANGLE SHAFTING.

A GRINDER working at a bench that ran along both sides of the room and across the end, was much puzzled to learn how the shafting beneath the bench from which all the grinders were driven was connected in the two corners of the room. Being well housed in beneath the benches, and boxed up tightly where the connections were made, no one at the benches had the slightest idea of this angular transmission till it was one day overhauled for repairs, when it was noticed that belts had been made use of in about as close a position as it was possible to run them. There were six wheels and to separate belts in each corner, besides a short countershaft, and yet this arrangement had run quietly for a long time without making trouble or even given the oiler occasion to look after them. What a belt can stand is astonishing. The first belt ran from the driving to the countershaft overhead, that came so close together that the belt wheels nearly rested on each other. The four-wheel method was then made use of for the second belt, where one of the wheels has to run loose on each shaft to transmit power by this method. In this fashion the shaft was taken beneath a bench around on three sides of a room without gears or any other noisy fixtures.

WOOD WITH THE QUALITIES OF IRON.

THE vermillion tree, says an exchange, grows in India, and is the property of the government exclusively. It is cut by convicts, so much each year. When in its natural state it has the peculiar quality of reflecting light, and is so hard you cannot penetrate it without boring. Its durability is well known. It was used for the main stairway at the great exposition in London in 1851. At the World's Fair, the Pullman Car Company had a car handsomely fitted up, the inside of which was finished in this wood. It has marvelous weight and strength and is really wood with the qualities of iron.

DRYING HARD WOODS.

THERE is still a good deal for hard wood lumbermen to learn about drying different species of lumber. Consumers find more or less fault continually with the present methods, or rather with some of them. It is dawning upon their minds that lumber of all kinds can be dried thoroughly and without injuring it in strength or texture; that there is no need of case hardening it on the outside while leaving the sap inside to sour and ferment and ultimately work its way to the surface to discolor and ruin fine finish or to destroy the strength of the interior fibers by fungold growths like dry rot, and that it need not be scorched and barbonized till the life is almost out of it and the cohesion of its fibre destroyed. The art of artificially drying lumber is rising into the domain of science, and lumbermen are learning that not every dunderhead who has blundered on to the fact that heat increases the absorbing power of air, can build a successful dry-kiln. Millions of feet of hard wood lumber are annually ruined for fine use by improper artificial seasoning, while the men who do the drying are totally oblivious of the fact and the consumers do not know what is the matter with it. They realize that something prevents it fron taking the finish it should and that they cannot use it; but they do not know why. This subject needs continual agitating until it is better understood all around.—Hardwood.

"Can any little boy here," asked the visitor, "give me an example of the expansion of substances by heat?" "I can," said Tommy, "our dogs tongue is twicet as long as it was last winter."

J. F. EBY. H. BLAIN.

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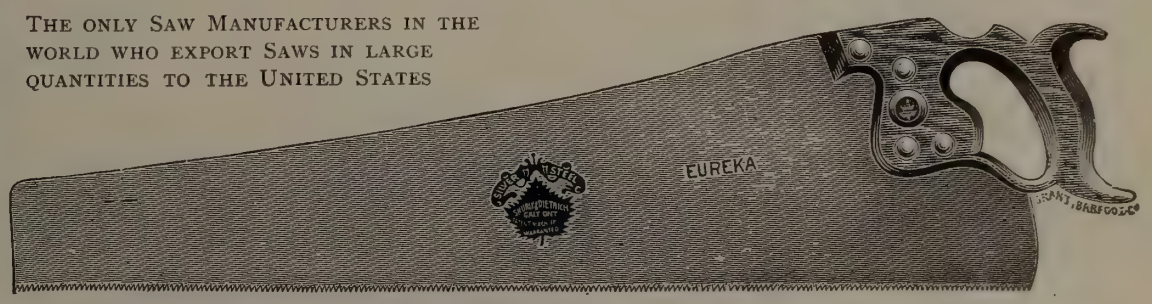

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BIG CANADIAN MILLS.

FOLLOWING up a discussion in the Timberman on the largest saw mills of the country, a correspondent, evidently from the Ottawa district, sends to our contemporary the following particulars of large Canadian mills :—

"Until John R. Booth's mill at Ottawa burned a few weeks ago, it was the largest mill on this continent. There were fourteen band mills, four gang and four twin circulars in the mill. The capacity was about 1,200,000 feet per day, but owing to the cramped position and bad arrangement of machinery it never cut 1,000,000 feet per day. This was not the largest mill in the world, however, as I understand there is now running in Sweden a mill cutting every twelve hours over 3,000,000 feet of lumber. I am inclined to think that W. J. Young, of Clinton, Ia., has now the largest on the continent.

I will give you the capacity of the leading mills in Canada for comparison : J. R. Booth, of Ottawa, has now four band saw mills, two gangs, and a twin circular. Runs day and night, and cuts about 100,000,000 feet a season. Buell, Hurdman & Co., Hull, Quebec, have in one mill three band saw mills and a gang. In the other mill, five gangs and one twin circular. These gangs in this last mill are, however, all old style, and two are slabbing gangs. In both mills, running only day time, they cut about 70,000,000 feet a season.

Gilmour & Hughson have two band saw mills, a twin circular and a gang. They run only nights and cut 50,000,000 feet last year. This is their new mill. Their old mill up river has several old style gangs and cuts about 40,000,000. W. C. Edwards has three bands and a gang at New Edinboro, at Rockland three band saw mills, a gang and twin circular and cuts all told about 60,000,000.

Gilmour & Company, Trenton, Ont., have three band saw mills, a twin circular and two gangs and cut about 75,000,000 a season.

These are the largest concerns in Canada. All are backed by ample capital and own large quantities of white pine. J. R. Booth is estimated to own nearly three billion feet of standing pine, both white and Norway (or, as it is called here, red pine). Buell & Hurdman own about one billion. I am not capable at this time of giving an estimate of the other holdings.

There are other large manufacturers, of course, but those I have named are representative and stand at the head. I am personally acquainted with all of them and have these figures from their own lips."

PAPER PULP WATER PIPES.

THE experience with the new paper pulp pipes, which are made on pretty much the same principle as the fiber pail, have demonstrated that the idea will eventually prove successful. As it now stands, the hand-made pipes, formed from crudely worked and irregularly subdued pulp, are well enough made to warrant that they will stand the wear and tear to which street water pipes are subjected. With each new test of the proposed pipes, a step in advance is made, and this would seem to indicate that after a few more trials perfection will have been attained. The matter as it now stands is about as follows : Paper pulp, in which there is a fairly good fiber, is agitated with water and run into molds and cast into the form of the ordinary water pipe. The same molds that are used in connection with casting iron pipes are employed. The mode of procedure is substantially the same. Of course there are various strengthening materials compounded with the pulp, otherwise it would not stand a great pressure. The inventors report that these ingredients are inexpensive and simple.

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Lumbermen's Supplies a Specialty
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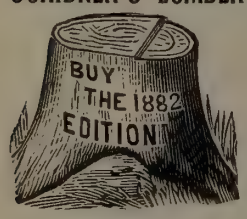
SCRIBNER'S LUMBER AND LOG BOOK



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THE J.C.McLAREN BELTING Co MONTREAL

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 24th of each month to insure insertion in the following issue.

FOR SHINGLES IN CAR LOTS WRITE FOR prices. McEACHERN & CARR, Trout Creek P. O., Ont.

A STEADY, CAPABLE YOUNG MAN, WITH several years' experience in general saw mill and wood business, desires position; office work preferred. "J. C.", CANADA LUMBERMAN.

WANTED

FOR HEMLOCK, DIMENSION LUMBER, hardwood flooring, cedar shingles, piles, sawdust, etc., write J. E. MURPHY, lumberman, Hepworth Station, Ont.

WANTED

FOR IMMEDIATE SHIPMENT, 1 INCH AND 1¼ inch Brown Ash and other Hardwoods. Quote lowest cash prices. JAMES G. CANE & CO., Room 20, Aberdeen Chambers, Toronto.

WANTED

POSITION AS TRAVELLER OR TORONTO Agent for Manufacturer, by gentleman of ability and experience, with some knowledge of the lumber business; highest references. Address "Traveller," CANADA LUMBERMAN.

WANTED,

150,000 FEET NO. 1 AND 2 SOFT ELM, 1" to 4" thick; 250,000 ft. No. 1 and 2 Birch, 1" to 2" thick; 100,000 ft. No. 1 and 2 White or Brown Ash, 1" to 4" thick; 100,000 ft. No. 1 and 2 Hard Maple, 1½" and 2" inch thick. Address BUFFALO HARDWOOD LUMBER CO., 940 Elk St., Buffalo, N.Y.

THOROUGHLY EXPERIENCED AND RELIABLE inspector to purchase for an extensive eastern manufacturing concern, stocks of ash, birch, elm, maple, etc., lumber and also piece-stock, from 2 inch and up wide, 18 inch and up long, 1 inch thick, kilndried if possible; specifications upon application. Splendid chance to work up low grades. Give full particulars of stocks ready for shipment and references. Address CANADA LUMBERMAN.

FOR SALE

LABERGE MILL, WITH WOOD LAND, over 400 acres, near St. Faustin, County of Terrebonne, P. Q., on Montreal and Western Railway, comprising two H. P. boilers, one 65 H. P. engine, and saw mill complete—only one year in use—with clapboard machine and planer and log lathe, shingle machine, Champion planer and matcher, &c.; side track; with or without over 200,000 feet of sawed birch and spruce. Good reduction made on cost price. Address to J. LABERGE, 1511 Notre Dame Street, Montreal.

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ACCOUNT REMOVAL—ALL GRADES AND thicknesses of excellent stock of dry Poplar, entire stock of walnut rejects and culls, all thicknesses, principally inch old dry Indiana lumber, mostly kilndried. Splendid for cutting up purposes. Special prices.
P. O. BOX 2144, NEW YORK.

FOR SALE,

STEAM SAW MILL, WITH 60 H. P. STEEL Boiler. new, and 50 h. p. engine, and 500 acres of land, with a heavy cut of birch and other timber, also a large quantity of black birch, to be had convenient to mill. G. T. R. switch on the premises. For further particulars, apply to
JAMES McCARTNEY,
SOUTH RIVER, ONT.

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NEW AND SECOND-HAND STEEL AND iron rails for tramways and logging lines, from 12 lbs. per yard and upwards; estimates given for complete outfit.
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Canoe, Yacht and Boat Sails made to order. Perfect Fits Guaranteed.

Every description of Lumbermen's Supplies and Waterproof Clothing.

TIMBER LIMITS AND MILL FOR SALE

MILL consists of 50 h. p. engine and suitable boiler. One small size Waterous Band Mill with all necessary tools, long carriage, heavy three-saw edger, endless chain, bull wheel rig, 60 inch cut off saw for shingle blocks; two "Dunbar" shingle machines, one combined planer and matcher, and small saws, etc., etc., usually found in mills. The whole in first-class condition, having only been in use a short time and well looked after. Situated at Gaspe Basin, Province of Quebec. Deep water right at mill. Excellent point for shipment to Prince Edward's Island, Cape Breton, and New England ports.

Timber limits consist of 68 square miles on the Dartmouth river, extending one and a half miles back from said river, on either side; always plenty of water for driving. An estimate was given after careful survey on these limits that there are between sixty and seventy millions of spruce and pine and from seventy to eighty millions of cedar. The greater part of these limits have never had an axe on them. As this property must be sold to liquidate an estate it is a rare chance for an investment. For further particulars apply to A. A. BENSON, 718 Craig Street, Montreal; Waterous Engine Works Company, Ltd., Brantford, Ont., or RUPERT J. LOUNDES, Assignee, Gaspe, Que.

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CANADA MACHINERY & SUPPLY CO.
OF BRANTFORD, ONT.
are offering the following
SECOND-HAND MACHINERY
FOR QUICK SALE AT LOW PRICES.

ONE heavy Waterous saw mill, iron saw frame, with a three block carriage, with two intermediate blocks, complete with 67 inch inserted tooth Hoe saw.

THREE complete three block saw mills, with any size saw wanted; two heavy, double planer, matchers and beaders, with eight inch feed rolls; one heavy planer and matcher; one complete heading and stave mill outfit; one complete set of butter tub machinery (American make); one double Excelsior cutting machine

BOILERS.—One 60 inch by 14 feet; one 56 inch by 12 feet; one 48 inch by 14 feet; one 48 inch by 12 feet; one 44 inch by 14 feet, and a large number of smaller sizes.

ENGINES.—One 15½x20; one 12½x20, Goldie & McCulloch make; one 12x18, Waterous double cut off; one 11½x18, Thomas; two 9x12, Waterous; one 8½x12, Beckett, and a large number of smaller sizes.

WATER WHEELS.—One 42 inch, Leffel; one 40 inch, Leffel; one 36 inch, Leffel; four 30½ inch, Leffel's; one 20 inch, Barber and Harris, in case; one 17½ inch, Leffel; one 17½ inch, Little Giant; five 15½ inch, Leffel's.

WE also carry a Complete Stock of all kinds of WOODWORKING MACHINERY, IRONWORKING MACHIERY, GRIST MILL MACHINERY, Shafting Hangers, Pulleys, Belting, Etc. Write us particulars of what you want. Address THE CANADA MACHINERY AND SUPPLY CO., Brantford, Ont.
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FROM
Port Huron and Detroit
Is the Short Line to
SAGINAW AND BAY CITY
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MT. PLEASANT, CLARE, REED CITY
BALDWIN, LUDINGTON, MANISTEE
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The last-named place reached by the Company's line of Steamships across Lake Michigan.
The line thus formed is a short and direct route from
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and all Canadian Territory
To ST. PAUL, DULUTH and Pacific Coast Points.

This road traverses a section of Michigan with unrivalled advantages to settlers. Cheap lands, thriving villages and towns, well watered with streams in all directions: a market for every product of Forest and Field.
The policy of the "F. & P. M." is known to all travellers and settlers.

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GENERAL OFFICES: - SAGINAW, MICH.

Representative Lumber Manufacturers and Dealers

TOWN	Railway, Express, or nearest Shipping Point	NAME	BUSINESS	Power, Style and Daily Capacity
Ottawa, Ont	Ottawa	**Booth, J. R.**	Lumber, Wholesale and Retail	Steam, Circular and Band Mill
Ottawa, Ont	Ottawa	**Bronson & Weston Lumber Co.**	2 Sawmills, White and Red Pine, Wholesale	Water, Gang and Band, 450m
Parry Sound, Ont	Utterson	**Conger Lumber Co.**	Lumber, Wholesale and Retail	
Parry Sound, Ont	Parry Sound	**Parry Sound Lumber Co.**	Saw, Shingle and Lath Mills, Pine, Wholesale	Water, Gang, Circular, Saw 90m, Shingles 70m, Lath 30m
Muskoka Mills, Ont	Midland	**Muskoka Mill and Lumber Co.,** Head Office, Arcade, 24 King st. w., Toronto	W. Pine Lumber, Lath and Bill Stuff, all lengths.	2 Mills, Water, 1 Band, 2 Gangs and 3 Circulars.
Alexandria, Ont	Alexandria	**McPherson, Schell & Co.**	Cheese Box Factory, Pine, Spruce, Cedar	
Almonte, Ont	Almonte	**Caldwell, A. & Son**	Sawmill, Pine, Lumber, Hemlock, Hardwoods	Circular, 3m
Barrie, Ont	Barrie	**Dyment & Mickle**	Sawmill, Pine, Spruce, Cedar, Hardwoods	Steam, Circular, 40m
Barrow Bay, Ont	Wiarton	**Barrow Bay Lumber Co., Limited**	Saw, Shingle and Heading Mill, Pine, Cedar Oak, Oak Railway Ties, Paving Blocks	Steam, Circular, 16m
Blind River, Ont	Blind River	**Blind River Lumber Co.**	2 Saw, Sh. and Lath Mls., Pine, Hem., Bl. Birch	Stm., Band, Cir., S. 75m, Sh. 60m
Bobcaygeon, Ont	Fenelon Falls	**Boyd, Mossom & Co.**	Lumber, Wholesale and Retail	
Barrie, Ont	Barrie	**Burton Bros.**	Lumber, Wholesale and Retail	
Waubaushene, Ont	Waubaushene	**Georgian Bay Consolid. Lumber Co.** Hd. office arcade 24 King st. w., Toronto	Pine only	Waubaushene mill, stm., 200m; Pt. Severn mill, water, 120m
Calabogie, Ont	Calabogie	**Carswell, Thistle & McKay**	Lumber, Wholesale and Retail	
Callander, Ont	Callander, G.T.R.	**John B. Smith & Sons** Head Office, Strachan Ave., Toronto	White and Red Pine Lumber, Bill Stuff, Lath and Shingles	Steam, 2 Circular, 80m
Collins Inlet, Ont	Collins Inlet	**Collins Inlet Lumber Co.**	Lumber, Pine, Oak, Ash, Birch, Whol. and Ret.	
Glammis, Ont	Pinkerton	**McIntyre, N. & A.**	Saw, Shingle and Lath Mill, Timber Lands, Hemlock, Pine, Lumber, Hardwoods	Steam, Cir., Saw 14m, Sh. 20m
Hamilton, Ont	Hamilton	**BRADLEY, MORRIS & REID CO.**	Lum., Tim., Pine, Hem., Hwds., Whol. and Ret.	
Huntsville, Ont	Huntsville	**Heath, Tait and Turnbull**	Sawmill, Pine, Spruce, Hemlock, Hardwoods	Steam, Circular, 25m
Hamilton, Ont	Huntsville and Katrine	**Thomson, Robert & Co.**	Sawmill, Pine, Spruce, Hardwoods	Steam, Circular, 4m
Keewatin, Ont	Keewatin	**Dick, Banning & Co.**	Sawmill, Pine, Hardwoods, Wholesale	Steam, Circular
Keewatin, Ont	Keewatin	**Keewatin Lumber & Mfg. Co.**	Saw, Lath, Sh. and Pl. Mill, Moving Posts, Pine	Water, Band and Circular, 100m
Lakefield, Ont	Lakefield	**Lakefield Lumber Mfg. Co.**	Lumber, Wholesale and Retail	
Little Current, Ont	Sudbury	**Howry, J. W. & Sons.**	Lumber, Wholesale and Retail	
London, Ont	London	**Gordon, James**	Exp. and dlr. in Am. Hwds, made to specification	
Longford Mills, Ont	Longford	**Longford Lumber Co.**	Saw and Plan. Mill, Tim. Lands and Logs, Pine	Steam, Band and Circular, 100m
Norman, Ont	Norman	**Minnesota & Ontario Lumber Co.**	Lumber, Wholesale and Retail	
Louise, Ont	Elmwood, G.T.R.	**S. B. Wilson & Son**	Hardwoods, Shingles, Lath, Handles	Steam, Circular, 20m.
Toronto, Ont	Warren, C.P.R	**The Imperial Lumber Co., Limited.**	Pine	80 M. per day, Stm., 2 Cir. Saws
Toronto, Ont	Cache Bay, Ont.	**Davidson, Hay & Co.**	W. Pine, Lath, Shingles, Dim. Timber, Car Sills	Stm, 2 Band, Cir. & Gang, 140m
Toronto, Ont., Mill: Stony Lake	Lakefield	**S. J. Wilson & Co.**	Pine and Hardwood, Wholesale	Steam, Circular, 15m.
Toronto, Ont	Toronto	**F. N. Tennant**	Lumber, Wholesale	
Toronto, Ont	Toronto	**Donogh & Oliver**	Lumber, Wholesale	Com.
Toronto, Ont	Toronto	**Victoria Harbor Lumber Co.**	3 Saw, Shingle and Lath Mills, White Pine, Whol.	Stm., Cir., Gang and Band, 140m
Toronto, Ont	Toronto	**W. N. McEachren & Co**	Lumber, Wholesale	Com.
Toronto, Ont	Toronto	**James Tennant & Co.**	Lumber, Lath, Shingles, etc., Wholesale	Com.
Toronto	Toronto	**DeLaplante & Bowden**	Pine and Hardwood Lumber, Whol. and Retail.	
Toronto, Ont	Toronto	**James McBain Reid.**	Ry. and Ship Timber, any required dimensions	
Wiarton, Ont	Wiarton	**Miller, B. B.**	3 Sawmills, Lumber, Barrel Heads	Stm., Wr., Cir., Port. & Sta., 10m
Montreal, Que	Montreal	**Dufresne, O. Jr. & Frere**	Sawmill, Pine, Spruce, Hemlock, Hdwds., Whol.	Steam, Circular and Band, 50m
Montreal, Que	Montreal	**SHEARER & BROWN**	4 Sawmills, Oak, Ash, Elm, Pine, Hem., Dim.	2 Stm., 2 Wat., Band, Cir., 40m
Moodyville, B.C.	New Westminster	**MOODYVILLE SAWMILL CO.**	Sawmills, P. Fin, Spruce, Cedar, Hardwoods	Steam, Circular, 20m
New Westminster, B.C.	New Westminster	**Brunette Sawmill Co.**	Saw and Planing Mills, Sash, Doors and Blinds. Fir, Cedar, Spruce, Hardwoods	Steam, Gang and Circular
Canterbury, N.B.	Canterbury Stn.	**James Morrison & Son**	Sawmill. Pine, Hardwoods	Steam, Circular, 38m
Bridgewater, N.S.	Bridgewater	**DAVIDSON, E. D. & SONS**	5 Saw, Shgle. and Lath Mills, Pine, Spr., Hwds.	Water, Circular and Gang, 200m
South River, Ont	South River, G.T.R.	**South River Lumber Co., Ltd.**	Pine, Spruce, Birch, Hemlock, Shingles	Stm., Cir., 40m, Shingles, 35m, Lath, 15m

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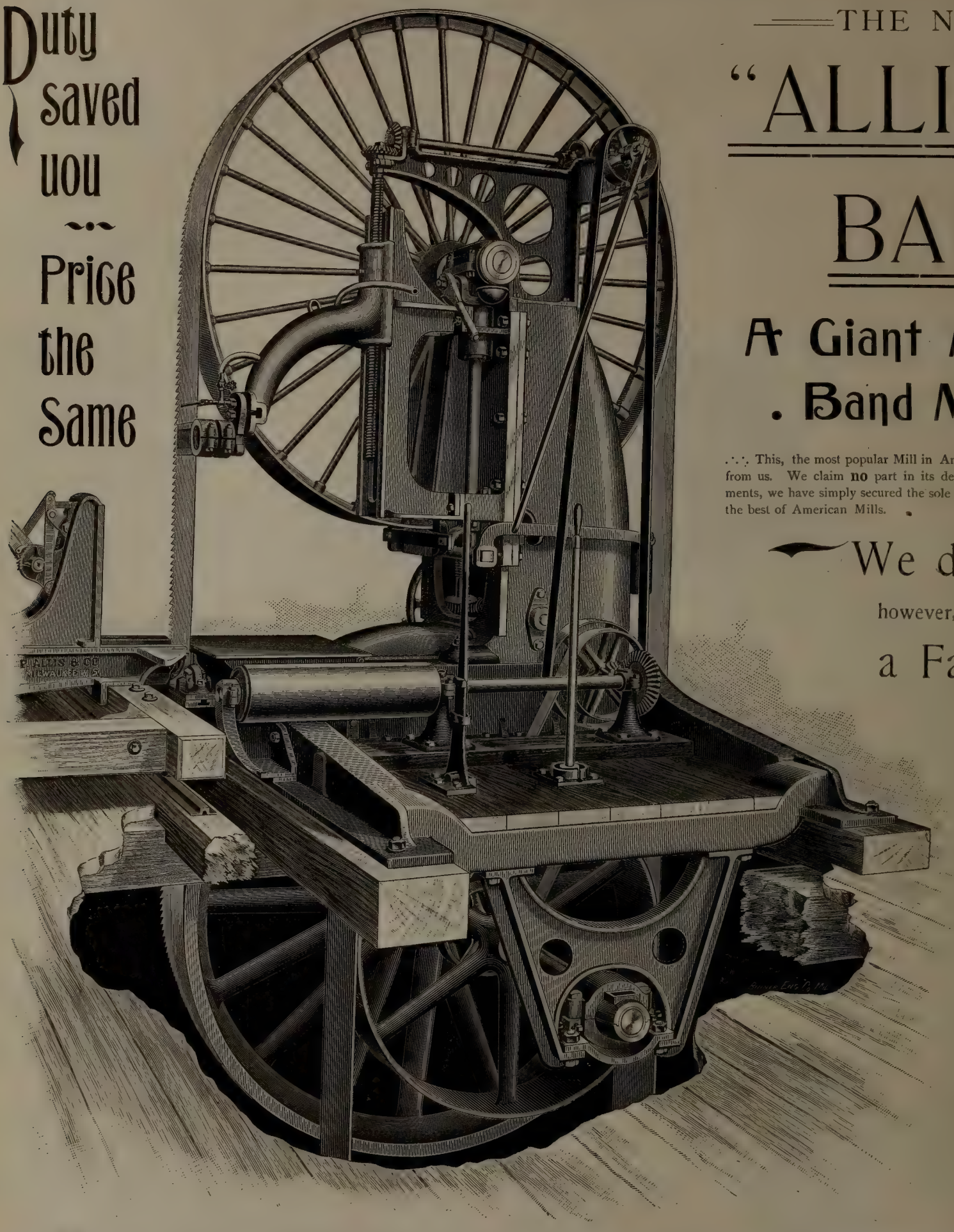

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A Giant Among . Band Mills .

. . . This, the most popular Mill in America, requires no eulogies from us. We claim **no** part in its design, invention or improvements, we have simply secured the sole right to build in Canada this the best of American Mills.

We do Claim however, to Build a Fac-Simile

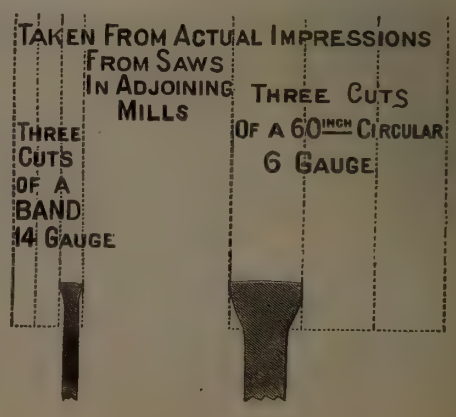
of the Band Mills built by ALLIS & Co., of Milwaukee, ...

With all up-to-date Improvements

and GUARANTEE in the strongest manner desired that . . . . . .

Our Allis Band Mills are the equal in every re spect . . . . of the American built Allis Mills.

WITH THIS GUARANTEE why hesitate to change. The **saving** is enormous. Without practical demonstration you can scarcely realize it. **Saving in Kerf—Saving in Cutting** nearer to size—Saving in cutting to suit quality—Increase in value in medium and very wide lumber—Improved appearance—**Increased Output of Mill**. We guarantee the "ALLIS BAND" to cut equally as fast or faster than the circular mill it replaces. Anticipating a large demand for these Mills during the next 8 months, we offer special inducements for immediate sales—delivery to suit purchasers' convenience. Write us.



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" " 6IN. DOUBLE OAK LEATHER—7,522"

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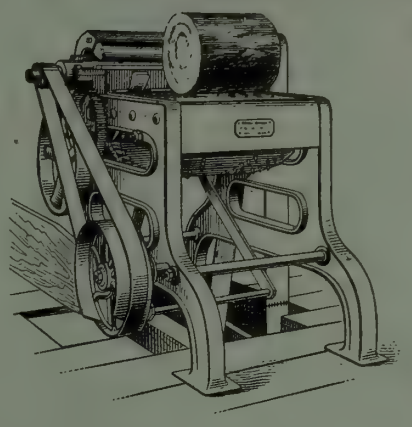
Patent Rossing Machine



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It will do double the work of any other.
It is the only machine made that will peel Cedar Shingle Blocks.
It will peel dirty blocks without taking the edge off the knives as they cut from the clean bark or block out.
It is a self-feeder, and very easy to operate.
It requires less power than a face wheel.
All iron and steel, very simple and durable.
It will ross knotty and uneven timber without waste.
It occupies about the same space as an ordinary planer.
You can have a chance to try a machine before buying it.

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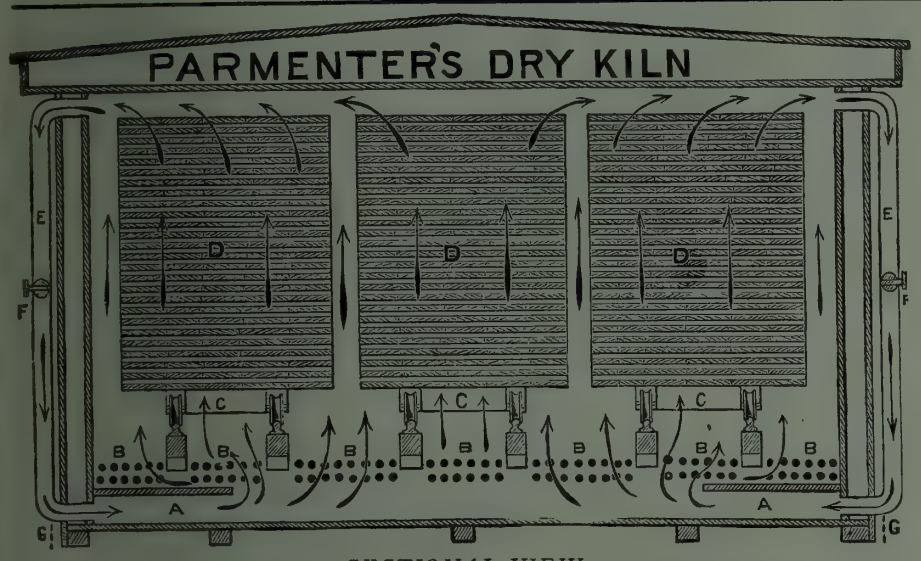
EASTMAN, QUE.



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FOR DRYING LUMBER, SHINGLES, STAVES,
. . . HEADING, ETC., ETC. . . .

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Dauntless Shingle and Heading Machine

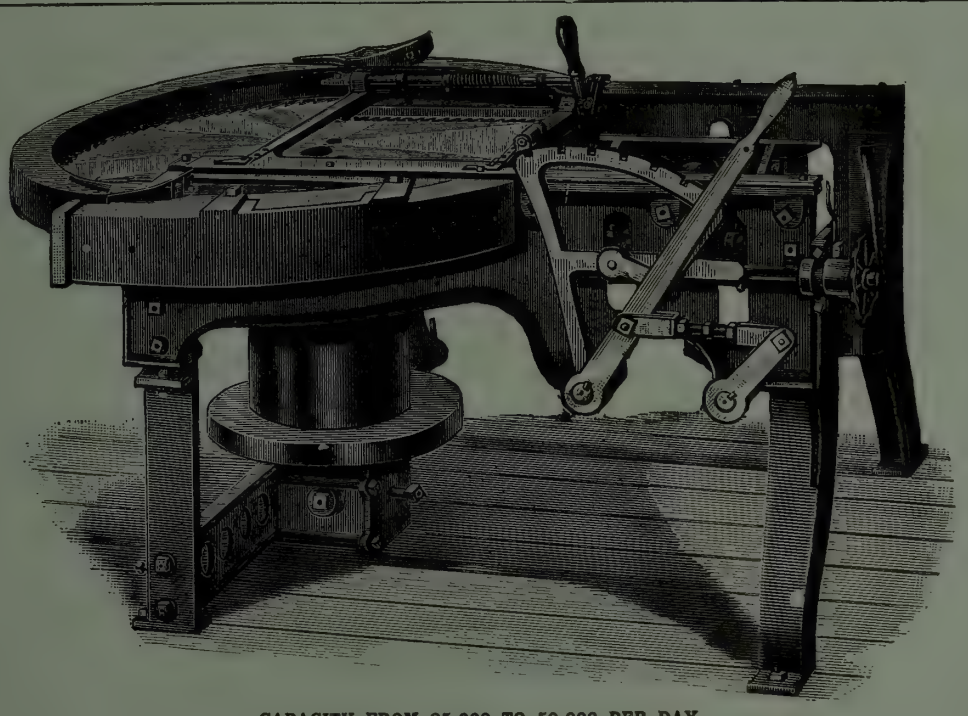
∴ WILL make more Shingles per day than any self-acting machine with vertical saw in existence, and more Shingles from the same quantity of timber.

THE FRAME———•

. . . Is of Iron throughout, very heavy and rigid, strongly bolted and braced.

THE CARRIAGE———•

. . . Is very light and strong, made of forged Cast Steel Plate, running on steel ways or tracks. Will take in a block 18 inches wide and 19 inches long, adjustable for 16-inch or 18-inch shingles.



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A FULL LINE OF

Saw Mill . .

Machinery

AND CAN FURNISH

COMPLETE OUTFITS

AT VERY LOW FIGURES.

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PATENTEE AND MANUFACTURER OF SAW, SHINGLE AND LATH MACHINERY

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PARTIES manufacturing or having for sale **Birch, Maple, Basswood, Soft or Rock Elm, White or Brown Ash, &c.,** will find us always in the field for desirable stock.

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A Life Policy
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An Investment Policy
Or an Annuity Policy ?
THE ONTARIO MUTUAL LIFE
ISSUES THEM ALL
One 20-year Survivorship Distribution Policy embraces all the newest features, and is the best form of Protection and Investment money can buy. It has no equal. Guaranteed values, attractive options and liberal conditions.
A WISE AND GENEROUS PLAN.
Our Annuity Endowment Policy ensures a certain annual income to yourself during 20 years after maturity of the Policy or to your family at earlier death; and the Annuity Life Policy guarantees a sure income to your family during 20 years after your death; first payment immediate. The rates are lower than on ordinary plans.

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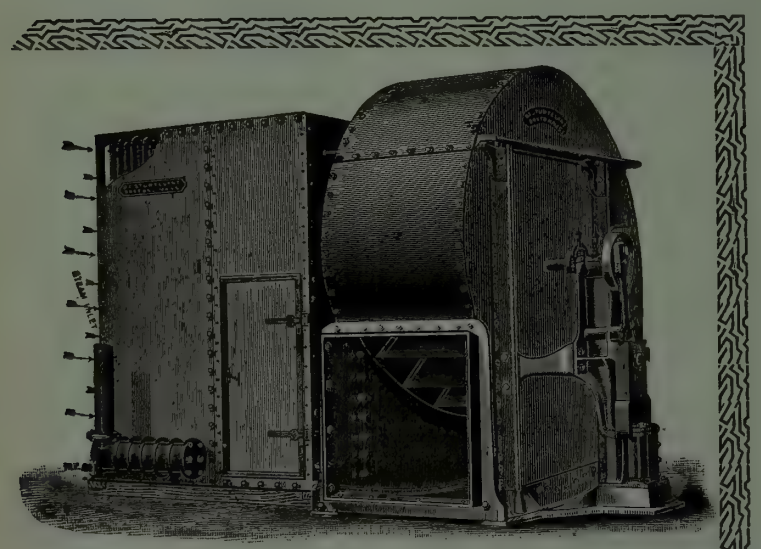

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THE CANADA LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XV. NUMBER 12. | TORONTO, ONT., DECEMBER, 1894 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

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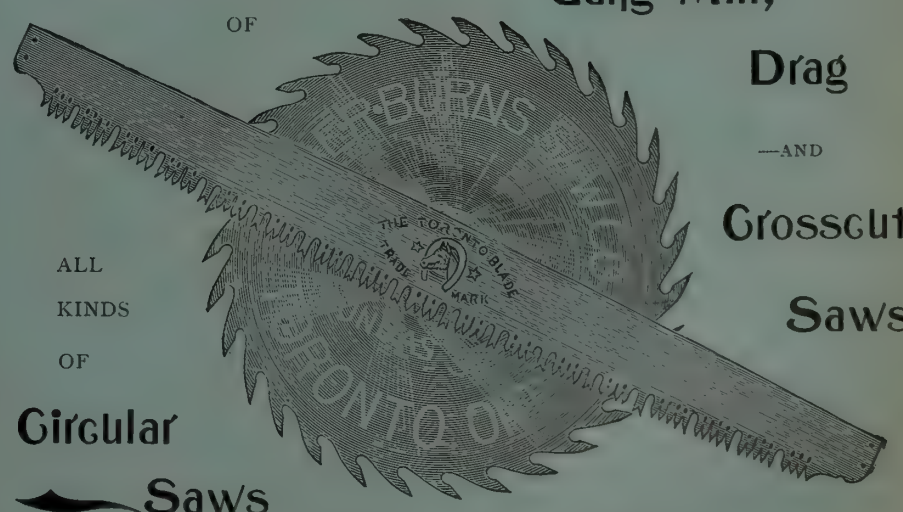

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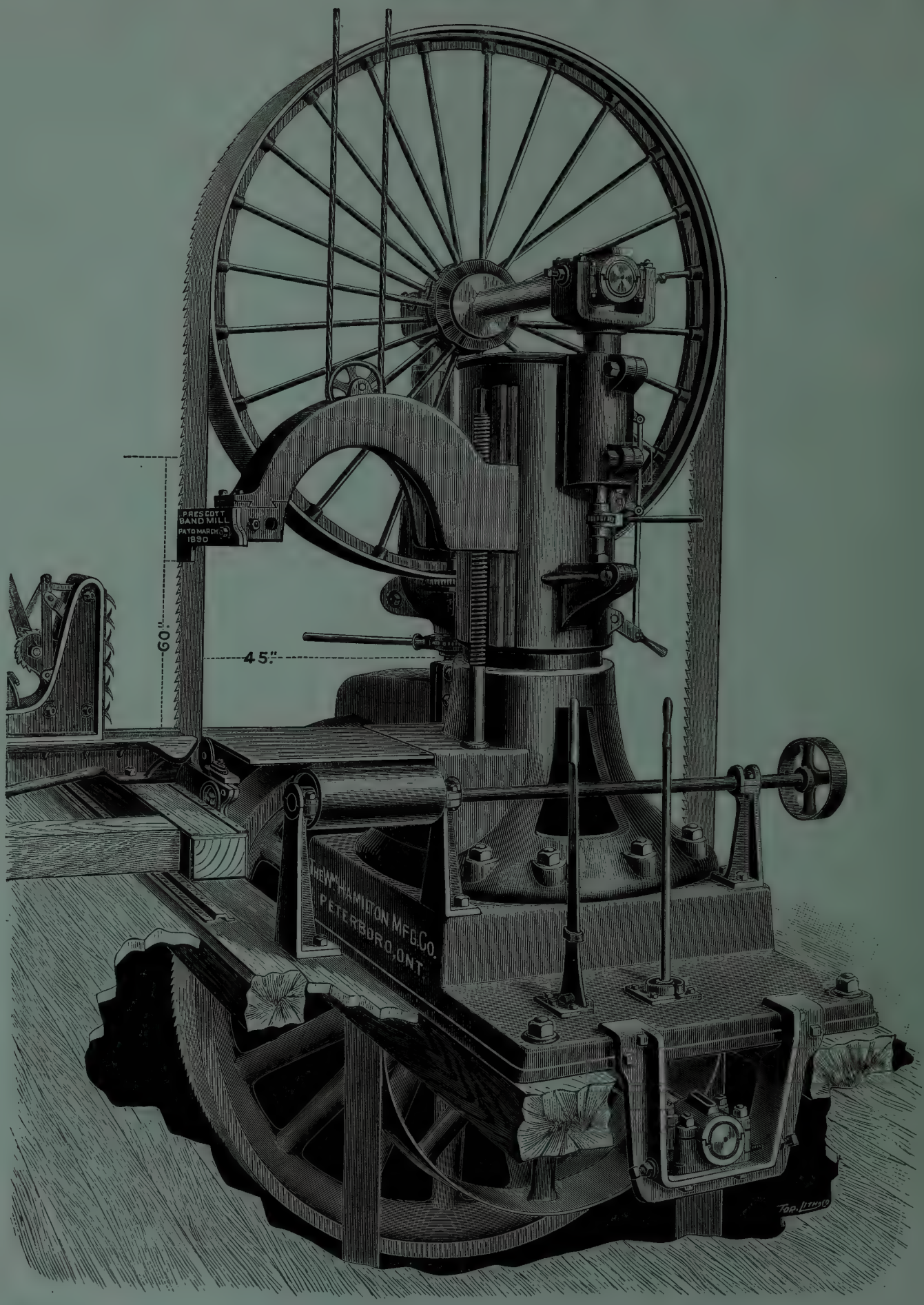

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...What Some of Our Customers Say...

OF THE

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Buckingham, P. Q., Sept. 1st, 1894.

Messrs. The Wm. Hamilton Mfg. Co., Peterborough, Ont.

Dear Sirs: In reply to yours of the 31st instant, we have every reason to be satisfied with the Prescott Band Mill received from you spring, 1893. We have never had any trouble with it, nor has there been any repairs or changes required, and we therefore consider it a first-class machine, and one in every way suitable for the requirements of our business.

Yours truly, Ross Bros. in Liq.
Per G. L. Parker.

Rockland, Aug. 31, 1894.

Messrs. The Wm. Hamilton Mfg. Co., Peterborough, Ont.

Dear Sirs: In answer to your enquiry we have to say the four (4) Prescott Band Mills got from you spring of 1893 went into operation on the 15th of May, same year, and have been again in operation since the opening of the present season, and we are much pleased to be able to say that they have continually given us entire satisfaction. We have been entirely free from breakdowns and have had every comfort and satisfaction in running those machines. Should we require any additional machines, our first enquiry would be made of you.

Yours truly, W. C. Edwards & Co., Ltd.
Per W. C. Edwards.

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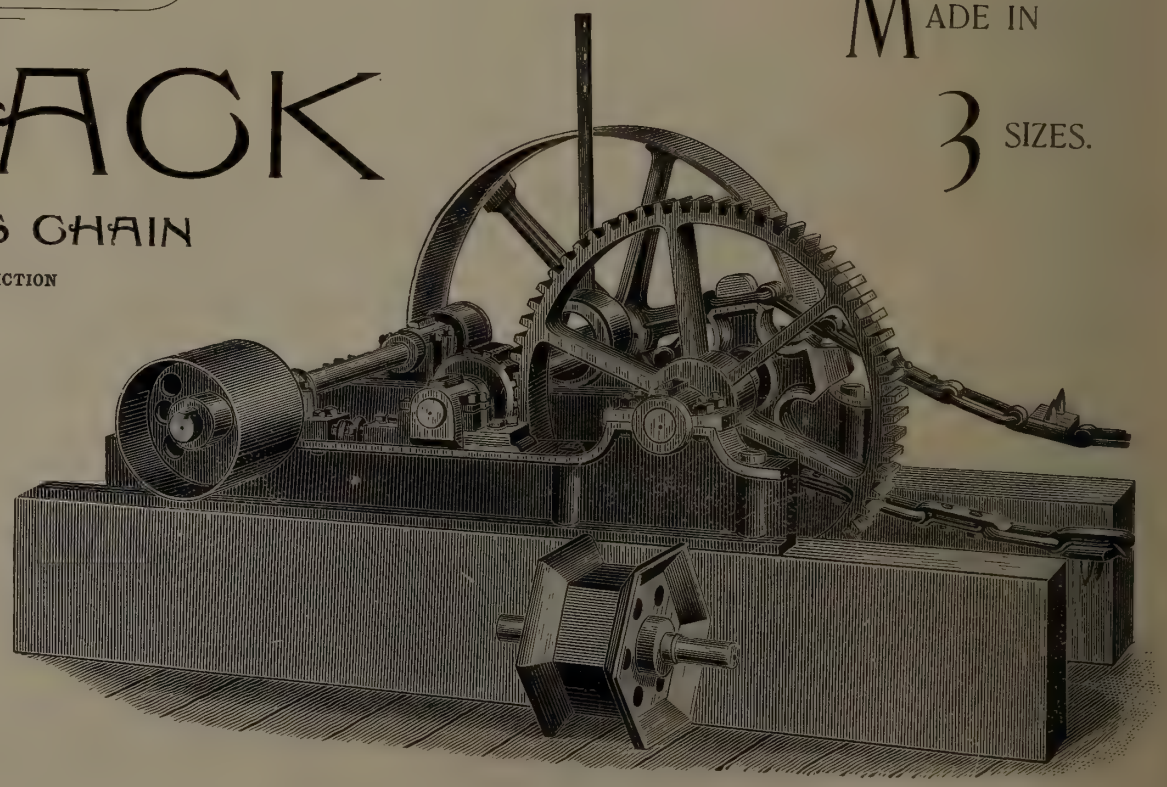

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Easy to place in mill.

Can be placed on mill floor or on timbers underneath the floor.

No crossed belt is required.

Can be stopped or started instantly without a jar.

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THE CANADA LUMBERMAN

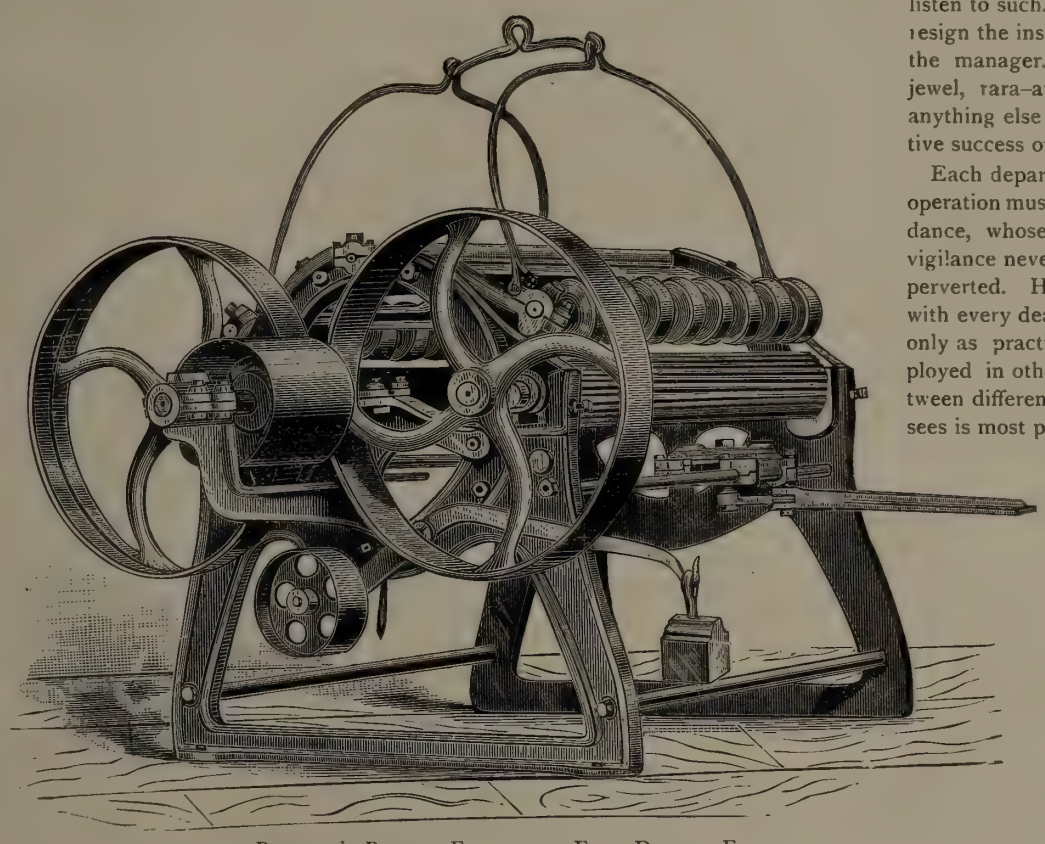
VOLUME XV. NUMBER 12. } TORONTO, ONT., DECEMBER, 1894 { TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

PAYETTE'S PATENT DOUBLE EDGER.

THE accompanying illustration represents an improved double edger machine, patented by Mr P. Payette, of Penetanguishene, Ont., and manufactured by Messrs. P. Payette & Co., of that place. The machine is made in two styles—one with frictional feed, the other with direct feed—and in four sizes to suit mills of different capacity.

The saws are easily removed from the mandrel by taking out the end bearing from the frame. The feed rollers can be stopped or started instantly on the frictional feed edger, and somewhat less quickly on the direct feed machine by using the tightener pulley from the feed belt. The shifting saw is moved by a long lever fastened about the center to a swing plate, the end of the lever being attached to a link fastened to the cross-head. The shifting saw has a brass yoke attached to the cross-head that moves the saw. All saw collars can be moved on the mandrel and set to any width desired. The binder is raised by an overhead lever. These detail improvements are not shown on the cuts.

This machine has been on the market for upwards of five years, and is said to have given good satisfaction. Any further particulars may be obtained by writing the manufacturers, as above.



PAYETTE'S PATENT FRICTIONAL FEED DOUBLE EDGER.

HOW TO CONDUCT A PLANING MILL.

AT a time when the extension of the planing mill business in Canada is a likely development of the near future, the following article by Morris J. Webster, in the Wood Worker is timely: A planing mill is an adjunct of a saw mill. It is for dressing, matching, sizing, resawing and otherwise fitting its products for the market and the builders' use. It deals principally or altogether with large quantities and the wholesale trade. It is fitted with the heaviest and improved machinery of its class, according to the peculiarities of the material wrought upon, and the trade wrought for. Its manager must be a thoroughly posted lumber man, its foreman a mechanic, with energy, tact, skill and plenty of sand—otherwise, backbone. Its men must be trained to the work imposed upon them, be paid a fair compensation, and be made to understand the interdependence of the employer and employe. Under these conditions a planing mill is a satisfactory source of revenue to both, and a benefit to the community in which it is located. An ordinary understanding of the term planing mill, and of the class of which we shall treat in this article, is one where lumber is manipulated as above named, only in lesser quantities, and in addition to which there is a carpenter shop. A general jobbing business is carried on, builders' work is gotten out and prepared, and sash, doors and blinds manufactured to a greater or less extent for local or export trade.

We will assume that a mill of this class is to be established with a capital of, say $20,000 exclusive of ground. Expenditures would assume about these proportions:

Building, sheds and office	$ 4,000
Motive power	2,000
Machinery	5,000
Shafting, belting, etc.	1,000
Tools and fixtures	500
	$12,500
Leaving for working capital	7,500
	$20,000

The motive power must be of the best type. Nothing is too good, but must have been proved equal to the work. Stoppages during work hours eat into the best bank accounts; so of machinery, the best in the market is the cheapest in the end. No fancy nickle-plated affairs, but heavy, rigid cast frames and best steel for wearing and working parts. Let the building be strong. No machinery will do its duty, or last half its proper time, in a building of springing beams, settling foundation or shaky floors. Make it tight and warm and yet capable of plenty of ventilation. Arrange machinery with wise reference to class of stuff to be worked up; that is, so that in handling stock, men are not tumbling over each other's material. Provide ample supply of water and gas or other light, and fire-proof fuel room adjacent to fire room, into which lead pipes from a blower of sufficient size and located to take away shavings from machines.

Now, we have a mill that, with proper management, will be a success, the elements of which are so numerous as to require enumeration, and to be especially considered. 1st. The management, by which is understood the owner or party who decides the policy, approves of the expenditures and pays the bills. The most successful manager is he who has come up from lumber-lugger or tailing a machine, to helper, hand, foreman, superintendent, then to the office and management. Such a man knows the needs of each man and machine and can promptly check an extravagance, or stop a leak. The management must be liberal, yet guided by a perfect knowledge of the best, quickest and cheapest way to accomplish an object.

The superintendent must be an intelligent and able mechanic, able to build, set up and run any engine, or take the place of any man in or about the premises. Not only must every man's duties be familiar, but be under constant supervision. The state of progress of each order, the material needed for same, the requisite when finished, must be kept constantly in view. The ability of each workman must be understood and applied where it can be best utilized. The capacity of each foreman and workman being understood, they must be kept up to it by such tact, suasion or discipline as the successful superintendent knows how to exercise. Not only must the routine of a mill be thoroughly laid out and adhered to, but contingencies must be apprehended and provided for. The probable failure of lumber supply, the giving away of foundation, "shore" or support, the breaking of belt, rod or machine under usual or unusual conditions, scale or corroding, choking or blowing out of steam boiler, pipe, joint-valve or connection, overflow of pipes, fixtures or drains, the security of stack-guys, tramways, gangways and lumber piles, must one and all be under especial care. His authority must be absolute, his word law and his decision final; he must be thoroughly and intensely loyal to the interests of the company; must never utter a word that can be construed as a reflection on the management, nor listen to such. To be consistent then he must resign the instant he fails to approve and justify the manager. A perfect superintendent is a jewel, rara-avis, one upon whom more than anything else depends the present and prospective success of a factory.

Each department, room, process and special operation must have a foreman in constant attendance, whose eye is ever on the work, whose vigilance never lags, whose diligence can not be perverted. He should be thoroughly familiar with every deal and process of manufacture, not only as practiced by his concern, but as employed in other shops, that he may choose between different methods or combine them as he sees is most practical or expeditious. He must know all grades and qualities of stock, their peculiarities and adaptabilities, their defects and action under given circumstances. He must be a leader of men, a driver of his work, have the patience of a saint, and yet be ready to wreak instant and summary vengeance on any infringement of law or discipline. He shall be loyal to the superintendent, carrying out his orders and instructions in spirit and letter. A backbiter is a sneak—a sneak is a thief—and steals the time and money of his employer. A manager or superintendent can not guard too carefully against this worst of all evils. A discontented, fault-finding, tale-bearing foreman will work more loss in a factory than any other adverse circumstances, unless it be a fire or an assignment.

While a foreman need not be a man of as broad knowledge or extensive mechanical experience as the superintendent, yet he should be a man of more physical energy and endurance, cast in a more rugged mould, as it were, and have thorough and hearty support of those in authority over him. His control of his men should be absolute, and his management subject only to the approval of the superintendent. I am satisfied that here is the weak point in nine-tenths of the firms of this class in the country. The manager tampers with the duties and responsibilities of the superintendent and foreman because he has the "authority," or the superintendent says to a workman: "Here, take this to the finishing room and have it shellaced," or, "You go and help such a man do so and so," when, four times out of five, this particular workman has work in hand needed for the completion of a certain piece of work upon which three or four other workmen are engaged. His absence not only upsets the foreman's arrangements and hinders the other workmen, but disgusts them all, creates distrust that ends in dissatisfaction generally. I have known

as promising a business as could be found in many a day's travel ruined by this kind of "pig-headedness."

It will sometimes occur that foremen become jealous of each other or of the superintendent, or of the pay he or someone else gets, or does not get. If it results in moroseness, or a falling off in diligence, no matter how desirable his services otherwise, it will be profitable to discharge him and that at once.

Workmen are of many shades and degrees of worth, or worthlessness. Valued according to the work they produce, there are no two worthy of the same compensation. While one in ten is a good-all-round man, three will be profitable only at their bench or machine. Three will be indifferently good if under constant surveillance and direction, and three more will not earn the wages they receive. After years of experience in the employment and managing of workmen, I am firm in the belief that the range of prices is never wide enough to do absolute and impartial justice. The complaint, "I do as much work and ought to have as much pay," is never a safe guide in establishing rates. It is quality and quantity, not quantity alone, that is the test. One man may shove as many pieces through a machine as another man, but what percentage of the output of each is first quality stock? One's machine is kept up through a day's or a week's run and is in first-class condition every hour, and turns out first class work. No time has been lost in broken belts, burned out bearings, loose knives or other mishaps. This man has made his wages three times, twice in saving, once in skill, viz.: saved lost time of breakage and cost of repairs, and his skill and judgment have increased the value of material wrought upon more than his wages. The other man has had "bad luck." Breakage has occurred, belts run crooked, fly off, are patched up and break again, his machine gets the name of being a "Jonah," and he gets laid off when occasion arises to shorten force. A cheerful, willing, competent workman can not be overpaid, and a question of wages should never be allowed to separate him from his employer.

Encourage enthusiasm and good natured rivalry between your own and other mills. Make a record and don't let your competitors better it. Brag on your men, and be sure you keep men you can brag on. Put every man on his honor, and if he doesn't respond, drop him. Reputation is capital, both to employer and employe. Both understand it, if of ordinary intelligence. The workman knows it brings better wages and steady employment. The manager knows it brings increased business and better prices. The manager who neglects or fails to stimulate pride of products, or the workman who takes no pride in the output of "our shop," is unfit for the position and must soon yield to better men.

A case in point: When I was just going into the office of my employer as a workman of some merit, our firm was known to be none too strong financially, but with grit and plenty of work in them. The manager called into the factory one morning and said to the foreman—we had no superintendent, "Major Buncomb has got in a piece of work which we ought to have had—he thinks we can't do such work. Send the best man you have got to inspect the work thoroughly, and we must better it in design and workmanship." The foreman called me up and together they explained what was wanted and the means and facilities needed. "Study that work, be sure you understand it. Let's see if we can't capture that trade."

Don't you think I was proud? I owned an interest in that business, or I felt that I did, and wouldn't I work days and sit up nights for "our shop?" Thereafter I put all the brain and energy I had into that business. "We" captured that and better trade. "Our" bank account got longer, our business and reputation grew until we were choosers of the trade. The good work was ours if we wanted it. From $12 per week, in five years my salary became $1,200 a year. Reputation did it.

Don't lie to patrons. If the manager of a mill knows the capacity of his plant, barring accidents, he rarely if ever need disappoint a customer. Disappointments breed distrust and weaken patronage, bank accounts shrink, bill collectors become a terror and pay day a nightmare; begging favors of money lenders, and fighting the inevitable, come of breaking faith with patrons and employees.

HARDWOOD MATTERS.

LUMBERMEN interested in hardwoods look with alarm upon the appearance of African mahogany in large quantities upon the English market, and the possibility of this wood being exported in considerable quantities to America. English lumber journals are devoting a large amount of space to a discussion of the question. These changed conditions are due to the concession contained in what is known as the Verdier treaty, which gives to M. Verdier, of Cherbourg and Assinee, for 30 years, the sole and exclusive right to cut and export mahogany in and from the whole of the French territory, south of the Congo. The treaty has received the final assent of the French government and came into effect on the first of November. The immense tract of land effected is on the Ivory coast in the Bright of Benen on the west coast of Africa and is said to be rich in mahogany. It is foreshadowed in advices from England and France, as a result of these changed conditions, that African mahogany is to be put upon all the European markets in such quantities and at such prices as to give very little room for more common woods. To quote our cotemporary Hardwood: "If African wood can be put down in Liverpool and Harve at 16d. to 19d. per cubic foot, what hope is there for American walnut, oak and gum? But this is not all, for it is very probable that the Verdier concession will over-stimulate the capacity to take care of it and the overplus will naturally come to New York in practical competition with Mexican, Cuban and Central American woods, and to a certan extent with all the finer woods of the United States. At the lowest selling price for African wood in Liverpool, it can be put on the New York market nearly as cheap as oak, and much cheaper than walnut." The suggestion is that a prohibitory duty might be placed on this wood, but the result would be to render it still cheaper in the European markets and in this way close out the exportation of cabinet woods from this side of the Atlantic. The fear among Canadian hardwood men is that African mahogany will be made so close in price as to give no encouragement to the shippers of birch, oak, ash and other hardwoods in this country.

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It is pointed out by a lumber exchange that whilst birch waited long for a full recognition as a cabinet wood, yet within the past year it has made great strides in the favor of manufacturers of furniture. It looks now as though it were to take the place of cherry in a large way. No northern and comparatively cheap wood can be utilized for light-colored finish so well as birch. The suggestion is that owners of such timber should begin to take care of their resources.

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So much attention has been given to other woods on the Pacific coast that we have not heard much of that country as a hardwood district. One, however, who has given some attention to this matter says that an abundant supply of hardwoods is grown all over the Pacific slope. Among the many species common to the coast may be named the yew, mountain mahogany, madrona, mesquite, rhus, chittam, Port Offord cedar, alder, laurel, maple, ash and oaks, all of which under proper treatment, may be made to yield a commercial timber of rare beauty, strong and durable, equal to any timber grown in the United Kingdom. A very superior quality of oak timber is said to be found on the coast.

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The immense increase in the manufacture of bicycles has created a new use for rock elm, which is being substituted for iron, steel and other metals for the rims of bicycle wheels. Hickory had been used, and in a measure is yet used, for this purpose, but not with the best success. It is said to make a good tough wheel, and does not yield to the shock of striking an obstruction as readily as metal, and to this extent is an improvement on metal. This complaint is made, however, of hickory by one bicycle firm: "We have to buy so much wood that will not answer in order to get a sufficient amount that will, and there is so much loss from imperfect bending and other causes, that it actually costs more than the best steel." Again it is said, that after a few months exposure it becomes brashy, which is an objection from the manufacturers' standpoint. One large manufacturer of bicycles has said that it is his belief that rock elm is bound to prove the best thing for rims that is not too unreasonably expensive.

THE LAW ON THE SAWDUST QUESTION.

OUR Ottawa correspondent, in this issue, gives an account of an important meeting of lumbermen in that district held to protest against the enforcement of legislation on the sawdust question, which is expected to become law on May 1 next. It may be of value to lumbermen to know the position of the law as it stood before the last session of parliament. At that time the depositing of sawdust or mill rubbish in any stream frequented by fish was prohibited, but power was vested in the Governor-in-Council to exempt streams from the operation of the Act, when it appeared in the public interest to do so. The manner of procedure in the latter event was as follows: Whenever exemption under the Act was applied for, the Department of Marine and Fisheries made due enquiry into the facts, so that a report could be sent to the Governor-in-council. Supposing the conditions were favorable, an order-in-council would be passed, exempting the stream from the operation of the Act generally as regards sawdust, but prohibiting the dumping of mill rubbish. In other cases, where it appeared on the official report that the sawdust was carried by the force of the current in the river out to the ocean, the Department of Marine and Fisheries, without an order-in-council, would direct its officers not to prosecute for violation of the Act until further instructions. Last session, however, the senate attached to a bill introduced for the purpose of amending the Fisheries Act, a clause repealing altogether the provision which vested power in the Governor-in-Council to exempt any stream in Canada, and also providing that all streams heretofore exempt from the operation of the Act should be subject to prohibition on and after May 1 next. Sir C. H. Tupper, says the Ottawa correspondent of the Empire, caused a special notice to be sent to all owners of mills upon streams now exempted from the operation of the law, in order that they might not only know what they might have to expect, but that they might furnish to the Minister such evidence as in their opinion would warrant special action being taken by Parliament to continue the exemption as heretofore. Many of the mill owners have complied with this notice. Such facts as they have furnished to the department have been sent to the proper officers in the district to investigate and report upon. In addition, these reports have again been taken up by Mr. Veith, a special officer of the department, who is charged with the duty of going more fully and thoroughly into the particulars in each case. It remains, therefore, for the parties interested in obtaining the exemption of any stream from the operation of the Act, to apply for special legislation at the next session of Parliament, just as individuals in other cases are compelled to pursue a similar course. For instance, where a company of private individuals desire to make use of navigable waters in such a way as to cause what is known as an illegal obstruction to navigation, they are compelled to give notice, and after giving such notice, may get legal sanction by virtue of a special Act. By the means which the Department of Marine and Fisheries has adopted, the Minister hopes to be in possession shortly of such a vast amount of information that in the event of special legislation being asked for, his department will be in a position to render the fullest possible aid to Parliament in reaching a conclusion on the matter.

NOVA SCOTIA EXPORTS.

The following figures are given as covering the list of exports of lumber from Nova Scotia for ten years:

	FEET.
1883	77,918,000
1884	69,159,000
1885	79,647,765
1886	87,180.125
1887	82,959,589
1888	85,070,005
1889	92,605,488
1890	99,512,924
1891	78,603,742
1892	87,861,398
1893	109,252,930

"No, Maude, you can not sharpen an old saw with a newspaper file, but many a newspaper file is made dull by the old saws that are found on it."

BY THE WAY.

ACCORDING to reports from the trade in the Minnesota district, lumbermen there are making a strong bid for business in Winnipeg and throughout Manitoba. The Mississippi Valley Lumberman says: "Several Minneapolis lumbermen and representatives of two or three concerns with mills above Minneapolis, have recently looked over the Winnipeg market, and find that under certain conditions and with certain restrictions, Winnipeg to-day furnishes a good market where anything less than a 25c. rate, at least, can be obtained. The Minneapolis rate is 25c., which serves to take off quite a bit of the profit, but mills on the Great Northern and Northern Pacific, north of this point, have the advantage of from 2c. to 5c. less to pay for transportation." The same view is, in a measure, expressed in a remark recently made by Mr. Frank McDonald, a lumber dealer of Brandon, who says that since the abolition of the duty on imported lumber the trade of Winnipeg in that locality is being, almost wholly, supplied by shipments of the United States mills. What is needed to retain this trade at home is improved transportation facilities in the Prairie province. As we have before pointed out, a vigorous effort is being made to secure these for the Rat Portage and Winnipeg territories, and the facts that we mention here ought to further draw the attention of the government to the necessity of protecting, by proper railway extension, the important lumber industry of that district.

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United States lumbermen usually get credit for being more reckless in the cutting of forest products than Canadian owners of limits. This has been observed, and remarked on, in the case of limits held in Ontario by Michigan lumbermen. To employ an Americanism they are "hustlers" in the woods, just as they are said to be in the marts of commerce. Where Canadian woodmen are satisfied to go slowly, and let their cut extend over a fair period of time, American lumbermen, when they come in control of a limit, like to clear it as quickly as possible. Mr. Wm. Little, of Montreal, and other students of forestry, drawing attention to this method of working, have said that the time will come when, from a patriotic point of view, Canadians will have reason to regret that they have been so prodigal in the cutting of forest products. The Lumber World, a Buffalo journal, rather more frank than some of its cotemporaries, freely admits that the only interest Americans have in Canadian timber lands, is to get the logs out of the forest and transform them into a commercial product as speedily as possible. "While all this means," says our cotemporary, "a considerable activity in Canada, it really means no permanent good to that country. For a while, there may be an increased call for Canadian mill supplies, but, when once the forest is stripped, the American owners will probably find it useless to go on paying taxes on the stumpy waste. When the Yankies have distimbered the land, of what use will that land be to the Canadians?" This may seem rather plain talking from such a source, but it squares very completely, with what some, at least, in this country have been thinking about. And is not the matter worth thinking about?—by Canadians.

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If there is cause for the criticism sometimes made that Canada is not giving any remarkable attention to the question of forest preservation, there is yet evidence abroad to show that the matter is not being entirely neglected. The order-in-Council passed by the Ontario government recently, making a considerable addition to the territory of Algonquin park is evidence in this direction. The addition made will include, on the west side the eastern portion of Finlayson, McCraney, Butt, Paxton and Ballantyne townships, and on the north side, the southern portion of Boyd township. The total area of the added territory will constitute 155,802 acres of land, exclusive, of the water stretches, which will amount to about 15,000 acres. The original area of the park was 938,168 acres so that Algonquin park now extends over an area, which exceeds 1,100,000 acres. Claim can be made that it will be with these additions, the second largest park of this character in the world. Yellowstone National park covers an area of over 2,000,000 of acres, and ranks as number one. In this province we are also ahead of some countries in the regulations for the protection of our forests from fires, and the Northwestern Lumberman finds occasion in a recent editorial to commend the Ontario system of fire protection by a system of fire "rangers" as one that could be followed with profit by the forestry department of the United States. With the late disastrous fires of Wisconsin and Michigan clearly in memory, the subject was made one of consideration at a conference to consider forest preservation, held in Minneapolis, where a resolution was adopted to appoint a committee to prepare a bill for presentation at the next session of the legislature, in which an effort will be made to have these states and others profit by the experience of Canada.

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The only thing that can be written of the trouble over the boom duty, since the last issue of the LUMBERMAN, is that nothing has been done by the Controller of Customs to relieve the minds of lumbermen, either in Canada or the United States, unless we except an announcement from Bay City, Mich., made within the past few days, saying that the Hon. Mackenzie Bowell has written the committee of Michigan log towers, recently appointed in that city, that he would be glad to meet the members at any time and arrange a hearing for them before the Privy Council on the question in dispute. It is this inaction on the part of the government at Ottawa that is to be most severely condemned. A change in the political complexion of the United States Congress has taken place within the month, and there are certainly those in the new House who will only be too glad to take advantage of the present action of the Controller of Customs to so change United States tariff legislation, that the opportunities Canada has to export lumber shall not longer prevail. The hint has already come from United States sources that active steps in that direction will shortly be taken. The matter is of such a trifling character, that, to repeat what was stated in these columns last month, the action of Controller Wallace is open to, and is receiving, vigorous condemnation from the lumber trade in Canada. What would the duty on boom sticks, between the Georgian Bay shores and Saginaw, amount to for an entire season, when log towing is at its best, compared with the loss that Canadian lumber interests will certainly suffer, if retaliatory legislation, consequent on Mr. Wallace's decision, should be enacted at Washington? This is the situation in a nutshell, and lumbermen will be glad to have a plain business answer from the Controller.

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The recent suspension of two lumber firms, of Liverpool, Eng., has given occasion to English lumber journals to discourse, and apparently not without occasion, on the methods of financing adopted by some dealers in the United Kingdom. After the shock received, and the losses sustained, in Great Britain, through the reckless banking methods in Australia, one would have expected that their own people would have kept clear of questionable commercial schemes. It seems, however, that in lumber circles, at least, loose methods of financing have prevailed for some time. The obnoxious custom of kite flying is said to have been one cause of the present financial trouble in the lumber trade, and it is not unlikely, thinks the Timber Trades Journal, that further disaster will follow the trade as an aftermath of these difficulties. Careful and conservative as Englishmen usually are in their business ventures, it appears that it has been no uncommon affair for men to enter the lumber trade with altogether insufficient capital, or, after having secured a start, to branch out quite beyond the power of their capital. What is a sin of the trade in this newer country is not without its counterpart in the older land, namely, an extreme cheapness of credit. An English cotemporary cites the case of a concern in the lumber trade, known to have little or no capital, and yet able to secure without suspicion, regular credit to the extent of £40,000. If the cause for the troubles we cite is asked, the answer is probably correctly given in these words: "The fatal ambition of the modern style is evidenced by the desire to double or treble a turnover in the shortest possible time, and to establish an equal position in a decade, with older merchants of a generation or more. We have thus an exemplification of that alluring lust for riches so subversive of all natural peace and prosperity." A moral drawn from these troubles is the necessity for a strong organization of the trade, that shall discuss, without fear or favor, abuses of the trade, and warn its members of impending danger, when indications of trouble, sure to follow, such as here cited, begin to show themselves. So it is, as problems of the trade common to all countries, or distinctive only to special localities, are brought under consideration, the importance of united effort as a means of self preservation and protection becomes even more clear.

PITCH OF LUMBER PILES.

REGARDING the proper pitch of lumber piles, says S. D. Albright in Hardwood, my experience would suggest a fall of about five-eighths-inch to the foot in slope, with forward pitch of about one inch to the foot in height of pile, with cover raised in front and projecting about six inches over front of pile. This gives enough slope to run off any water that may beat in, and is much easier to work on, for inspector and shover off. It is also easier for pilers to put up than a pile with too much slope. The principal objection to excessive forward pitch is the excessive weight on front foundation, which is liable to settle more than others, throwing the pile still farther forward and causing the water to come in from the front end. I would also advise that alleys should run the entire length or breadth of yard on such a plan as to invite a free passage of prevailing winds clear to the ground, especially at Southern points that are subject to mould and mildew. There are usually some portions of a yard that are better fitted for exposure than others for rapid drying of stock liable to damage from stain, as for example, saps in popular and pine, and care should be taken to give this class of stock all possible advantage of position.

POWER TRANSMISSION.

BEFORE emptying cylinder oil out of the barrel, it is a good plan to nail a piece of mosquito netting, or a fine sieve over the bung-hole, as then all chips, old bungs, etc., will be excluded from the oil tank.

When fitting up an engine shaft or other large shaft, in fact, jack shafts or similar work, it is a good plan to allow a little end play in the shaft as it distributes the oil and makes the bearing much smoother and better, says an exchange. This will very often cure a shaft that has been heating and giving trouble, and in a new shaft particularly it is best to do this.

In long distance electrical transmission of power the lines should be carried on poles whenever it is possible, for the farther apart the conductors are, the less will be the inductive capacity; if placed underground they will of necessity be near together. The placing in separate conduits to gain distance will not help, for the nearness of the earth is the equivalent of the nearness of the conductor of opposite sign. These things are only warnings, however, and slip out of sight with proper precaution.

The common sense way of preventing slipping of belts is really the only one object to which we ought to direct our attention; there is the relation of the pulley to the belt, the method of placing a belt on a pulley, the question of speed, tightness of belts, all of which, with other points, require careful consideration. Oak tanned leather belts are best for general use. Cotton belts are best for dry places. It is economy to put on a wider belt rather than a narrower one too tight. Vertical belts should only be moderately tight.

TRADE NOTES.

A handsome new catalogue of 110 pages, devoted to illustrated descriptions of general saw mill machinery, has just been issued by the Wm. Hamilton Mfg. Co., of Peterboro', Ont. In the introduction to this catalogue, the Company say: "During the last thirty-seven years we have been in business, we have supplied machinery for many of the largest and best mills in Canada, and it is our object to still maintain the superiority of our work and to offer our customers the most complete machinery in the market." It will be to the advantage of every progressive saw mill owner, to write the Company for a copy of this new catalogue, which will be cheerfully furnished on request.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

PUBLISHED ON THE FIRST OF EACH MONTH

—BY—

C. H. MORTIMER

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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

CANADA LUMBERMAN WEEKLY SUPPLEMENTAL EDITION.

IT is proposed to commence, the first week in January, 1895, the regular publication of the "CANADA LUMBERMAN WEEKLY SUPPLEMENTAL EDITION." This EDITION will consist of four pages, corresponding in size with those of the monthly edition. The fourth issue in each month will be bound up with the monthly edition.

Special attention will be paid to market conditions and tendencies in the principal manufacturing districts and the leading domestic and foreign wholesale markets. Reliable and up-to-date information will likewise be given regarding carrying charges by rail and water to the leading markets. Arrangements are being made for placing the paper regularly in the hands of the leading buyers in these markets, and for a system of special correspondence which will enable us to place before our readers each week a careful and exact review of the lumber situation in all important particulars.

In brief, the aim will be to provide a weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad. Manufacturers of such products will be given the opportunity through the pages of this WEEKLY EDITION to acquaint buyers with the character of the material which they have to offer. On the other hand, buyers can make known the particular kind of material which they are open to purchase.

No advertisements will be inserted in the WEEKLY EDITION other than those for the sale or purchase of timber products, mill properties, second hand machinery by mill owners, employment wanted, help wanted. A Classified Directory of all advertisers in the monthly will, however, regularly appear in the weekly, without cost to advertisers.

Notwithstanding the low price at which THE CANADA LUMBERMAN is now offered to subscribers, and the expense which the WEEKLY EDITION will entail, no additional subscription will be charged during 1895 at least. Under these circumstances we confidently hope to retain all our present subscribers, and add many new ones to their number.

UNITED EFFORT A NECESSITY.

WITH a distinction of 2½c. per 100 lbs. in freight rates against the hardwood men, they are seeing the necessity for united action in protesting against this condition of affairs. An object lesson is furnished them in what was accomplished by the white pine men in taking up the cudgels against the Grand Trunk when the tariff on pine was increased from 6½c. to 7½c. per 100 lbs. The hardwood men, unfortunately, cut no figure in these negotiations, and largely, it is believed, because they did not present a united front.

There are doubtless several reasons to be urged why the Grand Trunk have made a discrimination between pine and hardwoods. The larger quantity of pine carried as contrasted with hardwoods is one reason. But a 6½ cent rate prevailed before, and the question asked is, why now make this distinction, and which is an invidious distinction against Toronto?

Hardwood men, however, are coming to the conclusion, that if they are to accomplish anything in their contention with the Grand Trunk the initiatory step must be through an organization of the trade. The freight trouble is only one reason that might be urged for an association of lumbermen. Others have been pointed out by the LUMBERMAN on different occasions, and are so trite as to be clear to every member of the trade. But still no movement is made. Will dealers move now and put themselves in a position to right wrongs that will at different times show themselves in connection with the trade? Elsewhere in these columns we have referred to losses suffered by lumbermen through faulty inspection regulations, which is only another reason why the trade should organize.

FRAUDULENT BUYERS.

THE LUMBERMAN is in receipt of a letter from a lumber manufacturer of the province telling of the trouble he has met with in his efforts to secure payments for certain shipments of lumber sent to the United States. In this particular case the trouble arises through the form of inspection adopted by the buyer in New York. Certain classes of lumber were ordered and our correspondent says that he filled the order correctly in every particular. But on the arrival of the car at destination other rules of inspection are made to apply, bringing the lumber down several points. In another case cited in the same letter a neighboring lumberman sent to the States a car load of lumber. This was more than a year ago, and though the consignee is supposed to be a man of some standing in the trade, at this distance it has been found impossible to collect the full amount of account. Mentioning this matter to a Toronto shipper the other day he drew the attention of the writer to the case of a shipment of hardwoods to an American concern, where considerable trouble was gone to in the effort to secure just exactly the class of lumber ordered. Said our informant: "Here is a statement from that concern claiming a reduction representing a large amount figured out through their method of inspecting the lumber. The matter is still in abeyance though there seems only one choice open to us, either to let the lumber go at a loss or bear the expense and trouble of having it reshipped to us."

We should be sorry to think that these cases can be applied generally to the United States lumber trade. That American lumbermen have to fight fraudulent concerns within their own country is plain by an advertisement before us in a Chicago lumber cotemporary from the Philadelphia Wholesale Lumber Dealers' Association warning the trade against certain fraudulent parties who send out "letters type written and of business like appearance, giving usually some fake concern as a reference." The lumber shipped to these parties is never paid for.

In the case of the man who deliberately plans to get lumber into his hands with no intention whatever of paying for it, there is only one way to deal with such a party, and that is to put the criminal law into force. And at the same time for the shipper to exercise the utmost caution in selling goods to unknown concerns. Better lose a sale than give the lumber away. In other cases named, where the trouble arises out of methods of inspection, the remedy is one that rests to a large extent in the hands of the lumbermen themselves. They must get together and so arrange their inspection methods that no one man can take the inspection rules into his own hands and defy the entire trade. This carries the inference, of course, that the entire trade will be in shape to act, when need be, as one man.

EDITORIAL NOTES.

AN experiment in the exporting of Canadian lumber that may develop into something worth while, has been made by Mr. A De Bruyne, a new resident of Aylmer, Que., who recently came from Belgium. He has caused to be shipped to his native land 100,000 feet of lumber, besides a quantity of dimension lumber, purchases from Conroy's mills and from Klock Bros. It seems to be his opinion that there is a good market there for Canadian lumber. The results of the experiments will be watched with interest.

PATIENCE and perseverance may result ultimately in "getting there" in the case of the lumbermen who have at different times attempted to raft logs on the Pacific Ocean. It must be admitted, however, that those who undertake this work are likely to need the perseverance of the saints. So far every attempt in this direction has been a flat failure. On Oct. 12th, Robinson & Bains, of San Fransisco, sent out from Astoria a raft so constructed that it was believed it could stand the battle of the waves and winds. It did not take many days to prove the futility of the effort. This raft has gone to pieces on the Pacific Ocean and thousands of piles are now floating at the mercy of the waves. The cost of lumber and lashing in this case is estimated at between $50,000 and $60,000 and the insurance about $18,000. Is there any business in taking these risks?

IN our Michigan letter of this month the remark is quoted of one of the heaviest United States' owners of Canadian pine, that despite the privilege of exporting sawed lumber free, he prefers to send his stuff over in the logs and cut on the Saginaw side of the line. The reason given is that there is to be found there a regular market for lumber, and as a consequence a better price is realized. In Ontario we have no market as United States lumbermen understand the term. Buyers can go to Saginaw and there make at the time a selection of whatever classes of lumber they are requiring. Here we have no central point where lumber of the different kinds is got together and offered for sale. The position assumed by this Michigan lumberman emphasizes what has been stated in these columns from time to time, that steps ought to be taken to establish a regular lumber market for Ontario. Toronto has been mentioned in this particular more than once, but no active measures have ever been inaugurated. The suggestion came to the LUMBERMAN a few days ago that northern mill men might with profit enter into an arrangement whereby they would plan some method to carry this purpose into practical effect.

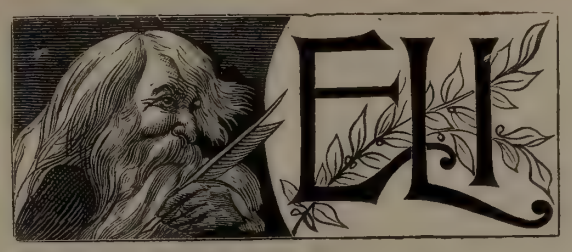
IN a chatty paragraph on the Eli page, Mr. McRae, of Ottawa, tells us of the ravages to wharfage works perpetrated by the toredo, and he describes interestingly the methods of operation of this little insect. The Canadian Pacific Navigation Co., at Vancouver, B. C., have been at continual expense and inconvenience through the havoc that the toredo has played among the piles of the extensive wharfs of that company. They have tried various efforts to overcome the trouble, but without much, if any, success. The latest movement is to secure from New South Wales a specimen pile of turpentine wood,

which is said to be proof against the ravages of the toredo. Aside from the use that may be made of this wood for this particular purpose, it will be interesting to note whether the introduction of Australian turpentine wood into this country may not result in a development of the lumber trade between the two countries. It is claimed that there are several species of woods in Australia that would be found useful for wharfage works, railway ties, and other purposes in Canada. We had occasion to quote Mr. Carter Troop, some time since, suggesting as a result of his visit to the Antipodes the liklihood of reciprocity in woods between Australia and Canada. Mr. J. S. Larke is about leaving for Australia, as special Canadian commissioner, for the particular purpose of endeavoring to extend trade between the two countries, an outcome of the late conference at Ottawa. May we not hope to discover as one result of Mr. Larke's mission that the lumber trades will be benefited thereby?

WHILST complaint comes from some quarters that Canadian lumbermen are acting unwisely in holding up the price of lumber, it would appear from what is transpiring in other white pine territories that they have shown a good measure of foresight in coming to this decision. The evidence is clear now that stocks on hand at the close of the season will not be nearly so large as had been anticipated in the early summer. Is not white pine, even though stocks were large, a valuable enough asset to comand a decent paying price? The Minneapolis lumbermen are coming to this conclusion. The manufacturers of the Mississippi valley held a meeting a fortnight ago where they resolved: "That it is the sense of this meeting that there is no occasion of anticipating excessive stocks of logs or lumber and no substantial reasons for continuing the present low prices of lumber." This is a district where, perhaps, more than at any other point, unless we except Wisconsin, the trade have for some months persistently kept down the price of white pine. They now see their folly, and are going to undertake, which is not always an easy transaction, to get prices up again. President Laird, of the Mississippi Valley Lumberman's Association succinctly placed the case like this: "It may be considered a well settled principle of business that a man must think well of his own stuff if he expects other people to place a proper value on it." This one sentence might be taken as a motto for white pine lumbermen everywhere. If lumbermen themselves do not place a value on their product those who want to buy this product are not likely to encourage them in that direction. The mistake can sometimes be made of being too stiff in matters of this nature, but we believe, so far as white pine is concerned, that the conditions of the market warrant the decision of the lumbermen of the Mississippi valley, and better still, the stand taken by Canadian lumbermen in holding to a fair price. This does not mean a combine to raise prices. It is simply a policy of self preservation—refusing to sacrifice what a man holds himself. As the Timberman has said he is a foolish man who supposes that it is better to sell gold dollars at 90c. than not to sell them at all.

The Glens Falls Pulp Company, of Glens Falls, N. Y., who recently bought a large area of spruce limits on the Batiscan River, on the line of the Lake St. John Railway, are now making 100,000 logs on these limits and on the River Miquick, which flows into the Batiscan. These logs are to be cut into pulp wood, at the mouth of the Batiscan River, and sent from there by canal boat to Glens Falls, where they will be manufactured into pulp and paper.

By the failure of the London banking house of Nevelli & Co, who were the financial agents of the St. Lawrence Lumber Company, of the Maritime Provinces, the latter company will go into liquidation. The Canadian stockholders are few, but their interest is large. They are Senator K. F. Burns, who held over half the subscribed stock; Hon. Peter White, Speaker of the House of Commons, who held £7,000; W. H. Thorn, J. J. McGaffigan and J. M. Humphery estate, but the three latter interests are small. The liabilities in Canada will amount to $60,000.



MR. James McEvoy, of the Geological Survey, who has just returned from his summer field work in the Kamloops district, British Columbia, tells an alarming story of the destruction of the valuable timber resources of that province. He states forest fires this year were more destructive than ever. For weeks this summer fires were so numerous in the Kamloops district that he was unable to see more than 40 feet ahead. The Indians are responsible for this great destruction of valuable timber. They do not set out the fires carelessly, but purposely, with the object of making hunting easier and better. After strips of forest are burned down, the burned country in a year or two becomes covered with a growth of grass, and the large game leave the thick forests and congregate about the grass meadows, where a greater quantity of food can be obtained. The Indians thus find it easier to get the game. During the last three weeks of Mr. McEvoy's stay on the slope, he was obliged to camp in snow from six inches to a foot deep.

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"Hardwood lumber trade in this section, says Mr. J. E. Murphy, of Hepworth, Ont., "is particularly dull and lifeless. There is a somewhat increasing enquiry from American points, but prices offered are very low. Hardwood of all kinds can be bought here to-day just as cheap as before the duty was removed, and in some kinds, such as hard maple and soft elm, cheaper than it has been for several years. The statement made in a late issue of your journal by a Buffalo dealer, that Canadian manufacturers were asking $2.00 per 1000 more for their lumber now than before the duty was removed, must be erroneous. I can find a dozen or more manufacturers in this vicinity who will be glad to sell two or three million feet of hardwoods at prices that have ruled here for the past few years."

* * * *

Herbert Moulton, representative of a Michigan lumbering firm, and who passed through Toronto recently, on his return from a trip to the North Shore lumbering districts of the province, has this to say of the present situation: "The new tariff laws affecting lumber, places us in about the same position as we would be in the event of annexation; and as the forests of Michigan are gradually becoming exhausted, we are forced to look about, and Canadians may expect a rush for mill sites in the northern part of your province before long. Our people will also be looking anxiously for timber limits, and the next public sale will see higher prices paid. The private limits that were offered here in Toronto some time ago, were not sought after by the Michigan lumbermen, solely because the sale was advertised at a time when the passage of the Wilson Bill was in a state of glorious uncertainty, and the lands were offered at auction only a few days after the bill was made law, not allowing the American capitalists time to decide upon their future course and have purchasers in attendance at the sale."

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C. N. Emerson, a representative of the William Hamilton Manufacturing Co., of Peterboro, has given the following account of the so-called alligator, used at some points in the province for hauling logs through the lake regions: "J. R. Booth, Buell, Hurdman & Co., W. C. Edwards and Gilmour & Co. drive their logs from 300 to 500 miles. They use flat boats called 'alligators,' which are provided with a powerful engine and boiler so managed as to be easily attached to the paddle wheels, one of which is on each side of the boat when it travels through the water as any sensible boat does, but when necessary this boat will climb out of the water on to dry land and crawl over land until it gets to water, when it waddles into the water again like a duck. This is done by disconnecting the engine from the paddle wheels and connecting it to a drum around which is coiled about a mile of ¾ inch wire rope. This rope is paid out and attached to a tree or rock or other suitable "snubbing post;" and if no other suitable object is in sight, unlike other boats, the 'gator' is not to be beaten, but out goes the big anchor, one of the flukes is buried in the ground, the engine started and the drum revolved, to which the engine is attached through powerful gears to increase the power; and so the rope is wound up, and, of course, the boat goes up to the 'snub,' when the rope is paid out again, and so on until the 'gator' is again in water. The engineer on one told me that in going over land the 'gator' is sometimes mighty hard to handle, as it is sure to head for a mud hole if there is one around. He told me that he had known them to leave the straight line, veer around and go thirty feet out of the way and tumble into a mud-hole, in spite of all the swearing of the captain and work of the crew. To use his own words, "D—n her, she knows when there is water around as well as we do, and we can't keep her out of it." So it would seem as though water is her native element sure enough. This same man says that his 'gator' fairly grunts when she slips into the water after an over land journey. These alligators are indispensable for logging where the country is all dotted with lakes, as they tow the logs across a lake, start them down the rapids to the next lake (most of these lakes are connected by short, rapid streams, or rapids or falls), the alligator then goes over land to the lower lakes, picks up the logs, tows them across this lake, and so on."

* * * *

A short time since it was my pleasure to meet Mr. J. W. McRae, of McRae & Co., Ottawa, whose operations in lumber have been on a considerable scale and varied in their nature. Mr. McRae is a cyclopedia of information, touching almost anything of a mechanical kind. I suppose this bent of mind has influenced him in taking hold for Canada of what is known as the German process of producing artificial woods out of some one particular kind of wood, or what is perhaps known best as "ebonizing," "mahoganizing," and rosewoodizing," the softer woods like pine, or as in Mr. McRae's case, birch. Mr. McRae showed me a specimen that he had with him that certainly was an excellent imitation of the real article. He instanced a case of showing an imitation of Italian walnut to a person who was supposed to know the real article from the artificial, and when Mr. McRae frankly told his friend that what he held in his hand was only an imitation of Italian walnut, he was met with the decided reply, "You don't fool me in that manner." It is not my intention here to give a description of Mr. McRae's method of thus altering woods. Some time ago mention at some length was made of the matter in these columns. Despite the severity of criticism that this class of work occassionally receives, Mr. McRae is confident of its practicability and its uses. It has been a success in Germany, where an apple wood is altogether used for the work. In Canada, birch has been found the most sutiable, and because of the character of the grain, it fits in admirably for this work. Talking of applying chemicals to woods for preservation, drew forth a reference to the extent to which creosote is used in the case of railway ties. And here it is claimed that in Australia there is to be found a wood that will withstand climate and insects, and the suggestion has already been made that it would be a good plan to have this wood exported to Canada. The most deadly insect that works in wood is the toredo, but it is said that certain Australian woods are proof even against the ravages of this little insect. Mr. McRae told of the wonderful operations of this insect in worming its way into timbers used in the construction of harbors and other wharfage works. He says they start as little insects about the size of a pin's head and work their way in myriads into the timbers and practically make these there home, growing to considerable size while at work in this manner. A peculiarity of the toredo is that while they will assail a piece of timber literally by the thousand, they never encroach, as it where, upon each other's territory, though as dividing one from the other the partitions will not be any thicker than a sheet of paper. In the playful language of the day, it may be said the toredo is a little fellow, but Oh my!

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

AN important meeting of the Board of Trade was held here a week ago to consider the question of the early enforcement of the recent sawdust legislation. By this measure on the first of May next mill men will be prevented from dumping their sawdust and refuse into the Ottawa river as hitherto. This will necessitate the erection of large burners by the mill men, at a considerable cost, besides placing them at great inconvenience and expense otherwise. The protest from the lumbermen's section of the Board of Trade was a vigorous one, and some important facts were brought out touching the extent of the lumber industry in Ottawa. Mr. J. W. McRae in introducing a motion, dwelt on the subject at issue largely from the standpoint of the forwarder. He pointed out that there were 9,000 men employed in the woods by Ottawa firms, 5,500 in the mills, and 600 on the river. 5,314 horses are employed, and men and horses consumed 7,970 tons of hay, 478,125 bushels of oats, 12,750 barrels of pork, 31,875 bags of flour, 5,314 bushels of beans, 2,662 bushels of peas, 637 tons of beef, and 1,595 tubs of butter. The canal tolls derived from the Rideau canal amounted to $41,161, seven-eighths of which was paid on sawn lumber. These were figures that, in Mr. McRae's opinion, ought to be carefully weighed before any effort was made to put the legislation of the Hon. Mr. Tupper into force. Hon. Mr. Bronson made a strong defence of the lumbermen's position. He quoted Mr. Sandford Fleming, who examined the river in 1872 and 1889, and who, as an engineer, expressed the opinion that there was no danger to navigation in the river then, nor likely to be for ages to come. He used the report of the New York Fish Commission to prove that although far larger quantities of sawdust were dumped into the Hudson than into the Ottawa, yet the supply of shad and salmon were increasing in that river to a large extent every year. Dominion Analyst McFarlane had given evidence that the sawdust had produced no deleterious effect upon the water. It is on these points that the government have largely based their sawdust legislation, and it is admitted that Mr. Bronson has made a strong case against them. Mr. Bronson went further. He declared that in the last six or eight years business of the Ottawa firms had decreased 50 per cent. and was on the decline. Two-thirds of the limits had been cut and at the best it could not be many years before Ottawa's supremacy as a lumber section would be lost. A result of the discussion was the passing of a resolution setting forth the importance of the lumber mills as the main industry of the Ottawa valley, giving employment to thousands of persons at all times of the year; that the practice of depositing sawdust in the Ottawa river and its tributaries had existed for the last 40 years; and that during the remaining period when lumbering would be an industry of any importance in Ottawa no increased injury could be done to the river. The position of the lumbermen was opposed mainly by Senator Clemow, who argued that the Ottawa river belonged to the whole Dominion, and that no exception should be made with it as against other localities. The meeting was prolonged until a late hour and then adjourned to some future date to be announced.

INDIFFERENT LENGTHS.

A new saw mill is being built at Aylmer, Que., by W. & J. Baillie.

The Hawkesbury Milling Co. is one of the few concerns in this district that has sold its cut.

A large number of men have been sent forward during the month to J. R. Booth's mills on the Temiscamengue.

A gang of Ottawa shantymen are engaged making improvements on the reserve of McLachlin Bros., on the Madawaska.

The opinion is entertained here that the placing of African mahogany in large quantities in the English market will not help the prices of Canadian hardwoods.

A great deal of dissatisfaction continues to exist over the action of the Controller of Customs regarding the duty on boom sticks. What puzzles lumbermen is the object of the step at a time of the year when logging is practically over.

A number of large buyers have been visitors to the city during the month. Among these may be named Beckett & Dobell, of Quebec; A. A. Buell, Burlington, Vt.; W. McArthur, Toronto; E. H. Wade, Quebec; J. H. Redfern, Montreal; and R. M. Cox, of Liverpool. No important sales are to be noted as a result of these visits. Buyers say that prices for deals are held high.

OTTAWA, CAN., Nov. 22, 1894.

The man who succeeds in business generally deserves success. The luck theory is carried too far. Some men acquire wealth and prominence through a chance in fortune's wheel, but by far the greatest proportion owe prosperity to systematic effort, personal energy and unremitting toil.—Traffic.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

A WELL WRITTEN and vigorously worded letter has appeared in the local press from Mr. J. G. Scott, of the Pacific Coast Lumber Co., New Westminster, in answer to "gross misstatements" made by Col. Chauncy W. Griggs, of Tacoma, regarding the lumbering business in British Columbia. Mr. Griggs, who had evidently talked for election purposes, made the statement that Canadian lumber mills are all run by Chinamen except the foreman, and that these Chinamen received uniform wages of 75 cents per day. Mr. Scott gives the statement an emphatic denial and challenges Mr. Griggs to produce evidence. He says: "I will bear the cost of taking a complete census of the employees of Canadian lumber and shingle mills, if the result of such census will show that one out of every 100 of these employees is a Chinaman. Furthermore, I assert and am prepared to support my assertion, that both our wages and cost of living are higher in British Columbia than yours on Puget Sound." Mr. Griggs had made equally foolish and incorrect statements in regard to the duty on logs and the conditions and amount of trade between the two countries. It was not a difficult matter for Mr. Scott to point out the absurdity of the statements.

COAST CHIPS.

Two shipments of lumber have gone forward from the Brunette mills to San Francisco.

The order received by the Ross-McLaren Lumber Co. for 100,000,000 feet for South Africa is giving renewed activity to lumber operations on the coast. We had always taken a great pride in this mill, but unfortunately conditions were such that it was forced to remain idle for some years.

A big stick of Douglas fir, 36 in. square by 60 feet in length, has been loaded along with other lumber at the Brunette mills for Montreal, where it will be used by the harbor commissioners in the construction of a dredge. This stick was an exceedingly pretty one, being entirely free from either knot or blemish of any kind.

The Forestry Department of New South Wales have shipped to Vancouver a specimen pile 48 feet long of turpentine wood, with a view to representing the usefulness of this timber in wharfage works. It is said to be proof against the ravages of the toredo, and serious injury has been done to the wharves here with this pest.

NEW WESTMINSTER, B.C., Nov. 18, 1894.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN].

THE mill of Stetson, Cutler & Co., which has been idle a large part of the season is now running. Mills generally are in active operation.

Negotiations are in progress between F. H. Eaton & Sons, of Calais, Me., and W. H. & J. Rourke, of St. Martins, N. B., for the purchase of the mill property of the latter, together with considerable limits.

Robt. Conners, a St. Francis river lumberman, has expressed the opinion that the winter's cut on the St. John's and its tributaries the coming winter will be smaller than that of a year ago. It may be remarked that all lumbermen do not hold to Mr. Conner's view.

It is believed that operations this winter in Cumberland County, Nova Scotia, will be on an increased scale because of heavy losses suffered by fire during the past summer. The Shulee Lumber Co. will get out about 70,000 pieces of piling, and probably 6,000,000 feet of logs.

There is an agitation for establishing in the province a factory for creosoting lumber. At present all creosoted lumber is imported from the United States.

Lumbermen here have their sawdust grievance, and at present a strong disagreement exists between Messrs. Davidson, lumbermen, and the local government. The objection comes mainly from the fishermen, while lumbermen argue that the importance of their industry far exceeds that of the fisheries.

ST. JOHN, N. B., Nov. 20., 1894.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

SHIPPING operations by water have been quite active during the month in anticipation of the closing of navigation. The figures for October for water shipments from Saginaw are in excess of shipments for the same month last year by 13,000,000 feet and are about the same figures behind shipments for October 1892. The year 1882 was the banner year for lake shipments, the total then being represented by 781,648,844 feet.

The Hon. R. A. Loveland, of the Saginaw Lumber & Salt Co., who recently returned from the Canadian lumbering regions has expressed this opinion of the situation: "Lumber is held very firmly in Canada. There has been a very good demand for deals and a large quantity of them have been manufactured in Canada the last year. Trade with us is very good. We have shipped considerable lumber into Canada, strange as it may seem, during the year, and are at the present time loading several cars for Toronto."

BITS OF LUMBER.

Hardwood operations are likely to be slow in the woods the coming winter.

The Arthur Hill Co., of Saginaw, has 250,000,000 feet of timber on Moon River, Ont.

The logging road, known as the Detroit, Bay City and Alpena has been sold under foreclosure of mortgage. The shipping record of Alpena for October is 84,000,000 feet of lumber, 6,355,000 shingles, 1,027,000 staves, 3,050,000 pieces of lath, 1,240,000 pieces of cedar.

The H. M. Loud & Sons Lumber Co., of Oscoda, say that Canadian competition is being felt by them. They say that Norway piece stuff has reached the lowest figure since 1892. In answer to a statement that has been current that this company have been shipping large quantities of cedar into Canada they say: "The only cedar that has ever been shipped from here to Canada is two cars, special long poles wanted quick and not obtainable there. This is the first Canadian order ever received and we don't ever expect any more orders."

All sorts of opinions are going around in regard to the possibility of Michigan lumbermen doing a good share of their cutting in Canadian saw mills. One view expressed by a large Michigan owner of Canadian limits gives solace to our people here. It is this that, even at an increased cost, it will pay Michigan men better to tow their logs to Michigan shores and have them cut here, because of the better market in Michigan enabling them to secure an increased price. To use this lumberman's words: "I will never have a single log cut in a Canadian mill for the reason that I can realize a better profit and a quicker return on my investments by bringing the logs here in rafts."

L. P. Mason speaks of the present season as a very quiet one. He has pretty well sent out his shipments for the season and does not anticipate much further trade this year. Manufacturing for the season is about at an end at this point of the river. The Merrill mill has only run since Sept. last, while the Gould & Cambrey Co., and Mitchell, McClure Co. have not cut a log. The Whitney and Batchelor mill only operated part of the season and so on through the record. All mills are running light. It is not thought that the cut at the Saginaw end of the river this season will go beyond from 160,000,000 to 175,000,000 feet, where in 1893 the total cut was 267,484,612 feet.

SAGINAW, MICH., Nov. 19, 1894.

RECENT CANADIAN PATENTS.

Henry Campbell, Baltimore, Md., has obtained a patent, No. 46,998, on a method of and machine for dowelling.

A patent No. 47,074 was granted on Sept. 20th to John Bowles, Washington, D. C., on a combined saw and planer.

Patent No. 46,918 has been granted to Algernon S. Pethetrew, St. Louis, Mo., on Automatic Receding Saw Mill Set-Works.

Robert Graham and Geo Roe, of Ottawa, Ont., were granted, on Sept. 17th, a patent, No. 47,106, on a method of moulding, in one piece, turbine water wheels.

MATTER OF ADHESION.

AMONG what may be called mechanical fallacies is "adhesion" of ropes, bands or other tractive apparatus for transmission. Adhesion instead of being a virtue is commonly a vice, lessening first cost at a loss of double as much in maintenance. There is no lack of tractive force; in fact, there is too much of it in most driving gearing, and we recommend that when an agent comes around to explain what a high duty he can attain with a rope, or how much the driving power of a band can be increased, the safest way is to place no confidence in such schemes and have nothing to do with them. If ropes slip, more ropes are needed; if belts slip they are too narrow. If a shaft is required to perform a certain work, we provide one at least three times as large as the torsonial strain demands; a wide factor of efficiency is provided in wheel teeth, beams, framing, indeed in nearly all the elements of machinery until we come to belts and ropes for transmission. These are commonly strained to their full capacity, hence the demand for increasing "adhesion."—Industry.

THE NEWS.

—Dr. Graham has purchased a saw mill near Buckingham, Que.

—D. S. Gibson, saw mill, Ellaton, Ont., is giving up business.

—S. Y. Bullis, of Athens, Ont., is fitting up his saw mill for the coming season.

—A new saw mill is being built at Prince Albert, N. W. T., by Daniel Shannon.

—A. H. McLane has purchased valuable milling property at Hopewell Hill, N. B.

—The Lake St. John railroad carried last year over $600,000 worth of lumber and firewood.

—The Lovell planing mill at Niagara Falls, Ont., has been taken over by A. Carnochan & Son.

—The Carberry, Man., planing mill will be sold by foreclosure of mortgage on December 1.

—Wilson Bros. are adding a three-story brick building to their planing mill at Collingwood, Ont.

—Oswald Chaput, lumber, L'Assomption, Que., is offering to compromise at 25 cents on the dollar.

—The lumber cut of C. L. White, of Apple River, N.S., this winter will be about 6,000,000 feet.

—E. T. Nesbitt, lumber dealer, Quebec, has compromised with his creditors at ten cents on the dollar.

—Garson, Purcer & Co. are rebuilding their planing mill at Brockville, Ont., recently destroyed by fire.

—The Rathbun Co. will take out large quantities of logs and timber at Dead Creek during the coming winter.

—A crew has left Selkirk for Lake Winnipeg to get out logs for next season's cut of the Mitchell mill at that place.

—H. Philion & Co., sash and door manufacturers, Ottawa, Ont., have dissolved partnership, A. N. Philion continuing.

—About seventy men are now at D. E. Sprague's lumber camp on the Rosseau river getting out logs for his Winnipeg mill.

—Thompson Smith's Sons have bought the pine on the Birch Island Reserve, Manitoulin, from Burton Bros., of Barrie.

—The mills of the Longford Lumber Co. at Longford, Ont., closed down a fortnight ago, after running steadily for seven months.

—The machinery for the new saw mill at Virden, Man., is being placed in position, and the mill will shortly be in operation.

—F. X. Simoneau, manufacturer of sashes and doors, Sherbrooke, Que., is reported insolvent. His liabilities are fixed at $5,000.

—Brosseau Bros. & Co., sash manufacturers, Montreal, have turned over their estate to an assignee. Liabilities, are estimated at $12,500.

—H. S. Lowndes, who erected a saw mill a few years ago at Gaspe, Que., is reported in financial difficulties and has been asked to assign.

—Nesbit & Lalonde, sashes and doors, Winnipeg, have dissolved partnership. The business will be continued by Milford, Lalonde & Co.

—John Piggott & Co., of Windsor and Chatham, Ont., have bought a million feet of pine lumber from Pitts & Co., of Bay City, Michigan.

—The saw mill at Sydney, B. C., has been purchased by Ewen Morrison, of the Rock Bay lumber yard, who will operate the mill at once.

—John Kidd, of Wiarton, is erecting a saw mill on Griffith Island and is putting the machinery in. Sawing will be commenced early in the year.

—Incorporation has been granted the St. Maurice Tool and Axe Works, of Three Rivers, Que., to manufacture axes, tools, etc. The capital stock is $40,000.

—It is said that a Vancouver, B.C., mill owner contemplates opening a lumber yard in San Francisco and entering into competition with Puget Sound mills.

—A cargo of one million feet of long lumber, and one of 263,000 feet, with a quantity of laths, pickets and spars, recently left St. John, N. B., for Australia.

—It is said a new lumber industry to employ 50 hands will be located in Walkerville. Some $50,000 will be spent in putting the old beet sugar refinery in shape.

—The Cookshire Mill Company have again started their saw mill at Cookshire, Que., and have given a contract for taking out 3,000,000 feet of logs the coming winter.

—The assignment is reported of James Gordon, lumber dealer of London, Ont., with liabilities of $7,000 and no assets. He traded principally on commission.

—J. A. Rosseau, of Ste. Anne, Que., contemplates erecting a large saw mill on the Lower Laurentian railway, near Riviere a Pierre, to cut deals for the English market.

—A partnership has been formed between R. R. Dobell, Lorenzo Evans, and W. M. Dobell, lumber merchants, Quebec, under the style of Dobell, Becket & Co., and in England as Richard R. Dobell & Co.

—The Mississaga River Improvement Co., of Thessalon, Ont., has been granted provincial incorporation, to construct dams, slides, or other works necessary for the transmission of timber down the Mississaga river.

Chas. Birge has successfully operated a saw mill at Horning's Mills, Ont., for the past ten years, but lost his mill by fire in April last. The expense of rebuilding has proved too heavy a strain on his capital, and he now assigns.

—E. C. Whitney's saw mill at Long Lake, on the Ottawa and Parry Sound Railway, is nearing completion. The building is erected and ready for the machinery, which will be put in on completion of the railway to that point.

—Mill No. 2 of the Ontario and Western Lumber Co., at Norman, Man., closed down for the season recently, after the most successful run yet made. The season's cut was nearly 11,000,000 feet of lumber and 3,000,000 lath.

—The Canadian business of H. Colclough, of Saginaw, Mich., has been managed by Moiles Bros., and the mills are situated at Johns Island in Lake Huron. As the result of a number of judgments being obtained against them, an assignment has been made.

—The Rathbun Co., of Deseronto, have recently purchased all the tie timber on the Wikwinikong Indian reserve, Manitoulin Island. The company's agent, Mr. Baker, of Lindsay, is now on the reserve making arrangements to have the ties taken out this season.

—The Dickson Lumber Co., one of the oldest industries in Peterboro', Ont., is about to cease operations. The firm was established about fifty years ago by Samuel Dickson, who was drowned in 1870 near the mill, a pier upon which he was standing being overturned by a rush of logs.

—A. De Bruyne, who recently arrived in Canada from Belgium, has just made a shipment of lumber from Aylmer, Que., to that country. The shipment consisted of one hundred thousand feet, besides a quantity of dimension lumber, and was purchased from Conroy's and Klock Bros.' mills.

—A short time ago D. S. Clemens built a saw and heading mill in the city of Guelph, and was meeting with a degree of success, but has been obliged through lack of capital to make an assignment. The property was offered for sale by auction, but was withdrawn, the highest bid not reaching the amount of the reserve bid.

—Alex. Gibson, the lumber king of Maryville, N. B., has finished his season's lumbering operations. His shipments of deals during the season aggregated over eighty-three million feet, the largest aggregate in one season in all his experience. He operated no less than eleven mills, besides his own at Maryville and Blackville.

—During his visit to Southern Manitoba the past summer, the Hon. T. M. Daly, Minister of the Interior, became impressed with the importance of immediate action being taken to preserve the timber in the Turtle Mountains. With that end in view a number of bush rangers will be appointed to patrol the mountains and see that the timber is not recklessly destroyed, and that settlers do not cut timber without having first secured the necessary permit.

—The manufacturing of lumber in the vicinity of Ottawa, is nearly at an end for the season. The lumber cut has been about 298,000,000 feet, made up as follows: J. R. Booth, of Ottawa, 90,000,000 feet; Bronson & Weston, Ottawa, 73,000,000; Buell, Orr & Hurdman, Hull, 70,000,000; W. C. Edwards, Rockland, 60,000,000; Hawkesbury Lumber Company, 55,000,000; McLachlan Bros., Arnprior, 50,000,000; Gilmour & Hughson, Hull, 40,000,000; James McLaren estate, 35,000,000; Gillies Bros., Braeside, 25,000,000; Ross Bros., Buckingham, 10,000,000.

—Mr. James McEvoy, of the Dominion Geological Survey, has just returned from his summer field work in the Kamloops, B. C., district. He reports serious destruction of the valuable timber resources of that province, the fires the past summer being more destructive than ever. The Indians are said to be responsible for this destruction, the object being to make hunting easier, as after strips of forest are burned down the ground in a year or two becomes covered with a growth of grass, and the large game seek the grass meadows and are thus more easily captured by the Indians.

FIRES AND CASUALTIES.

FIRES.

—Wm. Barnum's saw mill near Queensboro', Ont., was destroyed by fire on the 9th ultimo. Loss, $2,500; insurance, $1,000.

—Fire recently destroyed C. W. Taylor's sash and door factory at Cookshire, Que. The loss is estimated at $4,000 and the insurance $3,000.

—C. M. Bostwick's steam saw mill at Salmon River, N. B., was destroyed by fire about the last of October. Loss, $13,000; insurance $7,500.

—A large planing mill at Shubenacadia, N. S., owned by John Layton and valued at $25,000, was burned recently. A quantity of lumber was also consumed.

—The planing mill of Withrow & Hillock, corner Queen and George streets, Toronto, suffered a loss of $6,000 by fire about the 1st of November. It is supposed to be the work of an incendiary.

—E. A. Byran's stave mill at Blenheim, Ont., was discovered on fire on the 7th of November. The storerooms in rear of the mill, in which was stored a quantity of finished stock, were almost totally destroyed.

—The splendid saw mill of Knignt & Lowe, at Fourth Chute, Ont., about six miles north of Eganville, was totally consumed by fire the early part of November. Three car loads of shingles, ready for shipment, were also burned. New machinery has lately been placed in the mill, which was valued at $11,000. There was an insurance of $4,000.

CASUALTIES.

—While working in Baker's mill, at Randolph, N. B., Harding Watters had one of his hands severely lacerated.

—A young man named T. Roberge, of New Liverpool, Que., recently broke his leg while lumbering in the woods at North Stratford.

—Charles W. Brown miraculously escaped instant death in Craig's planing mill on Dundas street, Toronto, a fortnight ago. He was caught by the belting and brought in contact with the circular saw, but was rescued in time to save him from instant death. His left arm and leg were both broken, and other injuries were received, but it is thought he will recover.

—W. J. Spence, an employee of Craig & Co.'s planing mill, Toronto, was killed while attempting to adjust a belt in the mill recently. The belt had slipped from the pulley, and Spence attempted to adjust it while the machinery was in operation by the use of a stick which was hurled against his chest, crushing his ribs. He only lived a few minutes after the accident. He leaves a wife and seven children, who have the sympathy of all in their bereavement.

PERSONAL.

—The name of Mr. Harold Kennedy, lumber merchant, is mentioned as a probable candidate in Quebec West for election to the Provincial legislature.

Mr. D. Menzies, lumber merchant, of Vancouver, B. C., recently arrived from the west on a visit to his home at Ailsa Craig, and to renew his many acquaintances throughout Ontario.

Mr. M. F. Quinn, of the Export Lumber Co., New York, spent the greater part of last month in Montreal. His mission was in connection with the loading of two large steamers with white pine for South America.

PUBLICATIONS.

The Saw Mill Gazette, of New York, which has always been a welcome and appreciated visitor to our sanctum, has changed its title to "Lumber," as being more comprehensive in fulfilling the mission it has in view of covering the entire fiield of wood working "from the tree to the finished product."

A recent addition to the periodical press, that seems to meet a felt need, is the New Science Review, published quarterly in New York. The editor is Mr. J. M. Stoddart, who has had a wide and successful experience in journalism of the higher class. The two issues of the Review that have come to our table, are of a character that would seem to insure the success of this new claimant for public support. The class of papers published, whilst of a scientific character, and in all cases from writers whose names ought to carry authority with them, are yet couched in such terms and shaped in a manner to make them readily understood by the ordinary layman.

The great consumers of hard lumber are the furniture manufacturers; hence, because furniture making isn't being pushed very hard just now, the demand for hard lumber is light.

TRADE REVIEW.

Office of CANADA LUMBERMAN,
Nov. 26, 1894.

THE GENERAL SURVEY.

AS the end of the year draws nearly to a close, lumbermen everywhere commence to lessen their activities and prepare themselves for learning what they have accomplished during the year, or what they have failed to accomplish. One story of quietness is told, whatever source may be tapped for information, but this condition does not carry with it any serious spirit of despondency.

The time is too early yet to enter with fulness into a summary of the year's business. In a later issue, the LUMBERMAN will follow its usual custom and review conditions generally and at all leading lumber points. Introductory to this step an approximate estimate of the cut of the Ottawa district might be given here. This is estimated as follows: J. R. Booth, Ottawa, 90,000,000 feet; Bronson & Weston, Ottawa, 73,000,000; Buell, Orr & Hurdman, Hull, 70,000,000; W. C. Edwards, Rockland, 60,000,000; Hawkesbury Lumber Company, 55,000,000; McLachlan Bros., Arnprior, 50,000,000; Gilmour & Hughson, Hull, 40,000,000; James McLaren estate, 35,000,000; Gillies Bros., Braeside, 25,000,000; Ross Bros., Buckingham, 10,000,000. It is also at this time of the year that some conception can be realized of the outcome for another season. It is estimated that 50% of next season's cut of lumber in the Ottawa district is already sold, and at prices satisfactory to manufacturers. This is a hopeful indication of, at least, fair prices next year. The export lumber trade from the Ottawa district is, of course, about closed for the season.

Along the North Shore and the northern sections of the province, only fair supplies of stocks are to be found. At particular points we have reports of stocks on the piling grounds being heavy, but there is good reason to believe, taking the aggregate of stocks in the north, that these are only moderate. A large number of men have been sent into the woods, and if they are kept at work throughout the season the cut will be one of considerable size, but this is a point on which lumbermen themselves are not prepared to say much yet. The size of the cut will be governed by conditions that will develop during the next three or four months.

British Columbia trade does not improve, outside of the stimulus that has been given the trade in that province through the expected early opening of the Ross-McLaren mill, made necessary by the large order received by that firm from South Africa. A number of vessels have loaded, or are in course of loading at Vancouver for foreign parts, but this trade is after all not on an extensive scale.

Dealers report a fair amount of local business in Winnipeg and certain parts of Manitoba. This immediate activity is due there, as at other places, to the near approach of winter when the mills will be closed down. There is about 50,000,000 feet of lumber on hand at the mills at the Lake of the Woods. This is rather more stock than mill men would like to see, and one effect is that the mills do not expect to do much more cutting next season than is necessary to keep stocks sorted up in the various lines required. It is said that none of the pine mill men will get out any logs in Canadian territory this year, but a limited quantity will be got out on the south side of Rainy River for the Lake of the Woods mills.

UNITED STATES.

Actual business of the month does not show any wonderful improvement, if the increased activity that always comes prior to the closing of navigation is allowed for. Not for some months, however, has there been shown a greater confidence in the future of the lumber trade than has been observable since the elections of the early part of the month. We are told that evidence of this confidence is to be seen in the determination of mill owners to put their plants in good shape for business, when business comes, as it is believed, it now will come shortly. Business in manufacturing lines generally, is putting on renewed energy and a quickening in that direction must result in an increased consumption of lumber. In a word trade is getting over being sick, and commencing to feel lusty enough to do something worth while. Perhaps this buoyancy will need to be discounted a little later on, but it is a good feeling and a kind that will lead to a revival of business ultimately. In the Saginaw Valley conditions are decidedly better, and the talk is there of an increase in the capacity of wood-working plants. At Buffalo, Tonawanda and other eastern points, strength is being given to the lumber trade. It is the opinion, in important white pine regions like Michigan, Minneapolis and Wisconsin, that stocks on hand at the close of the season will not be as large as was feared a few months ago. A conservative feeling exists touching operations in the woods the coming winter, and except in the burnt regions of Minneapolis and Wisconsin, where necessity will require a large cut, the impression is that the log output for the coming year will be lighter than usual. If this is the case, an overstocked market for 1895 is not very likely to occur, and the trade will be able to maintain good prices.

FOREIGN.

There are numerous indications, say Denny, Mott & Dickson, of London Eng., that a reversion to an active state of trade in the United Kingdom is only held in check by the various elements of uncertainty existing in the spheres of politics and labor. A plethora of capital is seeking industrial investment, which is an encouraging sign, compared with former conditions. Farnworth & Jardine, of Liverpool, report the arrivals from British North America for the past month to have been 42 vessels, 36,517 tons, against 32 vessels, 28,501 tons during the corresponding month last year. Of Canadian woods, this same firm says the imports of waney and square have been small, but the deliveries have been small and the stock is quite ample. Oak has moved off very slowly during the month. Elm has not been imported, the demand has been very moderate and the stock is sufficient. Pine deals have not arrived too freely, and although the deliveries have been fair, values have not improved, and the stock is much too heavy. Lumber trade is undergoing a very satisfactory improvement in Newfoundland. The Chamber of Commerce, of St. John's in its annual report says: "The lumber industry of the Island is increasing annually, and there are now several large mills exporting to the United Kingdom, where the quantity and prices obtained, compare favorably with the exports of the Dominion. With the further opening of the interior, the enlargement of this important branch may be confidently looked for." To some extent this expansion of trade is attributed to the extension of railway facilities penetrating into the north of the colony, and the expectation is, that as the railway now under construction reaches further into the timber regions that there will be an increased development of business.

HARDWOODS.

The hardwood trade has been disturbed somewhat during the month with reports concerning the introduction of large quantities of African mahogany into the British markets and the expectation that this wood may become a factor in American markets. We have given some space to a discussion of the question in another column. Suffice it to say here that the matter is worth thought and study by hardwood men. The development of the auction business, in New York, as covering both imported and domestic hardwoods, is a development of the month. The sale which took place a fortnight ago, is reported to have been quite a success. Local hardwood business is slow, and the trade do not speak in hopeful terms of the prospects for, at least, the next few months. Dullness in lumber appears to be indigenous to the end of the year, and this, perhaps, in part, explains the present feeling of the trade.

SHINGLES

The prevailing dulness in the shingle trade of the past summer, continues into the fall of the year, and with the time about gone by when farmers might be expected to be consumers of a fair quantity of shingles, any revival in business cannot be expected immediately. This remark applies to local trade in Ontario. On the Coast, things continue depressed, and reports received from the United States tell no different tale. A new condition in the shingle trade in Ontario is the introduction of white cedar shingles from New Brunswick. No large quantities of these have come into the province, and yet for two years past, they have been imported to a greater or less extent. Those who are giving some attention to the white cedar shingles say, they see no reason why these cannot be brought into Ontario as advantageously as the red cedar shingles can be brought from British Columbia. The distance is less, making a slight gain in point of freight. The white cedar shingle is a heavier shingle than either white pine or red cedar, and is favorably spoken of by those who have made it a business to become acquainted with them. The price is about parallel with that asked for red cedar shingles, though on account of the thickness of the bundles these do not contain just as many shingles. Until a revival in the shingle market takes place, there is not any large encouragement for shingle manufacturers to open out fresh fields for their product, but so far as Ontario is concerned, if shingles are to be drawn from the Pacific coast there seems no reason why Ontario may not also come under contribution for a portion of her supplies to the Maritime provinces.

TORONTO, ONT.

TORONTO, November 26, 1894.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		2 30
XX shingles 16 inch		1 40
Lath, No. 1		2 00
Lath, No. 2	1 80	1 85

HARDWOODS—PER M. FEET CAR LOTS.

Quality, 1s and 2s unless otherwise specified.

Ash, white,	1 to 2 in..	$26 00	$28 00	Elm, soft	1	to 1½	$14 00	$15 00
" "	2½ to 4..	30 00	32 00	" "	2	" 3..	15 00	16 00
" black,	1 " 1½	18 00	20 00	" rock	1	" 1¼	16 00	18 00
" "	2 " 4..	20 00	24 00	" "	1½	" 3..	20 00	2 00
Birch,	1 " 1½	20 00	22 00	Hickory	1½	" 2..	28 00	30 00
"	2 " 4..	22 00	25 00	Maple	1	" 1½	16 00	18 00
" sqrs.	4x4 " 8x8	26 00	30 00	"	2	" 4..	18 00	20 00
Basswood	1 " 1¼	16 00	18 00	Oak, red, p'n	1	" 1½	28 00	30 00
"	1½ " 2..	19 00	19 00	" "	2	" 4..	30 00	32 00
" m. r.	1 " 1¼	14 00	16 00	" white "	1	" 1½	28 00	30 00
Butternut	1 " 1½	23 00	25 00	" " "	2	" 4..	30 00	35 00
"	2 " 3..	25 00	28 00	" quart'd	1	" 2..	48 00	52 00
Chestnut	1 " 2..	22 00	25 00	Walnut	1	" 3..	85 00	100 00
Cherry	1 " 1½	50 00	60 00	Whitewood	1	" 2..	32 00	36 00
"	2 " 4..	60 00	65 00					

OTTAWA, ONT.

OTTAWA, Nov. 26, 1894.

Pine, good sidings, per M feet, b.m.	$32 00	40 00
Pine, good strips, " " "	27 00	35 00
Pine, good shorts, " " "	20 00	27 00
Pine, 2nd quality sidings, per M feet, b.m.	20 00	25 00
Pine, 2nd quality strips, " " "	18 00	22 00
Pine, 2nd quality shorts, " " "	15 00	18 00
Pine, shipping cull stock, " " "	14 00	16 00
Pine, box cull stock, " " "	11 00	13 00
Pine, s.c. strips and sidings " " "	11 00	14 00
Pine, mill cull	8 00	10 00
Lath, per M	1 60	1 90

NEW YORK CITY.

NEW YORK, November 26, 1894.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply, rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$40 00 @ 50 00	Building orders	$28 00 @ 40 00
Decking	45 00 55 00		

Per M.

W. P. bridge timber,	$ 8 @ $35	
W. P. decking, 3 in. thick and up	44	45) planed 1 s and 2 edg.
" " 2 and 2½ in. thick	46	50) $1 per M extra.
" yacht decking	55	60—planed 4 s. $2 extra.
Building timber	26	32

ALBANY, N.Y.

ALBANY, November 26, 1894.

PINE.

2½ in. and up, good	$56	$60	10-in. common	$15	$16
Fourths	58		12-in. dressing and better	28	34
Selects	50		Common	15	17
Pickings	45		1¼-in. siding, selected, 13 ft.	40	45
1½ to 2-in. good	52	55	Common	15	17
Fourths	47	50	1-in. siding, selected	38	42
Selects	42	45	Common	15	17
Pickings	37	40	Norway, clear	22	25
1-in. good	52	55	Dressing	16	18
Fourths	47	50	Common	11	15
Selects	42	45	10-in. plank, 13 ft., dressing c. c.		
Pickings	37	40	and better, each	42	55
Cutting-up	22	27	10-in. plank, 13-ft. culls, each	23	25
Bracket plank	30	35	10-in. boards, 13 ft., dressing		
Shelving boards, 12-in. up	30	32	and better, each	28	32
Dressing boards, narrow	19	21	10-in. boards, 13-ft. culls	17	21

LATH.

Pine	$2 25	Spruce	$2 00

SHINGLES.

Sawed Pine, ex. XXXX	$4 10	$4 25	Bound butts, 6 x 18	$5 90	$6 00
Clear butts	3 10	3 25	Hemlock	2 15	2 30
Smooth, 6 x 18	5 40	5 50	Spruce	2 20	2 30

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N.Y., Nov. 26, 1894

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in	$45 00	48 00	Shelving, No. 1, 13 in and up, 1 in	31 00@33	00
2½ and 3 in	50 00	53 00	Dressing, 1¼ in	25 00	26 00
4 in	54 00	56 00	1¼x10 and 12		26 00
Selects, 1 in	38 00	39 00	1½ in	24 00	25 00
1¼ to 2 in	40 00	42 00	2 in	26 50	28 00
2½ and 3 in	47 00	50 00	Mold st'ps, 1 to 2 in	33 00	35 00
4 in		52 00	Barn, No. 1, 10 and 12 in	21 00	23 00
Fine common, 1 in	35 00	37 00	6 and 8 in	20 50	22 00
1¼ and 1½ in	37 00	38 00	No. 2, 10 and 12 in.	17 00	18 00
2 in	39 00	40 00	6 and 8 in	18 00	19 00
3 in		45 00	No. 3, 10 and 12 in.	14 00	16 00
4 in		45 00	6 and 8 in	13 50	15 50
Cut'g up, No. 1, 1 in.	27 00	29 00	Common, 1 in	16 00	18 00
1¼ to 2 in	32 00	33 00	1¼ and 1½ in	18 00	20 00
No. 2, 1 in	17 00	18 00	2 in	19 00	22 00
No. 2, 1¼ to 2 in	22 00	23 00			
No. 3, 1¼ to 2 in	18 00	19 00			

SAGINAW, MICH.

SAGINAW, November 26, 1894.

FINISHING LUMBER—ROUGH.

Uppers, 1, 1¼ and 1½	44 00	Fine common, 1 in	32 00
2 in	46 00	1¼ and 1½ in	34 00
Selects, 1 in	38 00	2 in	34 00
1¼ and 1½	38 00	C, 7, 8 and 9 in	30 00
2 in	38 00		

SIDING.

Clear, ½ in	24 00	C, ½ in	19 00
⅞ in	48 00	⅞ in	34 00
Select, ½ in	21 00	No. 1, ½ in	13 00
⅞ in	40 00	⅞ in	23 00

TIMBER, JOIST AND SCANTLING.

2x4 to 10x10, 12, 14 and 16 ft.	$11 00	20 ft	14 00
18 ft	13 00	22 and 24 ft	15 00

For each additional 2 ft. add $1; 12 in. plank and timber $1 extra; extra for sizes above 12 in.

SHIPPING CULLS OR BOX.

in., 4 and 5 in. wide	$10 00	1 in., 13 in. and up wide	$12 00
1 in., 6 in. wide	11 00	1¼, 1½ and 2 in., 7 in. and up wide	12 00
1 in., 7 in. wide and up	11 00		

SHINGLES, 18-IN.

Fancy brands, XXXX	3 25	Standard brands. river made, XXXX	3 00
Clear Butts	2 00	Clear Butts	2 00

WHITE PINE LATH.

No. 1	1 50	No. 2	1 25
		Hemlock	1 00

BOSTON, MASS.

BOSTON, November 26, 1894.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards		$12 00	¾ inch	$ 9 25	9 75
Coarse No. 5	15 00	16 00	11-16 inch		9 00
Refuse	12 00	12 50	⅝ inch		8 50
Outs	9 00		Clapboards, sap ext.	48 00	50 00
Boxboards, 1 inch	10 75	11 00	Sap clear	43 00	45 00
⅞ inch	9 75	10 00	Sap, 2nd clear	35 00	40 00
			No. 1	25 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in	$50 00@51	00	Fine com., 3 and 4 in	43 00	45 00
1¼, 1½ and 2 in	52 00	53 00	No. 1 strips, 4 to 6 in.	43 00	44 00
3 and 4 in	59 00	63 00	1¼, 1½ and 2 in	29 00	31 00
Selects, 1 in	43 00	45 00	No. 2	36 00	37 00
1¼, 1½ and 2 in	45 00	47 00	No. 3	28 00	30 00
3 and 4 in	55 00	57 00	Cut ups, 1 to 2 in	24 00	32 00
Moulding boards, 7 to 11 in. clear	36 00	38 00	Coffin boards	15 00	20 00
60 per cent. clear	34 00	36 00	Common all widths	22 00	26 00
Fine common, 1 in	38 00	40 00	Shipping culls, 1 in	15 00	15 50
1¼, 1½ and 2 in		42 00	do 1¼ in.	15 50	16 50

SPRUCE.

Random cargoes, large sizes	12 50@13	00	Mill random	11 00@12	00
Ordinary	11 50	12 00	Northern, random boards	11 50	12 00
Narrow	10 00	11 00	Second boards		10 00
Shippers	13 00	13 25	Northern No. 1 stock boards, 12 feet	20 00	23 00
Planed, coarse		12 00	No. 2	13 50	14 00
Rough, coarse, narrow	10 00	11 00	Planed, narrow	10 50	11 00
Rough, coarse, wide	12 50	13 00	Wide		14 00
Spruce frames, cars ordinary	13 00	13 50	Clapboards, 4ft. extra.	28 50	30 00
12 in	14 00	14 50	Clear	26 00	28 00
14 in	16 00	18 00	Second clear	20 00	24 00
Yard orders	12 50	13 00	No. 1	10 00	13 00
			No. 2	8 00	9 00

HEMLOCK.

Boards, rough	9 00@10	00	No. 2	7 00@	9 50
Planed	11 00	11 50			

LATH.

Spruce			By cargo	1 80@	1 90
By car	1 80@	2 00			

OSWEGO, N.Y.

OSWEGO, November 26, 1894.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$46 00@47	00	
Pickings, " "	36 00	38	00
No. 1, cutting up, " "	31 00	33	00
No. 2, cutting up, " "	24 00	25	00
In strips, 4 to 8 wide, selected for moulding trips, 14 to 16 ft.	32 00	34	00

SIDING.

1 in siding, cutting up			1¼ in selected	38 00@43	00
1 icks and uppers	32 00@39	00	1¼ in dressing	20 00	22 00
1 in dressing	19 00	21 00	1¼ in No. 1 culls	15 00	17 00
1 in No. 1 culls	14 00	15 00	1¼ in No. 2 culls	14 00	15 00
1 in No. 2 culls	13 00	14 00	1 in. No 3 culls	11 00	12 00

1X12 INCH.

12 and 16 feet, mill run	21 00	24 00
12 and 16 feet, No. 1 and 2, barn boards	19 00	20 00
12 and 16 feet, dressing and better	27 00	31 00
12 and 16 feet, No. 2 culls	15 00	16 00

1X10 INCH.

12 and 13 feet, mill run, mill culls out	21 00	23 00
12 and 13 feet, dressing and better	26 00	28 00
1x10, 14 to 16 barn boards	18 00	19 00
12 and 13 feet, No. 1 culls	16 00	17 00
12 and 13 feet, No. 2 culls	14 00	15 00
14 to 16 feet, mill run mill culls out	21 00	23 00
14 to 16 feet, dressing and better	26 00	28 00
14 to 16 feet, No. 1 culls	17 00	18 00
14 to 16 feet, No. 2 culls	15 00	16 00
10 to 13 feet, No. 3 culls	11 00	12 00

1¼X10 INCHES.

Mill run, mill culls out	$22 00@25	00	No. 1 culls	17 00	18 00
Dressing and better	27 00	35 00	No. 2 culls	15 00	16 00

1X4 INCHES.

Mill run, mill culls out	17 00	21 00	No. 1 culls	14 00	15 00
Dressing and better	24 00	30 00	No. 2 culls	13 00	14 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20 00	25 00	6, 7 or 8, No. 1 culls	16 00	17 00
6, 7 or 8, drsg and better	25 00	30 00	6, 7 or 8, No. 2 culls	14 00	15 00

SHINGLES.

XXX, 18 in pine	3 70	3 90	XXX, 18 in. cedar	3 50	3 70
Clear butts, pine, 18 in.	2 70	2 90	Clear butt, 18 in. cedar	2 40	2 65
XXX, 16 in. pine	3 00	3 20	XX, 18 in. cedar	1 75	2 00
Stock cedars, 5 or 6 in.	4 50	5 00			

LATH.

No. 1, 1¼	1 85		No. 2, 1¼	1 75	
No. 1, 1 in.	1 50				

LUMBERMEN IN CONVENTION.

MARITIME PROVINCE LUMBERMEN MEET AND ORGANIZE.—THE SAWDUST QUESTION AND FREIGHT RATES DISCUSSED.—OFFICERS OF THE NEW ORGANIZATION.

[Special correspondence CANADA LUMBERMAN.]

MONCTON, N. B., Nov. 20th.—The first provincial convention of lumbermen, held in the Maritime provinces, opened this morning in the W. C. T. U. hall here with an attendance of about thirty, which gradually increased in numbers during the meeting until the close, when those present totalled upwards of sixty. Among those in attendance were Capt. F. D. Veith, of the department of marine and fisheries; F. O. Talbot, H. J. Vaughan, Alma; Wm. Titus, Hammond, Kings Co.; J. Prescott, Goose Creek, Kings Co.; G. R. Prescott, Shulee, Cumberland Co., N. S.; A. Wright, Salisbury; J. G. Forbes, St. John; Geo. Fullerton, Pictou; H. G. Wall, Shulee; Wm. Chisholm, Halifax; G. D. Prescott, West River, A. Co.; Moses Prescott, Eastport; Wm. Wilson, Anagance; Hiram Humphries, Petitcodiac; E. P. Eastman, Petitcodiac; C. F. and T. R. Eaton, Eatonville, N. S.; R. McKee and O. Patterson, St. Martins, N. B.; John J. Whelan, Sussex; D. J. McLaughlin, St. John; James Ferguson, Bathurst, and many others.

CHAIRMAN'S ADDRESS.

The meeting was formally called to order by Mr. D. J. McLaughlin, of St. John, who was elected by acclamation to fill the chair, with Mr. J. G. Forbes, of St. John, as secretary.

Mr. Forbes delivered the opening address, explaining that the object of the convention was purely to consider the interest of the lumbermen. He referred briefly to the amendment to the fisheries act, with regard to the sawdust question, and considered it desirable that the lumbermen should meet and consult and determine how best to meet the requirements of the law or ask for modifications, or petition the department to pass a law to prevent lumbermen from going to expense to build a furnace to destroy the sawdust.

This law as enacted goes into force on May 1st, 1895, and from that date lumbermen are in danger of being fined from $10 to $100 a day for the drifting of sawdust from their mills into streams. This will be the law of the Dominion, and we must be prepared to comply with it or ask for such modifications in the law as would allow you to carry on your work in a paying way. The minister has excepted no mill in the law, and some person should move to obtain legislation that you should not be put to very great expense by erecting furnaces and other appliances for destroying sawdust. You should petition the minister to, at least, exempt those mills which are so located as not to interfere with, or injure the fish. One way, said the speaker, is to present a petition to parliament, and another to pass a series of resolutions.

The chairman here introduced Capt. Veith, of the marine and fisheries department, who was present to hear the contentions of the lumbermen on the matter.

THE SAWDUST TROUBLE.

J. C. Prescott, G. J. Vaughan and others stated that if the law went into force it would militate seriously against their business, and would probably lead to a closing up of mills. As a matter of fact Mr. Vaughan said no injury could be done to the fish in many localities where mills existed, as no fish were to be found there.

Mr. Wm. Wilson, of St. John, read statistics showing conclusively that instead of sawdust and refuse being detrimental to fish, they are rather beneficial. The report of the St. John, N. B., fishery inspector proved this, for, notwithstanding that numerous sewers omit their refuse into this harbor, and that the harbor is generally strewn in some localities with sawdust, last year the catch of shad and salmon was 22,500 and 11,500 respectively, greatly exceeding any previous year. The spawn were the best, and the fish in first-class condition. Mr. Wilson even went so far as to explain that smelts, by observation, congregate at the mouths of sewers to get their feed.

Mr. Talbot, of Alma, A. Co., said that on the shore of the Bay of Fundy there is not $50 worth of fish caught in a year. Fifty dollars worth of fish is of small account in comparison with the thousands of dollars loss to lumbering, should the law be enforced.

Mr. Forbes read the petition being circulated, which in effect points out that "an act further to amend the Fisheries Act," and passed at the last session of the House, the sixth section of the act if enforced will seriously affect, if not in many instances entirely destroy the business and operation of the petitioning lumbermen, and will practically render valueless the investments of the petitioners in these operations, owing to the inability of the petitioners to comply with provisions of said act, as their mills are so located that it is almost impossible to prevent the sawdust from entering the streams upon which they are situated except at an enormous expenditure of capital, without any corresponding advantage in the fishery interests of these provinces. Mr. Forbes said that this petition, to be presented in the proper way would have to be presented by some M. P., who is conversant with the lumbering interests.

Mr. Wm. Chisholm, of Halifax, asserted emphatically that he could not carry on his business if he has to comply with the law in question. It is impossible for him to save his sawdust. If the present law is enforced he will have to go out of the business. He could not see that the minister of marine and fisheries wishes to stop the lumbering business.

Moved by Mr. Chisholm, seconded by Geo. J. Vaughan, Albert, that in view of the great importance of the lumber interests of the Maritime provinces this meeting respectfully petition the Dominion Parliament asking such remedial legislation as would empower the minister of marine and fisheries to exempt from the operation of the recent act of parliament, mills which it can be shown do not seemingly effect the fisheries or private interests or impede navigation. Carried.

Mr. Talbot said that years ago shoals of salmon could be found on the Labrador coast, but now there are none. This was not due to sawdust or mills.

Capt. Veith said as far as sawdust was concerned he thought that mills that are situated at the narrows of the river do not affect fishing. It is the little mills at the top of the river where the fish go to spawn, and they will not spawn if there is sawdust spread over the ground.

Mr. J. H. White, of Sussex, did not believe that there were $50 worth of fish a year caught in the Bay Shore. He could not afford to build a furnace under the circumstances.

Mr. Chisholm, of Halifax, said that nearly all the mills in his locality are built on the same side of the river. The quantity of sawdust that the mill produces is so small that it is not a detriment to fish.

EXCESSIVE FREIGHT RATES.

The chairman called attention of the meeting to another important matter which required their consideration and prompt action, and that was the high I. C. freight tariff on lumber. He said that of late the rates have been unbearably increased, and suggested that a committee be appointed to wait on the government and see if something cannot be done for them under the peculiar circumstances.

Mr. Alex Wright, of Salisbury, condemned the manner in which the rates have been run up. They have increased them so that we don't know what to do. If the government persist in maintaining the present rates we will have to shut down or do something else.

Mr. J. Wilson, of St. John, has been connected with the lumbering industry for nearly half a century, and he said he never saw matters in such an unsatisfactory state as at the present time. If they exist much longer a terrible damper will be put on business. Those whose mills are located where they can ship by water were all right. The ship rates have decreased as the railway rates increased. He claimed it was a great injustice, and thought that if a committee would wait on the government and present their claims, some relief might be obtained.

Mr. Titus, of Hammond, Kings Co., said that on one occasion he shipped 8000 ft. of dry lumber, and was overcharged $3. He could get no satisfaction from the authorities.

Mr. Wilson spoke at length against the tariff and in conclusion moved, seconded by Hiram Humphreys, that a committee be appointed to wait on the proper authorities and direct their attention to the present high tariff on the I. C, R. and ask for such modifications as would be equitable. Carried.

Messrs. Wright, of Salisbury, Humphreys, of Petitcodiac, and Wilson, of St. John, were appointed the committee.

The meeting then adjourned for dinner.

LUMBERMEN ORGANIZE.

The meeting resumed in the afternoon and after a discussion an association to be known as the Lumbermen's Association of New Brunswick and Nova Scotia was formed with the following as executive officers:

New Brunswick—Messrs. Jas. Robinson, D. J. McLaughlin, Wm. Murray, G. L. Vaughan, Geo. Woodman.

Nova Scotia—Messrs. Young, Eaton, T. G. McMuggin and Wm. Chisholm.

It was decided that five should form a quorum, and that a meeting of the executive be held at an early date, for the appointment of officers, etc.

BOILER EXPLOSION.

On the 21st of November the boiler exploded in T. E. Essery's saw mill at Monticello, Ont., killing Robert McQuarrie, aged 24, and Alex. Darraugh, an elderly man, both of Orangeville. Otto Hendrickson had his arm broken in two places, while several others were badly injured. The mill was crowded with workmen at the time of the accident. The water in the boiler grew low, but little attention is said to have been paid to it, until the boiler flew into innumerable pieces.

Mickle, Dyment & Son's large saw mill at Severn Bridge, Ont., closed down for the season a fortnight ago. It will be put in operation again about the first of April next.

CORRESPONDENCE

Letters are invited from our readers on matters of practical and timely interest to the lumber trades. To secure insertion all communications must be accompanied with name and address of writer, not necessarily for publication. The publisher will not hold himself responsible for opinions of correspondents.

A VOICE FROM BRITISH COLUMBIA.

To the Editor of the CANADA LUMBERMAN:

Sir,—At the recent exhibition held by the Royal Agricultural and Industrial Society here the exhibits of native woods and their manufactured products would have done our province credit anywhere. The Pacific Coast Lumber Co. carried off the first honors again for sawn shingles. The Brunette Saw Mill Co. and The British Columbia Mills, Timber & Trading Co. both made very handsome and tastily arranged exhibits of doors, mantels and overmantels and general house finish. The adaptability and use of our red cedar for house finishing purposes is fast becoming recognized by progressive architects and builders. The Americans, in particular, are using it extensively; and for outside work in clapboards or bevelled siding it has been found to be particularly durable and its lightness makes it possible to lay it down at any point much cheaper than pine..

The American lumber journals on this coast are contending that according to the wording of the Wilson Tariff Bill red cedar lumber is not on the free list, but is classed as a "cabinet wood" and as such, subject to a duty of 25%, this, if the case, they admit was a fluke and not intended by the framers of the bill. It is possible that at an early date B. C. shippers will ask the American board of appraisers to pass a decision and should the decision be adverse it will be a matter for our own government to handle with Uncle Sam. If we are to give them advantages, in return for free lumber, we want free lumber, without any monkeying. Meanwhile two shipments of this lumber have been made, upon which duty has been collected. As an instance of the weakness of their contention, the Wilson Bill specially mentions pine and spruce clapboards as free, and the Bill further provides that for administrative purposes articles used for similar purposes shall be subject to similar duties. Now, where would the sense come in if duty were charged for cedar clapboards, or what duty would be charged if we called the lumber by its more correct name juniper?

In Eastern Canada we look on the average American lumberman as a broad minded, open hearted individual away above the petty jealousies of trade, out here a narrow minded jealousy is altogether too apparent in our brethern to the south of us. In its October issue, the "Puget Sound Lumberman," in a leading editorial announces the fact, very tearfully, that "four agencies have been established in San Francisco and Southern California, by British Columbia mill men," and its prophesies on the direful results that will follow are enough to make a cuddy laugh. There are only about four mills in this whole province that are equipped to do this trade and if they are going to knock the whole of the Washington and Oregon mills out, they must be in bad shape indeed.

H. G. ROSS.

VICTORIA, B. C., 1894.

MAGNOLIA METAL COMPANY'S SUCCESSFUL INJUNCTION SUIT.

JUDGE LACOMBE of the United States Circuit Court granted, on October 29th, 1894, the Magnolia Metal Company an immediate injunction against the Nassau Smelting Company of New York city, (composed of Benjamin & Moses Lowenstein), restraining them from selling a metal called the "MAGNOLIA" metal, which they have been assiduously offering in the New York market, and elsewhere, claiming it to be the same as Magnolia Metal and confusing the trade very generally with the similarity of the names. The Magnolia Metal Co. informs us that it will prosecute anyone to the full extent of the law, who infringes in the slightest degree on its patent or trade-mark rights.

A young man named William Allen was instantly killed by the falling of a tree while lumbering in the woods at Cedar Point, Ont. He was a resident of Coldwater, N. Y.

LUMBERMEN'S SUPPLIES

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WHOLESALE GROCERS - TORONTO.

A call from buyers when in the city solicited.
Letter orders have careful and prompt attention.

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Being extensive operators in the lumber business, we are in a position to know what supplies are required for the Camps.

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Has had a sale of ***over one million copies,*** and is the most complete book of its kind ever published. Gives measurements of all kinds of Lumber, Logs, Planks, Timber; hints to lumber dealers, wood measure, speed of circular saws, care of saws, cord-wood tables, felling trees, growth of trees, land measure, wages, rent, board, interest, stave heading bolts, etc.

. . . PRICE, 35c., POST PAID . . .

Orders have been received for this book from nearly all parts of the civilized world, viz.: United States, Canada, Australia, Cuba, Nova Scotia, South America, West Indies, South Africa, England, Germany, and France.

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Quotations furnished on application

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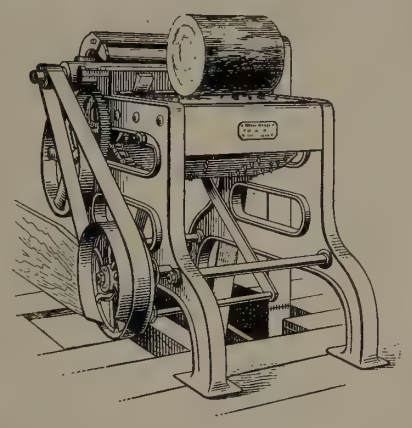

Why you should use this Rosser.....

It will do double the work of any other.
It is the only machine made that will peel Cedar Shingle Blocks.
It will peel dirty blocks without taking the edge off the knives as they cut from the clean bark or block out.
It is a self-feeder, and very easy to operate.
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All iron and steel, very simple and durable.
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It occupies about the same space as an ordinary planer.
You can have a chance to try a machine before buying it.

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SIXTEEN REASONS, AND HOW TO AVOID THEM

Being instructions to filers on the care of large band saw blades used in the manufacture of lumber.

A book filled with valuable information on the care of band saws. Giving the reasons for breaking; analyzing each reason; giving instructions to dispense with the causes as laid down in each reason; and full details on filing and brazing. The proper styles of hammers to use are illustrated and described, and views of blades showing the blows of the different styles of hammers form an important part of the illustrations. Improper and unequal tension are then treated, and the manner of properly setting irregular teeth is described. In connection with the treatise is a history of the invention, manufacture and use of the saw from its origin to the present time. The work in whole makes an accumulation of information such as has never before been published.

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SAVES TIME SAVES MISTAKES SAVES MONEY

BRIMFUL OF EVERY-DAY, PRACTICAL INFORMATION

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LOG SCALING.

THE first thing a log scaler determines is the length of the log, then its quality or grade, which must be determined by the defects visible to the eye. These consist of crooks, knots, punks, hollows, etc. Looking at both ends of the log, he ascertains whether there is any hollow, or ring rot, and if the butt is free from shake. Having settled these points, he lays his rule on the narrowest diameter of the small end of the log. If it is crooked, he takes his diameter (always inside the bark) from a point which allows the saw to pass through the log fully removing the slab. If the butt is hollow, he adds three inches to the diameter of the hollow, multiplies the size by itself, and deducts from the gross measurement. If it is a shaky log, he allows for that in determining the quality. If it has not been properly square butted, he makes a memorandum so that the expense of butting can be charged to the seller, or logger, unless in the bargain he is instructed to deduct enough from the measurement to cover the cost. A log cannot be considered merchantable until it is fully prepared for market. If it is knotty, he lowers its grade accordingly, if he is grading in quality. If the knots are large, black or rotten, he is to determine the class in which the log belongs by the damage caused by the defects. If the defect is ring rot, he should take no account of the log at all, as it is not worth the expense of handling, in a majority of cases. If a log is less than 24 feet long, it should be measured at the end; over that length, it is usually measured in the middle by calipers. In very long timber it is sometimes customary to measure at lengths of 12, 14 or 16 feet; this, however, is a matter of agreement between buyer and seller. Dead timber is always measured inside the decayed or black stained sap. In many hardwood sections the sap is always excluded from the diameter of the log. Bright sap in pine, hemlock, poplar, whitewood, basswood and spruce is always measured. Diameters are always to be taken inside of the bark the smallest way of the smallest end of the log.

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ALL KINDS
TIMBER & LUMBER
ROUGH & DRESSED
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The line thus formed is a short and direct route from
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To ST. PAUL, DULUTH and Pacific Coast Points.
This road traverses a section of Michigan with unrivalled advantages to settlers. Cheap lands, thriving villages and towns, well watered with streams in all directions: a market for every product of Forest and Field.
The policy of the "F. & P. M." is known to all travellers and settlers.
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Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 24th of each month to insure insertion in the following issue.

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TO BUY SMALL LIMIT, PINE AND HEMLOCK, or would put in mill and take contract of cutting by the thousand.

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STEAM SAW MILL, WITH 60 H. P. STEEL Boiler. new, and 50 h. p engine, and 500 acres of land, with a heavy cut of birch and other timber, also a large quantity of black birch, to be had convenient to mill. G. T. R. switch on the premises. For further particulars, apply to

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150,000 FEET NO. 1 AND 2 SOFT ELM, 1" to 4" thick; 250,000 ft. No. 1 and 2 Birch, 1" to 4" thick; 100,000 ft. No. 1 and 2 White or Brown Ash, 1" to 4" thick; 100,000 ft. No. 1 and 2 Hard Maple, 1½" and 2" inch thick. Address BUFFALO HARDWOOD LUMBER CO., 940 Elk St., Buffalo, N.Y.

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WANTED

MANUFACTURERS OR DEALERS HAVING choice Soft Elm, Hard Maple, Basswood, Brown Ash, or Birch, for sale, to correspond with us. E. CLARK & CO., Lumber Dealers, 53 State Street, Room 1020, Exchange Building, Boston, Mass.

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CORRESPONDENCE WITH SOME RESPONSIBLE Canadian Shingle Manufacturer in regard to handling product on commission or otherwise, by wholesale concern travelling continuously. Address Lock Box 45, Mount Morris, Livingston County, N. Y.

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TO CONTRACT FOR 500 TO 800 M FT. 4/4, 5/4, 6/4, 8/4 firsts and seconds Bass wood, the 4/4, 5/4 and 6/4 to be all 12 ft. long, the 8/4 all 16 ft. long. Will agree to take a good percentage of other lengths of firsts and seconds, and a large proportion of the common and culls. Would want the firsts and seconds, 12 feet, shipped in boat loads; other sizes and grades by car. Correspondence solicited. We are ready to buy Elm, Birch, Maple and Ash. YOUNG & KEELER CO., 65 South Street, New York.

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200,000 FEET OF LUMBER, AS SCHEDULED below, during the coming year, cash on delivery, delivered at either of the following places, namely: Duluth, Chicago, Cleveland or Buffalo; also 100,000 feet at Verona, Pa. (Pittsburg freight rates). Part of the lumber would be desirable in firsts and seconds 1 or 1½ inch, ordinary widths. Please quote on this class by itself. Most desirable lumber for my use is White Birch, Maple, Bass, Whitewood; any other white or light maple colored woods would prove satisfactory. Thickness, ⅞ or 1 inch. One side and both edges of the lumber must be sound and free from dark color marks. Six-sevenths of the lumber to be 5¼ inches wide; one-seventh of the lumber to be 10¼ in. wide. Should prefer the lumber cut into the following proportions and lengths, which also gives the producer opportunity to utilize short pieces and good ends of unsalable boards that otherwise would be lost. The proportions are: Four pieces ⅞ or 1 inch thick by 5¼ inches wide by 85 inches long; ten pieces ⅞ or 1 inch thick by 5¼ inches wide by 26 inches long; two pieces ⅞ or 1 inch thick by 10 inches wide by 26 inches long. State condition (dryness) of lumber. Should wish first shipment in December; balance during the year as may be arranged for. Please quote on any part of the above amount you may have capacity to furnish. I wish also quotations on veneers of any white faced lumbers for panels, about one-eighth of an inch thick, suitable for panel work, about 16 inches wide by 36 inches long. Address

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MILL consists of 50 h. p. engine and suitable boiler. One small size Waterous Band Mill with all necessary tools, long carriage, heavy three-saw edger, endless chain, bull wheel rig, 60 inch cut off saw for shingle blocks; two "Dunbar" shingle machines, one combined planer and matcher, and small saws, etc., etc., usually found in mills. The whole in first-class condition, having only been in use a short time and well looked after. Situated at Gaspe Basin, Province of Quebec. Deep water right at mill. Excellent point for shipment to Prince Edward's Island, Cape Breton, and New England ports.

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ENGINES.—One 15½x20; one 12½x20, Goldie & McCulloch make; one 12x18, Waterous double cut off; one 11½x18, Thomas; two 9x12, Waterous; one 8½x12, Beckett, and a large number of smaller sizes.

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Ottawa, Ont	Ottawa	**Bronson & Weston Lumber Co.**	2 Sawmills, White and Red Pine, Wholesale	Water, Gang and Band, 450m
Parry Sound, Ont	Utterson	**Conger Lumber Co.**	Lumber, Wholesale and Retail	
Parry Sound, Ont	Parry Sound	**Parry Sound Lumber Co.**	Saw, Shingle and Lath Mills, Pine, Wholesale	Water, Gang, Circular, Saw 90m, Shingles 70m, Lath 30m
Muskoka Mills, Ont	Midland	**Muskoka Mill and Lumber Co.,** Head Office, Arcade, 24 King st. w., Toronto	W. Pine Lumber, Lath and Bill Stuff, all lengths.	2 Mills, Water, 1 Band, 2 Gangs and 3 Circulars.
Alexandria, Ont	Alexandria	**McPherson, Schell & Co.**	Cheese Box Factory, Pine, Spruce, Cedar	
Almonte, Ont	Almonte	**Caldwell, A. & Son**	Sawmill, Pine, Lumber, Hemlock, Hardwoods	Circular, 3m
Barrie, Ont	Barrie	**Dyment & Mickle**	Sawmill, Pine, Spruce, Cedar, Hardwoods	Steam, Circular, 40m
Barrow Bay, Ont	Wiarton	**Barrow Bay Lumber Co., Limited**	Saw, Shingle and Heading Mill, Pine, Cedar Oak, Oak Railway Ties, Paving Blocks	Steam, Circular, 16m
Blind River, Ont	Blind River	**Blind River Lumber Co.**	2 Saw, Sh. and Lath Mls., Pine, Hem., Bl. Birch	Stm., Band, Cir., S. 75m, Sh. 60m
Bobcaygeon, Ont	Fenelon Falls	**Boyd, Mossom & Co.**	Lumber, Wholesale and Retail	
Barrie, Ont	Barrie	**Burton Bros.**	Lumber, Wholesale and Retail	
Waubaushene, Ont	Waubaushene	**Georgian Bay Consolid. Lumber Co.** Hd. office arcade 24 King st. w., Toronto	Pine only	Waubaushene mill, stm., 200m; Pt. Severn mill, water, 120m
Calabogie, Ont	Calabogie	**Carswell, Thistle & McKay**	Lumber, Wholesale and Retail	
Callander, Ont	Callander, G.T.R.	**John B. Smith & Sons** Head Office, Strachan Ave., Toronto	White and Red Pine Lumber, Bill Stuff, Lath and Shingles	Steam, 2 Circular, 80m
Collins Inlet, Ont	Collins Inlet	**Collins Inlet Lumber Co.**	Lumber, Pine, Oak, Ash, Birch, Whol. and Ret.	
Glammis, Ont	Pinkerton	**McIntyre, N. & A.**	Saw, Shingle and Lath Mill, Timber Lands, Hemlock, Pine, Lumber, Hardwoods	Steam, Cir., Saw 14m, Sh. 20m
Hamilton, Ont	Hamilton	**BRADLEY, MORRIS & REID CO.**	Lum., Tim., Pine, Hem., Hwds., Whol. and Ret.	
Huntsville, Ont	Huntsville	**Heath, Tait and Turnbull**	Sawmill, Pine, Spruce, Hemlock, Hardwoods	Steam, Circular, 25m
Hamilton, Ont	Huntsville and Katrine	**Thomson, Robert & Co.**	Sawmill, Pine, Spruce, Hardwoods	Steam, Circular, 4m
Keewatin, Ont	Keewatin	**Dick, Banning & Co.**	Sawmill, Pine, Hardwoods, Wholesale	Steam, Circular
Keewatin, Ont	Keewatin	**Keewatin Lumber & Mfg. Co.**	Saw, Lath, Sh. and Pl. Mill, Moving Posts, Pine	Water, Band and Circular, 100m
Lakefield, Ont	Lakefield	**Lakefield Lumber Mfg. Co.**	Lumber, Wholesale and Retail	
Little Current, Ont	Sudbury	**Howry, J. W. & Sons.**	Lumber, Wholesale and Retail	
London, Ont	London	**Gordon, James**	Exp. and dlr. in Am. Hwds, made to specification	
Longford Mills, Ont	Longford	**Longford Lumber Co.**	Saw and Plan. Mill, Tim. Lands and Logs, Pine	Steam, Band and Circular, 100m
Norman, Ont	Norman	**Minnesota & Ontario Lumber Co.**	Lumber, Wholesale and Retail	
Louise, Ont	Elmwood, G.T.R.	**S. B. Wilson & Son**	Hardwoods, Shingles, Lath, Handles	Steam, Circular, 20m.
Toronto, Ont	Warren, C.P.R	**The Imperial Lumber Co., Limited**	Pine	80 M. per day, Stm., 2 Cir. Saws
Toronto, Ont	Cache Bay, Ont.	**Davidson, Hay & Co.**	W. Pine, Lath, Shingles, Dim. Timber, Car Sills	Stm, 2 Band, Cir. & Gang, 140m
Toronto, Ont., Mill: Stony Lake	Lakefield	**S. J. Wilson & Co.**	Pine and Hardwood, Wholesale	Steam, Circular, 15m.
Toronto, Ont	Toronto	**F. N. Tennant**	Lumber, Wholesale	
Toronto, Ont	Toronto	**Donogh & Oliver**	Lumber, Wholesale	Com.
Toronto, Ont	Toronto	**Victoria Harbor Lumber Co.**	3 Saw, Shingle and Lath Mills, White Pine, Whol.	Stm., Cir., Gang and Band, 140m
Toronto, Ont	Toronto	**W. N. McEachren & Co**	Lumber, Wholesale	Com.
Toronto, Ont	Toronto	**James Tennant & Co.**	Lumber, Lath, Shingles, etc., Wholesale	Com.
Toronto	Toronto	**DeLaplante & Bowden**	Pine and Hardwood Lumber, Whol. and Retail.	
Toronto, Ont	Toronto	**James McBain Reid.**	Ry. and Ship Timber, any required dimensions	
Wiarton, Ont	Wiarton	**Miller, B. B.**	3 Sawmills, Lumber, Barrel Heads	Stm., Wr., Cir., Port. & Sta., 10m
Montreal, Que	Montreal	**Dufresne, O. Jr. & Frere**	Sawmill, Pine, Spruce, Hemlock, Hdwds., Whol.	Steam, Circular and Band, 50m
Montreal, Que	Montreal	**SHEARER & BROWN**	4 Sawmills, Oak, Ash, Elm, Pine, Hem., Dim.	2 Stm., 2 Wat., Band, Cir., 40m
Moodyville, B.C.	New Westminster	**MOODYVILLE SAWMILL CO.**	Sawmills, P. Fin, Spruce, Cedar, Hardwoods	Steam, Circular, 20m
New Westminster, B.C.	New Westminster	**Brunette Sawmill Co.**	Saw and Planing Mills, Sash, Doors and Blinds. Fir, Cedar, Spruce, Hardwoods	Steam, Gang and Circular
Canterbury, N.B.	Canterbury Stn.	**James Morrison & Son**	Sawmill. Pine, Hardwoods	Steam, Circular, 38m
Bridgewater, N.S.	Bridgewater	**DAVIDSON, E. D. & SONS**	5 Saw, Shgle. and Lath Mills, Pine, Spr., Hwds.	Water, Circular and Gang, 200m
South River, Ont	South River, G.T.R.	**South River Lumber Co., Ltd.**	Pine, Spruce, Birch, Hemlock, Shingles	Stm., Cir., 40m, Shingles, 35m, Lath, 15m

Lumbermen desirous of being represented in this Directory can obtain information in regard to rates by communicating with the Publisher.

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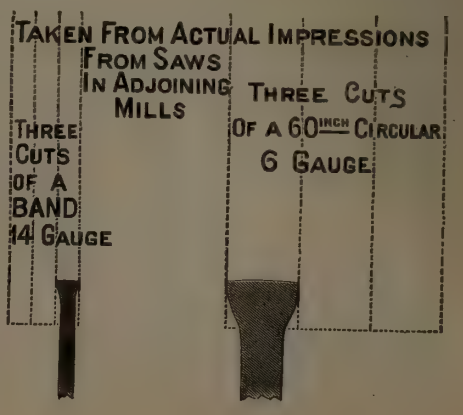
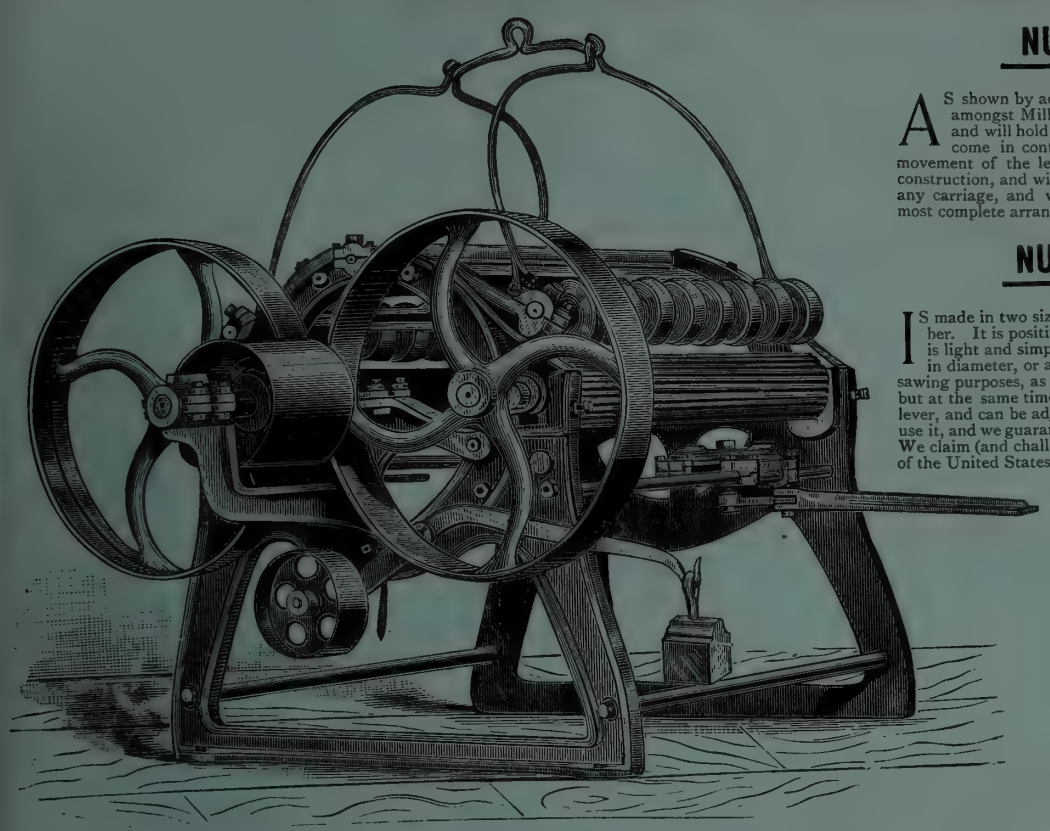
Our Allis Band Mills are the equal in every respect . . . . of the American built Allis Mills.

WITH THIS GUARANTEE why hesitate to change. The **saving** is enormous. Without practical demonstration you can scarcely realize it. **Saving in Kerf—Saving in Cutting** nearer to size—Saving in cutting to suit quality—Increase in value in medium and very wide lumber—Improved appearance—**Increased Output of Mill**. We guarantee the "ALLIS BAND" to cut equally as fast or faster than the circular mill it replaces. Anticipating a large demand for these Mills during the next 8 months, we offer special inducements for immediate sales—delivery to suit purchasers' convenience. Write us.



WATEROUS, BRANTFORD, CANADA.

SAW MILL MACHINERY



NUMBER 1 MILL DOG

AS shown by accompanying cut, is claimed to fill a long felt want amongst Mill men. It will hold pine, hardwood, or frozen timber and will hold from the smallest to the largest size log. It can never come in contact with the saw, as when off the log, by a simple movement of the lever, it automatically locks itself in. It is of simple construction, and will not easily get out of order. It can be adapted to any carriage, and when combined with our No. 2 Dog makes one of the most complete arrangements that it is possible to obtain.

NUMBER 2 MILL DOG

IS made in two sizes, or it can be manufactured to suit any class of timber. It is positively the most unique Dog ever put in the market. It is light and simple of construction. It can be used to dog a log 10 feet in diameter, or a piece of timber 3 inches, and is well adapted for resawing purposes, as slabs or small stuff—is very easily handled—is light, but at the same time strong and durable. It can be used with or without lever, and can be adjusted for down or up stroke with lever. Anyone can use it, and we guarantee it to hold any class of timber that it may be used on. We claim (and challenge denial) that there is NO Mill Dog in the market of the United States or Canada that can compare with it in any way.

References as to the merits of our Dogs can be given by some of the largest lumber firms on the Georgian Bay.

These Dogs are fully covered by Patents, both for the United States and Canada.

Prices and all information will be cheerfully furnished.

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WE make feed roller from 4 to 7 inches in diameter, with inside from 3 to 4 feet.—From 3 to 4 collars for saws. One collar is moveable at will of operator by lever; the other collars are fastened by set screws. Extra rollers and collars furnished if required. . . . . We also manufacture

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PATENT FRICTIONAL FEED DOUBLE EDGER

IN FOUR SIZES AND WITH FULL PATENT IMPROVEMENTS.

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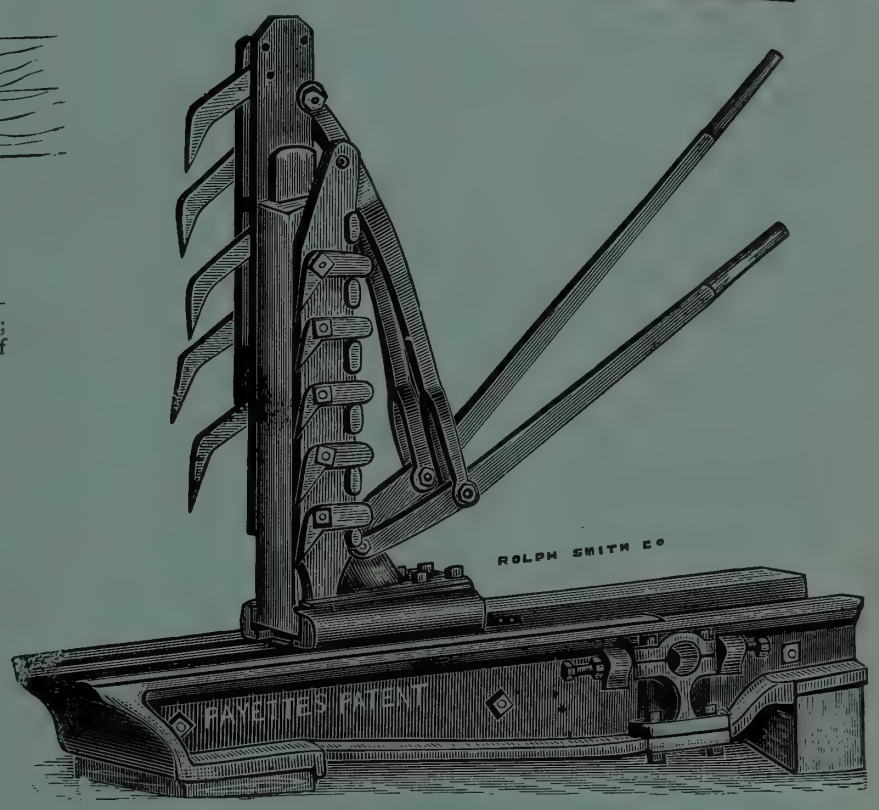
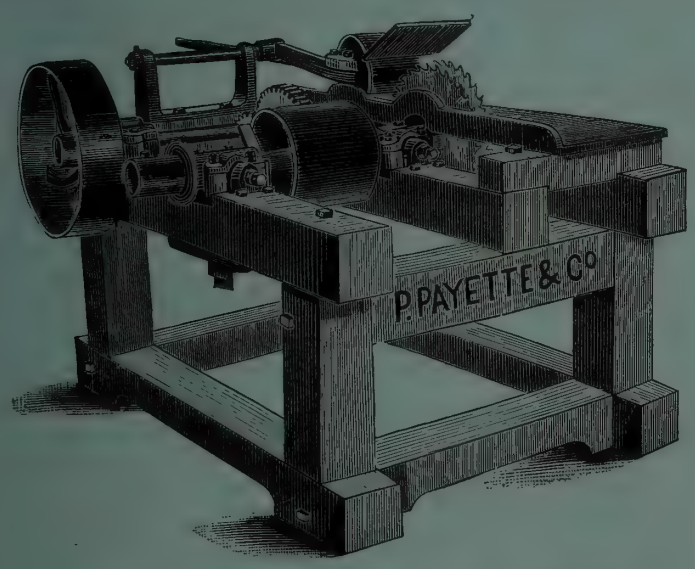




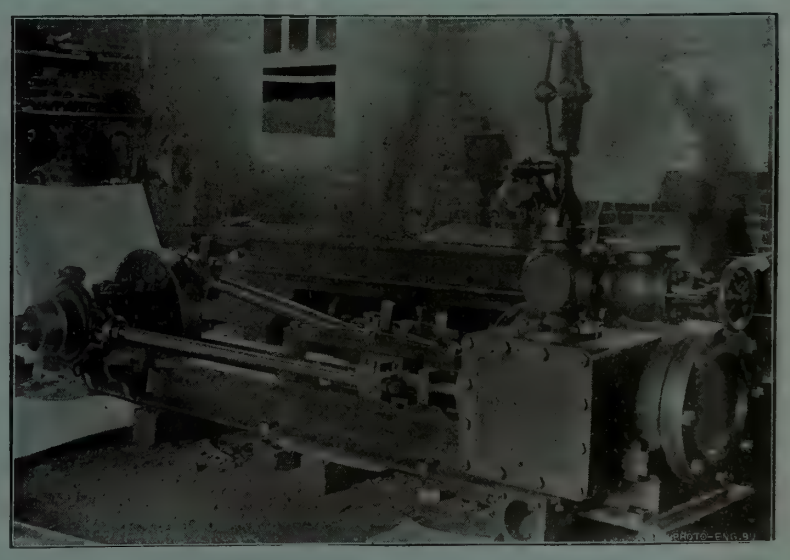
NEW IMPROVED GANG MILL BOLTER

THE many improvements in the construction of this machine have made it the most satisfactory one in the market. It is simple in its construction, yet it does its work rapidly and well. It has every convenience for quick adjustment and for starting and stopping.

The frame is made of hard maple with joint bolts, and made very heavy and strong, so as to give the machine good bearing and steadiness. The machine has a capacity for bolting of 40,000 lath per day of 11 hours, with two saws of 13 inches diameter and 13 gauge, and will bolt more by adding more saws.

The feed consists of a heavy steel pike feed roller and heavy binder on top of roller. It has only one feed belt. The feed can be instantly stopped and started by means of a hand lever and eccentric which raises the table from the feed rollers. The table is made of cast iron—all in one piece. The saws can readily be removed for sharpening without lifting the table. The mandrel is of best refined steel and made very heavy so as not to spring when doing heavy work. The box bearing is self oiling and made to swing and adjust the mandrel in line with the table.

OUR LATH MILL is made on the same principle and style as our Bolter, with the exception of the feed, which is made to work with expansion gear and with two fluted rollers. . . We recommend both of our machines as being first-class in every respect, and we guarantee them to give satisfaction. Prices and all information will be cheerfully furnished on application.



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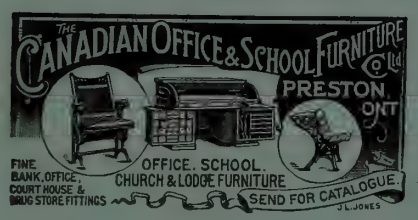

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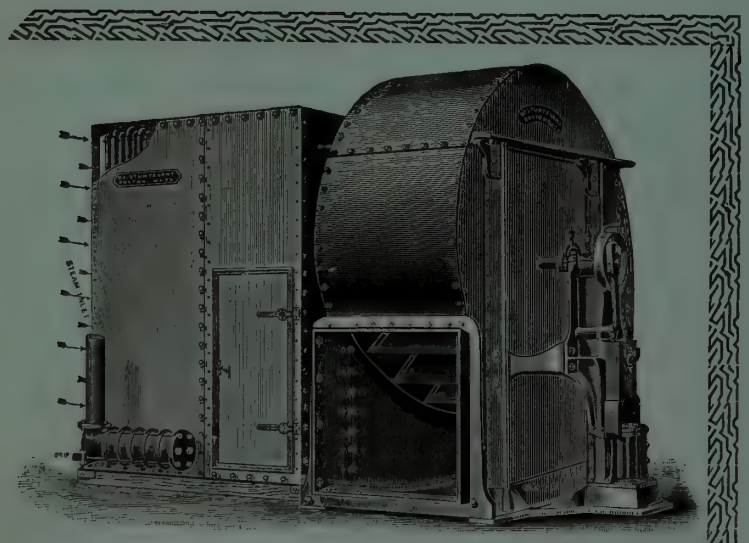

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ELECTRIC LIGHT PLANTS. ELECTRIC MOTORS. ENGINES AND BOILERS OF ALL SIZES.

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THE CANADA LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XVI. NUMBER 1. | TORONTO, ONT., JANUARY, 1895 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

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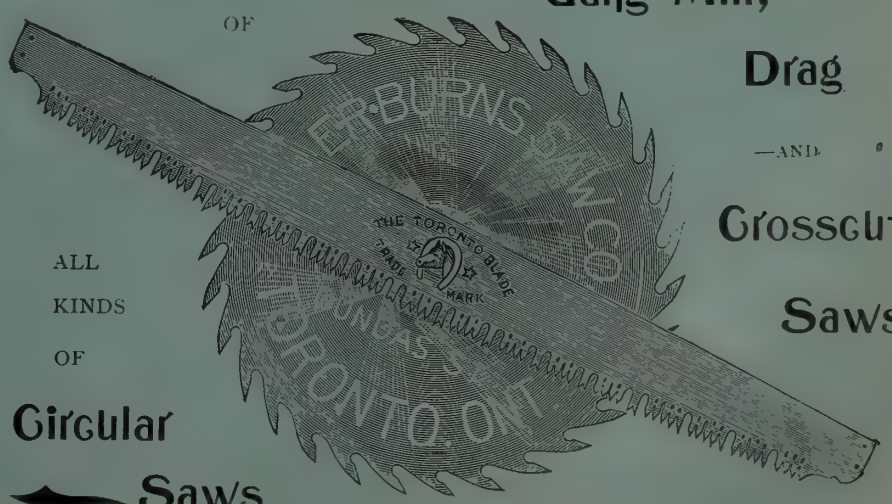

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THE NEW PRESCOTT

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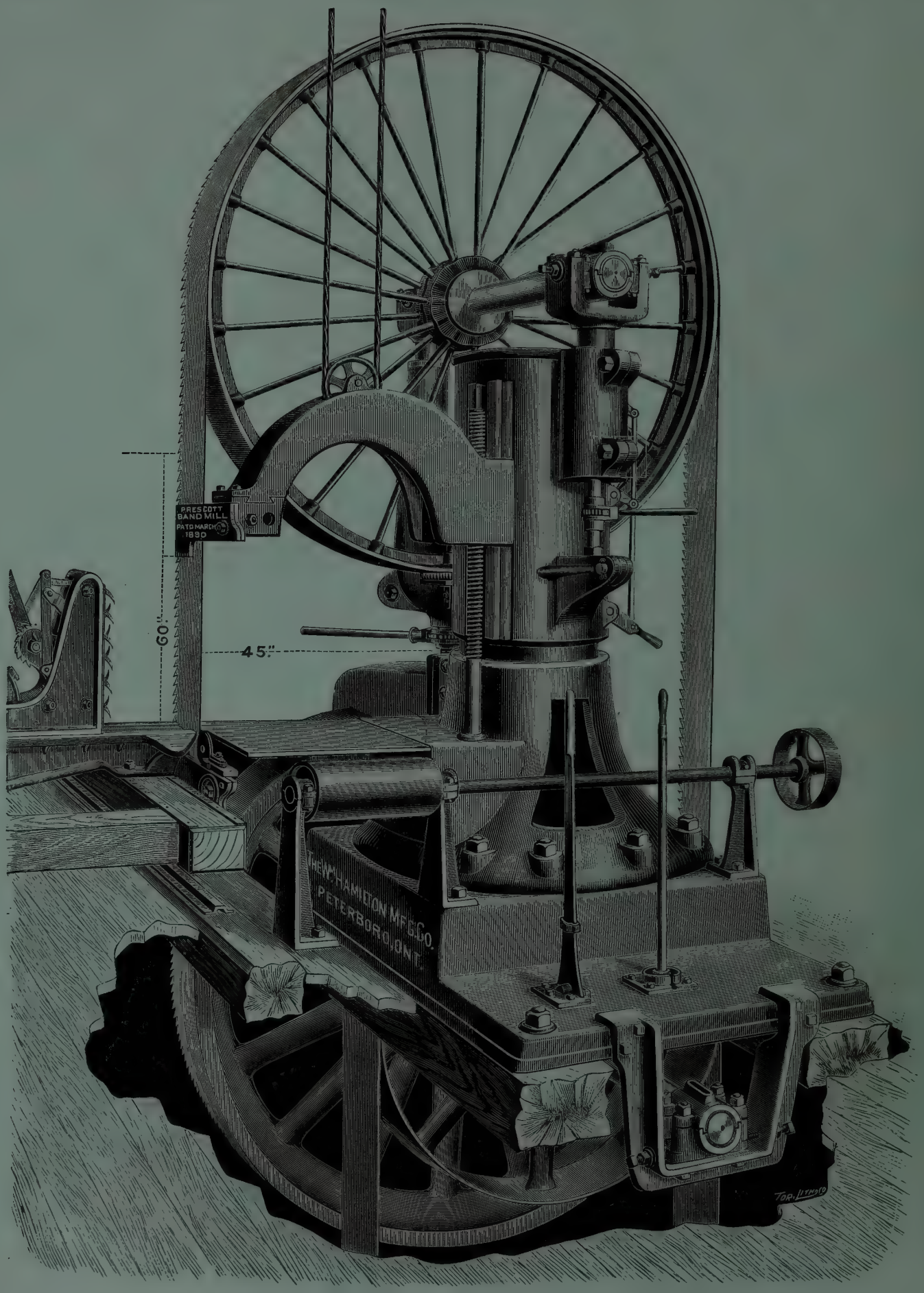

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THE CANADA LUMBERMAN

VOLUME XVI. NUMBER 1. | TORONTO, ONT., JANUARY, 1895 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

BY THE WAY.

SOME conception of the dependence placed in Canadian timber by United States lumbermen, and nearly all these in Michigan, may be gleaned from a summary of expected operations in Canada by American lumbermen. We do not give the following data as covering the entire ground. On the contrary the transactions named fall short of that end, but of themselves they are of considerable magnitude. The Saginaw Lumber & Salt Co. will put in about 30,000,000 logs in Canada that will be rafted to Michigan. The Green, Ring & Co. mill will probably be stocked with Canadian logs. The Fisher & Turner mill, of Saginaw, have a stock of 50,000,000 feet for next season's cut from Canada. J. W. Howry & Sons are cutting about 15,000,000 feet at Little Current, Ont., to be towed across the lake to Michigan, and over 40,000,000 feet to be manufactured at their mill at Fenelon Falls. J. T. Hurst has let contracts to put in 80,000,000 feet of logs in Canada waters. Alger, Smith & Co., are putting 25,000,000 feet of logs into Georgian Bay waters, and the son of General Alger is putting into the same waters about 8,000,000 on his own account. Bliss & Van Auken will obtain a stock for their mill next season in Canada. C. K. Eddy & Sons are putting into Canadian waters about 20,000,000 feet to be forwarded to their mill at Saginaw. S. G. M. Gates will obtain a considerable portion of his stock of 25,000,000 feet of logs from Canada.

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In the Ottawa and Michigan correspondence of the LUMBERMAN this month particulars are given of the interview of Michigan lumbermen with the government at Ottawa the early part of December concerning boom sticks. So far as one can judge from the impressions left on the minds of the deputation, there is every reason to believe that the government acted in a common-sense and business-like manner. The sudden and tragical death of Sir John Thompson may prevent the immediate giving out of a decision on the case, but there is the best of reasons for believing that this will be of a character to put an end to any further trouble over boom sticks. It will now be expected that the authorities at Washington will see to the speedy removal of the the clause in the Wilson tariff that has by some sort of twisting permitted of the exacting of 25% duty on cedar wood going from Canada into the United States. When the Hon. Mr. Foster drew the attention of the Michigan deputation to this point, they frankly admitted that it was news to them, and were of the same opinion as the Timberman and other United States lumber authorities that the clause had got into the tariff by mistake, the reference evidently being to cabinet woods and not to the ordinary cedar, which as a matter of fact was only 15% under the McKinley tariff. The lumber trades in both countries are on the whole satisfied with the conditions of free lumber, and in an interview on the Eli page Mr. D. L. White, jr., lumberman of Michigan, has expressed the opinion that he does not think there will be any changes whatever in the tariff, even to the extent that some have anticipated, of placing dressed lumber on the dutiable list.

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G. N. Wagner, of Grand Rapids, Mich., writes to the Timberman that he has just returned from an extended trip through the eastern and New England states, and has been terribly alarmed at the injury being done to United States lumber interests, because of the quantity of shingles that are going into those districts from Canada. He had supposed that the paucity of shingle orders during the past three months was due to the general business depression throughout the country. But the trouble has been, so he tells us, that New York and Massachusetts have been drawing their supplies of pine shingles largely from the Canadian side of the line. If Mr. Wagner could make the time to count up on his fingers the quantity of Canadian shingles that he found going into these markets, it would be quite interesting to Canadian lumbermen. Of course, Canadian shingles have been shipped in increased quantities to the United States since the change in tariff, just as Michigan, Duluth and Minnesota lumber and some Washington territory shingles have been coming into Canada since the change took place. What has been fair for the goose has been fair for the gander, we suppose. But when the statement is made that the quantity of shingles going into the eastern states from this country has been large enough to seriously affect the shingle market, those who know the real conditions cannot but smile. The shingle trade is undoubtedly down in the boots in the United States. But it is not any lower down than the same trade is found in Canada. The truth is that no quantity of shingles worth talking about is finding a market either in the United States or Canada. Shingles have not been in it for some time. Our friend from Grand Rapids need not start an on-to Washington movement on the strength of the shingle information he picked up when in New York and Massachusetts.

× × × ×

From a special lumber schedule issued by the Canadian Pacific Railway, and made effective Dec. 17th, 1894, it would look as though the conference of hardwood men with Mr. Burton of the Grand Trunk, and reported in another part of this journal, was likely to count worse than a blank for the hardwood men. Before the meeting took place hardwood was sent over the C. P. R. from certain points at 6½c. per 100 lbs., where the Grand Trunk had been charging 8½c. We fancy that in showing Mr. Burton certain Canadian Pacific freight bills at that meeting the members of the deputation who did so gave that gentleman a pointer that he quickly made use of. The case of the deputation was to be discussed at a conference of freight agents of Grand Trunk and Canadian Pacific to be held a week later. In place of giving any heed to the overtures of the lumbermen, which at that time, at Mr. Burton's request, were before the conference in writing, the two great railways simply followed the usual custom, whenever they can safely do so, of at once combining to make their rates uniform, and uniform at the higher figure of 8½c. This is an old trick of railway corporations. Not without the severest pressure will they budge an iota in making concessions to the commercial community. They gave away when the white pine men protested against the increase of 1 cent per 100 lbs. in freight, but only because the opposition developed so great strength that they could not do anything else. The case of the hardwood men is fair, equitable and necessary, but as yet the railways have not come to the conclusion that they are a formidable body, and nothing but might is made to prevail in cases of this kind. The Grand Trunk have taken and turned the tables on the hardwood men, not a very creditable proceeding, nor for the Canadian Pacific in joining with them, but the old adage stills holds good that corporations are soulless.

THERE seems to be some kind of fascination about the idea of a metal and leather combination belt. Many experiments have been made in this line, but none of these belts ever become popular.

LOSS OF POWER.

IF you happen to go into an engine room at any time and find that there is a leak past the cylinder or of the air pump, if you are using a condenser, you may be very sure that you are losing power. While the trouble may not be the cause of any danger, it shows that there has been some mistake in the setting out of the packing; that the adjustment is bad; that it has been in use far too long a time, or that the internal surface of the cylinder is cut. If the last is the case, you have no other remedy than that of re-boring the cylinder. In the other instances, the packing may be renewed or the piston may be taken out by removing the cylinder head, as in the case of locomotives. The leaking of piston packing may be detected when the exhaust is continuous instead of intermittent, although a leaky valve will also produce the same results; or it will be made to appear by opening the cylinder cocks and noting whether they blow steam on the back stroke. A twofold loss is entailed by this defect; steam is blown away uselessly and back pressure is increased, putting a greater load upon the steam that does the pushing.—Dixie.

THE INTERIOR FRICTION OF OILS.

PETROFF, who has occupied himself very extensively with the examination of lubricants, has investigated, says the Scientific American, the interior friction of oils by means of an apparatus invented by himself, and has given his results in tabular form and graphically by a series of curves. According to his results, the degree of transparency of lubricants, the refining process, viscosity, flash point and fire point, give no basis for estimating the degree of interior friction, though all are of importance.

If two oils which at the same temperature possess different interior frictions be mixed, the mixed product will yield a characteristic curve corresponding to that of an oil the qualities of which lie between those of the two opponents. Consequently, the excessive friction of any thick lubricant may be reduced by mixing with it small proportions of solar oil, pyro-naptha, or kerosene, or any oil possessing low inferior friction. But this addition can be useful only when the added product does not separate to any great extent.

The addition of such light oils can, of course,be easily detected through the flash point and the fire point. The addition of various resinous materials increases friction in the machinery and in the lubricant itself. These products have also an injurious chemical effect upon the metallic surfaces subjected to friction.

It was also frequently observed that samples of the same oil that were received in the factory at different times did not yield the same characteristic curve, although filling all requirements.

LUMBERING OPERATIONS IN ALBERT CO., N.B.

SENATOR McCLELAN, of New Brunswick, anticipates an increased interest in lumber operations in Albert Co. and vicinity the coming year. A larger amount birch timber was being cut in that county this winter than usual. Portable mills were being carried into the woods and the deals brought out. A week ago a vessel had loaded with hard wood for Boston. He understood the timber netted the owners $11, which was better than they had expected. The greater part of the hard wood would be sold in St. John. Speaking of laths, the senator said he did not think they would ever command a very high price, for the simple reason that wire was being used in their stead in different parts of the United States, and it was stated with satisfaction.

LUMBERING IN THE MARITIME PROVINCES.

[Special correspondence CANADA LUMBERMAN.]

LUMBERING in the Provinces of New Brunswick and Nova Scotia, is quite different, or at least differently carried on, than in any other part of Canada, both in the bush and in mill.

In the southeastern part of Nova Scotia oxen are used exclusively, and instead of the old orthodox ox yoke and bow there is a sort of yoke strapped across the head below the horns, same as is seen in parts of southern Europe. These lumbermen seem to think horses are too valuable to use in lumbering But there are a few getting out of this idea and find that a man can do much more with horses than oxen. The lumber in Nova Scotia, like New Brunswick, is mostly spruce, and is generally brought down to the mills full length of the tree and cut short by hand in the mill, with a crosscut saw. These mills, although some of them are quite extensive, are quite old in their style, such a thing as an endless chain carrying the logs in mill is unknown. True, they use an endless chain, but they use short dog chains and grab hooks, using from two to four men more than are necessary.

METHODS OF SAWING.

Live gangs are the favorite saws for cutting the lumber. These are quite different from anything to be found in the west. The logs follow one another in the gang and are held in place by a travelling head block with spikes on top and bottom, a sort of an inverted durable L dog; one of these travelling headblocks is in front and one in rear of the gangs. The lumber cut is not well done, as they carry too heavy feed; I have seen as high as 1¾ inches at a stroke. Hence their deals do not bring as good a price as St. Lawrence river cut of the same quality. Very thick saws are used. I found one mill using No. 12 gauge and they thought it quite an achievement. But the strange part of this was, they only use them five inches wide, as they say if wider they will not run true. Such a thing as hammering a proper tension in them is unknown, all slabs, edgings and lumber are trimmed and cut off by means of the old style of swing saw, such a thing as a two saw trimmer or slash table was never seen in these provinces. One man in New Brunswick put in a slash table in a sort of a way but took it out as it broke a saw one day. The circular saw mills, Rotarys as they are called here, are generally too light and poorly built for accurate work. There are, however, a few exceptions to this rule. Solid saws are scarcely used at all. "Hoc" tooth is the favorite. The fact is, sawyers here are away behind in filing and generally taking care of circular saws. This is the reason that the solid saw is not more in use. Many more men are employed in mills here generally than any other place I ever saw. Live rolls, etc., and many other labor saving devices are not ingeneral use.

HOW LUMBER IS PILED.

Another peculiarity one notices is to see men carrying deals on their shoulders, sometimes long distances. Men so employed usually have a leather cushion on one shoulder and a stick about three feet long on the other, reaching behind the neck and under the board or plank so as to equalize the load on both shoulders. Most of the New Brunswick steam mills use boilers from 40 to 50 feet long and from 30" to 40" diameter, no flues, but simply long tubes, which are laid side by side and as many as required in a battery. Under this whole space under them is a fire box. I have seen five and six men firing such a battery of boilers, while the sawdust was carted away to some distant bank. Such a device as a hog to grind this sort of fuel and feed it and sawdust automatically, with one man to attend the whole battery, never seems to have occurred to them. Cutting their logs alive into deals makes a great quantity of waste in shape of edgings, which if stocked and cut with a high speed gang would be saved by way of the sidings got off the log in stocking it. The quantity of deals cut by one of these gangs is wonderful. Plenty of gangs in New Brunswick average 70 M per day from the round log and edged on a separate edger. Lumber is not classified and piled in anything like Western mill yard style, but all lengths and widths piled up haphazard just as it comes from the mill, and generally all around and close to the buildings. I wonder at this much on account of insurance if for no other reason. Band saws are coming slowly to the front and would do so more rapidly but for the lack of sawyers. Many of the most progressive are realizing that the Band saw is the lumber maker of the near future. And another fact is making itself patent is some device to get more and better lumber from the same logs. The old question of not how much lumber can I cut but how much money can I make is causing many to think seriously of putting in Band saws. Some are now satisfied that a band will fill this bill in two ways, both in quantity and quality, besides having less breakages than the old long stroke heavy feed gauge. Most of the lumber manufactured is cut into deals, although a larger quantity is cut into 1 inch and scantling for South American and New England markets, deals being almost entirely for European demand. In many sections spruce forests, not cut too close, will reproduce themselves in from ten to twelve years. I have seen fine spruce forests on the Mirimichi River in New Brunswick growing where the old dead furrows are plainly to be seen, showing that the land was one time cultivated. In this fact it only remains for the lumbermen of these Provinces to lumber judiciously their limit and barring fire to have a perpetual paying territory and the Government a never ending source of revenue. In many sections hemlock exists in large quantities; but for the U. S. market, the present mode of manufacture would have to be materially changed.

NEW BRUNSWICK SHINGLES.

Cedar exists in immense quantities and of excellent quality in all northern New Brunswick, and is largely manufactured into shingles. These they make in first-rate shape, but their machines are usually slow, averging from 12,000 to 15,000 per day per each machine. These all go to New England markets, a few going to Prince Edward Island and Nova Scotia points. I think on the whole, in no place in Canada, are better shingles cut and better packed and graded than in northern New Brunswick.

At the present time the lumbermen are much exercised over the sawdust regulations. As heretofore they have mostly been pouring their refuse in the streams; this has become such a nuisance, that the government has wisely decided to put a stop to it, and none too soon, as many splendid salmon and trout streams are almost destroyed.

OBSERVING LUMBERMAN.

WHY DO BAND SAWS BREAK?

PROBABLY no one question pertaining to saws has been asked in the last ten years as often as this, and it would be difficult to find one that has been more imperfectly answered. It has been claimed alike by both mill owners and filers that fractures in band saws are mainly caused by poor steel or uneven temper, but this is far from the true answer.

The writer has had a long and varied experience in operating band saws, and most excellent opportunities for experimenting with them under various conditions, and it is his opinion, gathered from this actual experience and extensive observation, that not one band saw in twenty-five sent out by leading and reputable saw houses sustains a fracture through interior or imperfectly tempered steel. So much has already been said and written about the fitting and tensioning of band saws that it is unnecessary to go deeply into that really important factor in the life of band saws at this writing. I will simply say in this connection that the filers and fitters generally are well acquainted with the fact that fracture will take place in the best saw on earth in short order if it is run with an uneven tension.

Many saws have been ruined by uneven tension, and there is no doubt that many more will be, as beginners are found in every band saw country, and even the experts sometimes overlook a "fast" spot in their saws and find a crack as the direct result. This is a matter that will adjust itself with the growing knowledge and ability of the band-saw "fitter," for the essential points to be observed in his line are perfectly uniform tension, pitch of teeth to prevent crowding back on properly aligned wheels, perfectly square and even set (swage), with amount of clearance adapted to the timber being sawed, rounded gullets, sharp saws and the absence of glaze or case hardening.

I now propose to show the most destructive factor in the life of band-saws, the rather short-sighted policy of mill-owners and operators in allowing it to go on, and the injustice they do themselves and saw makers by attributing the short life of the saw to poor steel. The destructive element is excessive speed of saw travel, which is not only non-beneficial, but a positive detriment.

Band saw steel as now made is the finest, best, toughest and most costly steel used in any wood-working industry. Through the courtesy of one of the most prominent saw manufacturing firms the writer recently saw a number of pieces of their band saw blades broken on a Riehle testing machine, and they showed an average tensile strength of 150,000 pounds per square inch, or 12,000 pounds per inch in width of a fourteen gauge saw.

The fact that the steel in question does possess this enormous tensile strength causes mill men and others not acquainted with working and destructive strains to wonder at fractures taking place in their band saws, and through their lack of knowledge on this subject they almost invariably condemn the quality of steel or temper, when in fact, in a great majority of the cases of fracture, the saw is simply taxed beyond its tensile strength. The average operator will naturally inquire, "How can this be possible when we are only running from two to four tons strain on a ten-inch or twelve-inch saw?" The answer is so simple that it is surprising that it is not more generally known. Most of the strain comes on the edge of the saw, which, when run at a rate of speed nearly equalling two miles per minute (10,000 feet) causes the slack side of the saw to vibrate very materially, the amount of vibration varying under a given speed, according to uniformity of tension of saw, balance and rigidity of mill and stability of its foundation. This vibration of the saw creates an additional strain that is beyond computation. In a measure it is an unknown quantity, but that it adds a strain beyond the great tensile strength of the saw has been clearly demonstrated by a long series of experiments in high and low speeds, fracture taking place in the high speed and not in the low. These experiments were made in mills running and sawing regularly and on a mill which did no sawing, but which was put up for the purpose of testing for speed only. Every one of these tests established the fact that the high speed with its attending vibration is detrimental to the life of the saw without any commensurate returns in the quality or quantity of lumber manufactured.

My experiments and observations justify me in taking the position that better lumber and fully as large a quantity can be turned out on a speed of seven thousand feet per minute (all other conditions being equal) than on a speed of 10,000 feet, as a higher rate of feed can be maintained when the vibration is reduced to the minimum. That a large saving can be effected in saws, belting and machinery through reduction in speed is self-evident. Here are some comparisons of relative speeds and feeds, the entire feasibility and practicability of which were demonstrated by the numerous tests mentioned.

To make the illustration easy to figure and comprehend we will take but one length of saw and one space of teeth, and call the feed continuous: a saw fifty feet long with teeth space one and a half inches running ten thousand feet per minute, and for a basis of speed we will take twelve inches. The same relative proportions follow any reasonable change from this basis of speed and feed, though twelve inches makes a fair average of feed.

Given, then, a fifty-foot saw with one and one-half inch space, running 10,000 feet per minute, you have on a twelve-inch feed as many feet of feed as 50 will go times into 10,000, which is 200 feet of feed, and allows 33⅓ teeth per inch of feed. If speed of saw is reduced to 9,000 feet per minute the feed can be increased to fourteen inches and maintain as easily as twelve inches on the first speed given; 9,000 feet of saw travel gives a 180 revolutions of saw, which on a fourteen-inch feed gives 210 feet of feed per minute and allows 28 4-7 teeth per inch of feed. A further reduction of speed to 8,000 feet per minute and a corresponding increase of two inches in the feed gives 160 revolutions of the saw, and makes on a sixteen-inch feed 213⅓ feet per minute and allows 25 teeth per inch of feed. A speed of 7,000 feet per minute gives a 140 revolutions of saw, which on an eighteen-inch feed makes 210 feet of feed per minute, and allows 22 2-9 teeth per inch of feed. It will be noticed in this comparison that the highest rate of feet given is eighteen inches, while the lowest is twelve inches, and that the number of teeth per minute in each case is perfectly safe. The basis of twelve-inch feed is a fair average, take the country through. Soft pine operators can take eighteen inches of feed for their basis, and when they get up to a twenty-four inch speed they still have 16⅔ teeth to each inch of feed they carry.

The figures proved the proposition that a higher rate of speed can be maintained on a reasonably slower speed than 10,000 feet, and it can be demonstrated by any operator who conscientiously tries to save saw bills and extra work in brazing and tensioning. Vibration is increased by vibration, and fracture of blade by both. While a high rate of speed and extra vibration occasioned by it are responsible for the majority of fractures, it is well to consider other points that may have a tendency to produce cracks. Unless the operator knows positively the cause of the trouble he is not competent to treat it and is very much handicapped in all efforts to overcome the difficulty. When all things pertaining to the mill are in the best possible condition there still remains the ever constant hammering of the saw by its impact with and on the wheels, to say nothing of the bending and straightening while it is in motion. When one considers that a fifty feet band saw running 10,000 feet per minute is bent and straightened in every portion of its length 400 times per minute, 24,000 times per hour, 60,000 times per run of two and one-half hours, while all the time it is under a severe tensile and torsional strain, the wonder is that it does not break more often.—Lumber.

HARDWOOD MEN PROTEST.

A DEPUTATION of hardwood lumbermen, consisting of James Tennant, J. G. Cane, McBean Bros., Mr. Eyer, of Read & Eyer, F. N. Tennant & Co., and W. N. McEachren, held a consultation, on Dec., 6th, in the Grand Trunk offices, Toronto, with Mr. J. Burton, general freight agent, and District Freight Agent White, to ascertain if the G. T. R. could be prevailed upon to reduce the present freight rate of 8½c. per 100 lbs. on hardwoods to the former rate of 6½c. Mr. James Tennant was spokesman for the deputation and pointed out that in several respects the conditions of lumbering in hardwoods were favorable to the securing of a larger freight trade by the railroads than was the case with pine lumber. There was no large quantity of hardwood at any one point, and the result was that it had to be gathered in small quantities at different points and despatched to some central place for shipment. This meant additional carriage for the railroads. There was no such a thing as flotage with hardwoods, as was the case with pine. Hardwoods were much heavier than pine, a car of the former weighing from 36,000 to 40,000 lbs., where a car of white pine would only average, perhaps, 25,000 lbs. It was, therefore more profitable to the railways to carry hardwoods than pine. Then the hardwood men labored under the disadvantage of not being able to dispose of culls as was the case with pine, and this ought to be an item of consideration by the railways in fixing rates. Altogether the position of the hardwood man was handicapped in different ways, and it seemed unfair that his difficulties should be enhanced by a discriminating rate when it came to the shipment of stocks. Mr. Burton noted carefully the objections of Mr. Tennant, and these were supplemented by comments from other members of the deputation, but he would not promise any answer before the following Tuesday, at the earliest, when there was to be a conference of G. T. R. and C. P. R. freight managers in Montreal, when this question would, probably, be considered along with other matters and the lumbermen were asked to state their grievances in writing and forward such a letter to Montreal. Mr. Burton intimated that the railroads were desirous of seeing rates increased rather than lowered. White pine rates were regulated to some extent by vessel rates, a condition which did not apply in hardwoods. The deputation pointed out another grievance that bore unfairly upon the hardwood men, namely, the method of computing when the quantity of hardwood shipped fell below 30,000 lbs. F. N. Tennant & Co., for example, cited a case of a load of lumber that they had sent forward to a customer and which was billed to that customer as 30,000 lbs. where, when the car load was weighed it was found to contain only 25,500 lbs. The customer refused to pay freight except on the actual weight of lumber, and the shipper was out about $4.00, a discount which, he remarked, hardwoods would not stand at present prices. Mr. J. G. Cane and others cited similar cases. Mr. Burton fell back on the clause, which fixed the minimun of weight, and whilst promising to look into the matter was not disposed to treat the subject seriously.

WASTE IN MANUFACTURE.

MANUFACTURERS are always looking for new uses for waste material by which value can be obtained, and thus diminish the cost of the material worked up. But about a large mill or other manufacturing establishment, says the Manufacturers Gazette, there are many sources of wealth which, though indirect, if neglected just as positively add to the cost of the final product as though the price of the raw material had been enhanced.

Cleanliness of machinery and buildings helps to diminish the cost. A proper system of lighting, natural and artificial, and of ventilation, effects the cost. The steam heating arrangements of a mill are often neglected and become wasteful.

An engineer of our acquaintance was once employed to reduce, if possible, the consumption of coal of a mill which every year required an increasing outlay for fuel, and was then consuming several thousand tons annually. He found that there were over one hundred leaking steam valves in the various departments, and that the help or overseers never gave the matter a thought, but when the rooms were too warm opened the windows, and never shut off the steam. In many cases this could not be done on account of the worn condition of the valves. These were all removed and ground or new valves substituted. The result was a falling off in the coal consumption during the following months of nearly a ton per day average. Steam was carried in this mill about a thousand feet in uncovered pipes, and these were next covered, resulting in a further material reduction. Then the coal house door was kept locked, and records kept of the weight of coal consumed each day. By making one person responsible for this department a saving was kept up during the year that much more than paid the salary of the one employed, although he had other duties as well.

All saving from waste is better than an increase of business to the same amount, for it is an additional net profit or dividend obtained without risk or cost.

The subject is too large to more than suggest the many directions and methods which could be studied and applied.

THE BEST STEAM ENGINE.

WHAT will always seem like a mistake to outside engineers is not frequently made by the builders of steam engines, in assuming that the particular type of engine they build is the best for all purposes for which steam engines are used. All will remember the rather warm contention of a few years ago regarding the relative merits of high and slow speed engines. Expressions of opinion were rather positive on both sides, but if the arrangements made did not entirely convince the builders of either type that there was room for the other, they did have some effect in the way of confirming this belief in the minds of others, so that to-day there are uses for which it would be useless to attempt to sell a high-speed engine, and others for which a low-speed engine would find no favor—for the requirements of steam engineering go beyond the question of rotative speed, and one requirement will come strongly to the front in one place, or for one purpose, and another for another purpose.

Fuel may be so plenty in one location as to cut no figure in determining the type of engine to be used. In fact, in the instance of saw and lumber mills it is frequently the case that it is an advantage to burn as much of the refuse as possible under the boilers. And this may be the case in tanneries, and in the instance of engines used for the purposes. Now, under such circumstances it would be of no avail to talk to those wanting engines about the saving of fuel. Fuel is the one thing that it is not economical to save. So the saw mill, the lumber mill and the tannery have their special requirements. They are usually located in what may be called out-of-the-way places. The engines used in them are generally rather roughly handled, and there is no nearby machine shops to go to for repairs. Manifestly the requirements are for engines that will hold together under the rough usage they receive, and in the construction of which there is nothing that cannot be comprehended by the village doctor. Refinements for steam saving or for other purposes would be as much out of place as polish on a grate bar. What is wanted is something that will turn over right along without regard to pounds of steam or pounds of fuel, that is as near as possible proof against breakage, and utterly devoid of complication. There are many high-class engines that never ought to be bought or sold in such locations. Their refinements would be materially worse than wasted ; a cause for dissatisfaction rather than for satisfaction. They would not be worth a moment's consideration until they gave trouble some day beyond the skill of local talent to cope with.

Transplant the saw mill engine where coal is worth five or six dollars a ton—where there is no waste material for steam making—and, of course, it is all wrong. The conditions are as unfavorable now as they were favorable before. Fuel must be carefully considered, and to this end devices or parts that may be more liable to derangement will be tolerated. Better talent is employed around the engines and the machine shop is at hand.

Here then, in the two instances cited is a place for two types of engines—the one that is nothing but an engine, a machine, that couldn't do much to or for if he tried, and that is little liable to require the doing of anything until it goes "all at once" or requires a complete rebuilding, which it will hardly be worth, and the one upon which greater care can well be afforded to the end of saving fuel. Neither is suitable for the place occupied by the other.

The foregoing is a strong contrast : There are other requirements that may not seem so striking, but which may be of consequence. For example, the requirement may be for the nearest practicable approach to absolutely uniform turning, something beyond what would be of any particular advantage in the instance of the majority of steam engines. There are types of engines better suited to accomplish this end than others are, and so on ; other examples might be given if necessary. Enough has all ready been said to show the unwisdom of claiming for any single type of engine the advantages that can belong to all.

Theoretically speaking, it might be reasoned that every steam engine should have all the good features of a dozen types, or at least all it was possible to embody. Practically, there would be waste in this. In the machine business there are required for some purposes tools and machines of great precision, tools and machines that cannot be made too well, no matter what the cost may be. But for a large part of the work of the machine shop something that costs much less is equally as good—in some instances better. It would be foolish to reason that all the tools and machines should be made like the more costly ones, just as foolish as to reason that the costly ones should not be made. To a certain extent this is true of steam engines. No single builder builds the best for all purposes.—American Machinist.

FINISHING HARDWOODS.

HOW to treat the face of hardwood joinery frequently requires, says Timber Trades Journal, much consideration, and deserves a passing notice. In the case of oak, the action of the atmosphere would tone it down admirably ; but this takes time, and the first appearance of newness is often removed by the fumes of ammonia, which may be regulated to produce any desired shade, and the treatment is a good one when the work is not subject to much handling. Where it is, however, beeswax and turpentine are generally applied afterward, otherwise the damp heat of the hands will leave dark marks ; care must, however, be taken that as much of the wax is rubbed off as possible, or the work will very probably turn yellow in time.

After this application the oak will cease to darken, as the wax fills up the pores and prevents any further action of the air. Beeswax and turpentine alone produce good results on most hardwoods when well rubbed in, and a pleasant surface is the result, much the same as the light polish seen on an egg shell.

This treatment is particularly useful for floors. These, however, require periodical attention. Simple oiling is never satisfactory. French polishing is a very general treatment, but it is too well known to need any description.

It is of the most vital consequence to remember that damp plays havoc with seasoned work, causing it to swell and warp. It is therefore fatal to put it up against damp walls : when it is impossible for these to have time to dry, the wood should be well coated at the back with a damp-resisting preparation, and not be fixed close against the wall.

Don't imagine that because a machine is not being used that the countershaft does not need oiling just the same, for unless the belts are off and the countershaft is idle too, it needs just as much attention as though it were running. Neglecting this has caused more than one troublesome loose pulley, and the oiler should be made to attend to all counters, whether the machines are running or not.—Machinery.

A new belt fastener recently patented in England consists of a metal plate adapted to extend across the meeting edges, the plate having one straight side and at the other side a series of spurs arranged in pairs longitudinally opposite, the spurs of each pair being at equidistant points from the transverse center of the plate and arranged in advance of the preceding pair in both directions, so that each pair will penetrate the belt at different points.

THE CANADA LUMBERMAN
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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

A NEW YEAR'S GREETING.

THIS issue of the CANADA LUMBERMAN bears the date of a new year, and marks the commencement of the sixteenth year of publication. The year left behind has not been one to draw forth the enthusiasm of the lumber trade, which started in with great expectations, but commercial depression quickly laid its hands upon it, and the year through it has been a struggle to make things go. However, the outlook in the closing days of the year improved, and not alone as a matter of happy custom, but with grounds for the expectation, we may wish all our readers a happy and prosperous New Year. There is good reason to believe that these hopes will be realized. So far as this journal is concerned no effort will be spared to help to give prosperity to the lumber trades, and one earnest of our effort in this direction will be the commencement at once of the publication, as already announced, of a weekly edition of the CANADA LUMBERMAN.

FRAUDS IN LUMBER.

THE remarks in these columns last month of fraudulent buying has brought to light the fact that there is, perhaps, more of this business carried on, both in Canada and the United States, than is generally supposed. For some time back lumber journals across the border have been paying attention to this subject, and exposing very thoroughly the transactions of certain firms who have sent forth their cards as lumber dealers. Some times the fraudulent transaction takes the shape of securing goods for which there has been no intention, nor is there ability, to pay. Again the fraud consists in a dispute as to the character of the inspection, even though this had been thoroughly covered at the time the sale was made. It would appear that dishonest practices of the latter character are practiced near home. The LUMBERMAN is in receipt of a letter within the past week from Mr. Joseph S. Wallis, lumberman, of Port Carling, Ont. After referring in complimentary terms to the position assumed by the LUMBERMAN in its treatment of this question last month, Mr. Wallis says: "All the frauds are not confined to the United States. I have had the misfortune to have an inspector come to my yard, go carefully through the stock, and to make things sure, go carefully through the figures several times, leave a statement, agree to pay prompt spot cash less a given discount, get the lumber in his possession, and long after the spot cash should have been forthcoming, send on a statement to the effect that there was a shortage, and I would have to take back so much or———, and the so much would amount to 8% less than the price agreed upon and the amount of statement given and figured by the inspector, and terms extended by the buyer, without the consent of the seller, to some two months. The above is not a case of being actually done out of the whole amount of money, but it is a case 'give me my own terms or do your best.' I am of the opinion that, to say the least, some of our Ontario buyers need a little care exercised on the part of the seller, as well as with some of the United States buyers."

Mr. Wallis closes his letter, in which he very clearly shows how a certain class of frauds are worked, with the enquiry: "Can't you help?" We may, in plain terms, say that our purpose is to help the lumbermen of the Dominion to put an end, as far as possible, to all such attempts at dishonest business, indicated, not alone by what Mr. Wallis writes us, but by what comes to us from various other sources. We should be glad, if lumbermen who have had the experience of Mr. Wallis and others would write us, giving full particulars of transactions. The information will be used with the one purpose only of getting after the dishonest dealer, and of helping the trade, who are striving to hold up the true ideal of business in the lumber industries.

WHY NOT GROW TIMBER?

FOREST preservation is viewed by the majority of lumbermen so largely as an abstract question or one of theory or sentiment, that it requires almost the proverbial Scotch operation to get the trade to look at the subject as one of strict business. There is nothing new in the remark, whether lumbermen give credence to it or not, that the forests of this country, so rich at one time in pine, are already furnishing evidence of depletion. Five years ago, though the warning note had been sounded a decade before that, lumbermen of Michigan, laughed at those who talked of there being only sufficient pine in that great pine state to last a few years longer. In cold, hard, matter of fact language, Michigan lumbermen say to-day that were it not for the supplies of pine that they are enabled to secure in Canada, Wisconsin or Duluth, they could not keep their mills running a twelve month. Michigan lumbermen, in fact, do not do their lumbering in their own state, outside of the sawing of the logs that are brought from elsewhere.

Let this suffice, at present, for white pine. Hardwood men are in the position of having no virgin soil that they can tap when they have orders to fill for any particular class of hardwood. There is still a fair quantity of hardwood in Ontario, and other parts of Canada, but it exists in patches, only secured by increased labor and expense in haulage and freights. The question has been asked the LUMBERMAN, would it not be a good stroke of business for those who realize this position to take steps to reforest some parts of the province with hardwoods that are most in demand and that will remain practically, for a long time to come, in demand as a commercial commodity. Hon. Mr. Joly, of Quebec, has with energy and enthusiasm shown how well it will pay to plant walnut and secure for the future a supply of this valuable wood.

What this improvident disregard for the future means is shown in the case of certain counties where certain kinds of wood existed, but which had been recklessly cut down by those who recognized no wealth in the standing tree. Take, for example, the county of Kent. Oak that sold there 15 or 20 years ago at $4.50 per 1000 feet could now be marketed at $25. per 1000 feet, and walnut which had only brought $14. per thousand feet would to-day command $100. Readers of the LUMBERMAN will remember an account given in these columns some time ago of an ingenious fellow, who managed to strike certain points in the States where roots of walnut trees were to be found in considerable quantity. He bought these up and by economy and ingenuity in cutting up, was able to realize quite a handsome turnover from his venture. The farmer has on his 100 or 200 acres a few patches of hardwood and he sees little use for it beyond the trifle it will bring him when cut down. While the agriculturalist would be sleeping he might be making money by allowing this timber to stand. There is not much money in certain branches of farming to-day, with wheat netting Ontario farmers about 45c. a bushel. Why not engage in tree planting? Is there not more than theory or sentiment in the suggestion of our correspondent?

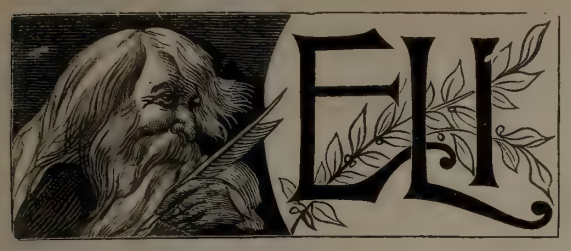
Special correspondence from the Maritime provinces, telling of methods of lumbering down by the sea, is suggestive in the matter of tree planting. This writer tells us that in many sections spruce forests, not cut too close, will reproduce themselves in from 10 to 12 years. As he remarks, what a rich harvest is in store for the shrewd lumberman, who can look far enough ahead, when he has a product like spruce that can be grown with as little trouble and as quickly as, it is stated, is the case with this particular product of the forest.

Growing trees may not be a chimerical scheme after all.

EDITORIAL NOTES.

THE woods of Australia are pushing themselves into the markets of the world in several different directions. We referred last month to the possibility of certain woods from the Antipodes finding a market in Canada, especially in the construction of harbor works, because of the fact that the wood is proof against the ravages of the toredo. Native woods of Australia and New Zealand are commencing to appear on the English market. This applies specially to hardwoods. The New Zealand government has sent to Great Britain a timber expert, whose chief object is to introduce to the notice of English buyers specimens of the numerous woods, of which the colony he represents is so well provided. Karri and jarrah, and New Zealand kauri pine have already established themselves in the United Kingdom, the first two being used to a large extent for wood paving purposes, and the latter as a furniture wood. One of the new woods that is being introduced goes under the name of stringy-bark. Whilst it is the boast of the lumbermen of the mother land that all parts of the world are placed under contribution for various woods, yet lumbermen there are disposed to look with caution upon the present movement, which they fear may result in placing on the market large quantities of woods that will be found to possess comparatively little value for practical purposes, and the result will be to depreciate the woods of the Antipodes that have already proven to be useful and desirable.

AN effort is being made by the lumbermen of the Southern states to bring about an increase in values in yellow pine. The remarks noted in our Eli page from D. L White, of Michigan, as also by a representative of the LUMBERMAN, show very clearly that yellow pine, for some time past, has been sold at a price so far below its competitor white pine that evidently unhealthy influences have been at work to cause this. It seems that it has been the practice of lumber operators and small mill men in the south to combine in a manner to place yellow pine stocks at a central point at prices below any prices substantial manufacturers are willing to quote. A year or so ago in an interview published in these columns it was shown that it was the practice of unscrupulous dealers to operate in lumber at certain points in the south, hire negro labor, get the stocks shipped east before the season was finally over, and then the operators themselves cleared out without having paid the negroes for the labor performed. This is only another of the difficulties that the lumbermen of the south had to contend with and they are organizing and have already held several meetings, hopeful that they will be able to suppress this unfair and dishonest class of competition. That some good has already been effected by these means is shown in one instance in Chicago, where a contract for yellow pine, ties and guard rails, which was taken at $16.50 has been abandoned and re-let for $18. White pine men will certainly wish the legitimate trade of the south success in the direction indicated, for they themselves know something of the unfair competition that exists between yellow pine and white pine.



It is seldom otherwise, let business men anywhere play sharp and their chickens will come home to roost some day. In the interview that took place the early part of the month between the hardwood lumber men and Mr. J. Burton, of the Grand Trunk, the latter made the statement in after conversation with several of the deputation that the practice of underbilling on the part of manufacturers had reached such a point that a little more than a year ago his company had found it necessary to establish a bureau of investigation at a cost of $20,000 to, if possible, put a stop to this evil ; at least to check it. The result so far has been that the bureau had actually saved the company $130,000. Mr. Burton, of course, meant this as an off-hand, if not an official, reply to the lumbermen who were complaining that they were being called upon to pay freight, very often, on a car billed to hold 30,000 pounds of lumber, where the actual weight probably would be 5,000 pounds less than this. In these cases, said Mr. Burton, the lumberman walks the deck. In a good many cases where underbilling has been going on the Grand Trunk have had to walk the deck. It was not intended that this should serve as a reason why the honest lumberman should pay for the sins of the dishonest man, but it was an illustration, that discreditable practices cannot be perpetrated by anyone, in any line of trade, without the whole trade being effected thereby. It is the old story of dog Tray keeping bad company. Mr. Burton stated that as a matter of fact the biggest sinners were the grain and lumber trades of the country.

* * * *

A fortnight ago I was in company with a number of Ontario lumbermen when the subject of shingles came up for discussion. No one enthuses over shingles these days, for if lumber generally has been slow for some time past the shingle trade has been slow in a superlative degree. There was a time when the term shingles, so far as this province is concerned, simply meant white pine shingles, but with the introduction of the red cedar shingles of British Columbia, and, though only to a limited extent, the white cedar shingle of New Brunswick, conditions have changed. Perhaps it is natural that Ontario lumbermen should hold to their first love, and think that after all there is no shingle to compare with white pine. I find the impression is growing among them that the red cedar shingle is not going to show itself possessed of that strong measure of endurance that has always been considered its leading recommendation. The Pacific Coast people tell of the red cedar shingle as showing no signs of decadence, after having been 30 years and more on a roof. Ontario lumbermen, as I have hinted, may be prejudiced against their red cedar rival. It is the case that those with whom I talked on this occasion were of one mind that whether it was owing to the process of kiln drying, or what not, red cedar shingles were not even now proving satisfactory. "It is all very well," said Mr. McBean, of McBean Bros., "to talk of the longevity of this shingle, but I doubt if on the Pacific Coast they are put to the test of the severe east rains and snow storms that we get in Ontario, and which will test almost any roof if not well covered, both as regards material and workmanship. I hear complaints of shingles that have only been two or three years in Ontario, as unable to withstand the rains of this province." Probably this point will be disputed be our friends on the Pacific coast, but I am giving somy views, at least, that prevail in Ontario.

* * * *

Mr. Eyer, of Read & Eyer, local lumbermen, is of the view that a determined effort ought to be made to organize the lumber trades of Toronto, and, the organization might perhaps include the provinces. "We are seeing the weakness of individual effort," said Mr. Eyer, "at the present time when we have a strong case against the Grand Trunk in the matter of freight charges. I would not like to say that, as a result of our interview with Mr. Burton a fortnight ago, we are not going to get anywhere, but the case would be very much strengthened if a stronger front could be presented in this matter as in any other case where we have a grievance. Then we see the need of organization in so many different ways. I do not know what others think, but for my part I would not care to ship a stick of hardwood to the United States as the market stands to-day. There is no money in the business for Canadian hardwood men." I remarked on this point that there was certainly a demand for hardwoods from the United States and the enquiries for specific classes of wood from that country were quite numerous. "I will grant this," replied Mr. Eyer, "but our hardwood men seldom act in concert. They have certain quantities of wood to sell and the disposition is to sell at almost any price rather than lose a sale. Were the trade organized there would be an opportunity to establish a fixed price, one that would represent a small margin of profit at least and not a loss. Furthermore the difficulty that is cropping up all the time as regards want of uniformity in inspection and which results in loss to our lumbermen, could be easily remedied. For my part I am disposed to let my stocks accumulate, rather than sacrifice them, knowing that there is value in lumber." I asked Mr. Eyer what seemed to be the bottom difficulty of successful organization of lumbermen. He said: "One drawback is that what you may term the big men of the trade will not affiliate with the smaller men. Perhaps they think themselves above some of the rest. Other people are saying that. I am not saying it. But it seems reasonable to suppose that if a movement could be led by some of the larger concerns, that the smaller ones would come in and the big concerns as well as the little ones would be benefited by such an organization."

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Wherever and whenever it is possible to get after any man who can talk lumber, or who has been where there is a liklihood of securing lumber information, I am brigand enough to waylay him without ceremony. A representative of the business end of the LUMBERMAN recently made a trip through the leading cities of the eastern states, calling upon the lumber trade, and on his return I was after him. "Tell us how you found the lumber trade, and what were the features of it that particularly impressed you." This is the way I started at our man from the counting-house. "Let me say," he replied, "I enjoyed my trip immensely and found United States lumbermen jolly good fellows and business from the word go. Whether in New York, Albany, Buffalo or Philadelphia, I found no one talking very loud of the splendid trade they were doing. All had one story to tell in this respect, that trade throughout the year has been terribly dull. Of course the tariff was blamed. The President came in for his share of censure. Canadians and free lumber caught it occasionally, though seldom—but trade was dull. That was the point. White pine men say that yellow pine is proving a competitor in certain lower grades, and the difference in price is sufficient to knock out white pine to some extent. Since the tariff has changed business has revived in part, but the year is going to close with the annual statements of most lumber concerns, showing a serious shrinkage in sales. But there is a lot of rubber in the composition of the average American. Whilst there is nothing bright to tell of lumber trade now, I found the feeling general that business was going to be all right after the turn of the year, and that spring would open out with activity in building lines, which is always a help to the lumber trade, and with snap in business at all quarters. When anyone wants white pine or yellow pine they know where to get plenty of it, if they have got the money to pay for it, but I found lumbermen nearly every place I visited making enquiry, 'where can we get supplies of hemlock or birch or ash or elm or some other particular class of hardwoods?' It occurred to me that hardwood trade in Canada ought to be good if our lumbermen would just lay themselves out to meet the needs of those who are enquiring for supplies of this kind. Just let me put in a word for the business end of the concern here by saying that I found United States lumbermen of the view that the issue of a weekly edition of the CANADA LUMBERMAN was going to prove an important factor in helping business in this direction, and generally, between the two countries."

* * * *

Comfortably seated in the reading room of the Queen's Hotel, I had an opportunity recently of chatting on lumber matters with Mr. D. L. White, jr., one of the large lumbermen of Saginaw, Mich., whose firm is interested in Canadian lumber. "A number of us", said Mr. White, "have just returned from Ottawa where we have been interviewing the Minister of Trade and Commerce, Hon. Mr. Bowell, and other members of the Cabinet, concerning the duty on boom sticks. The visit was pleasant and will, I believe, result satisfactorily for the lumber trades of Michigan and of Canada. Of course, diplomatic like, the Ministers, after hearing our case, agreed only to take the matter into their serious consideration, but we have every expectation that the decision will mean a removal of this obnoxious regulation." The lumbermen of Canada, as much as those of the country to the south of us, will, I believe, regard this as a satisfactory ending of an unpleasant difficulty. On no point have I found lumbermen more completely of one mind than on this question of the exacting of a tax on boom sticks. Naturally we talked about lumber conditions. Taking it altogether, whilst trade had certainly been slow during the year, Mr. White leaned to the opinion that 1894 would not close as unfavorably as some of the trade had expected. The stocks on hand in Michigan, in Mr. White's judgment, will not go beyond, probably, 200,000,000 to 300,000,000 feet, in place of 600,000,000 feet, as was stated a few months since by certain lumber authorities. Prices, of course, are not what they were a year ago and Mr. White hardly thinks they will reach so high a level again for some time. At present, however, they are firm and will likely hold at present figures. The outlook, after the turn of the year has been reached, is deemed to be encouraging, though no great boom is anticipated. Improvement will be gradual and sure. I asked this Michigan lumberman if he anticipated that the change in the complexion of the American Congress, a result of the late elections, would mean any amendment to the lumber tariff. "Unless there should be some unpleasant friction," said Mr. White, "between the Canadian and United States governments, I do not think that the tariff, so far as lumber is concerned, even in the case of dressed lumber, will be disturbed." To what extent free lumber may result in the building of saw and planing mills by American lumbermen in Canadian territories, is a disputed question on both sides of the line. Just as a number of mills have already been built here and will be operated by United States lumbermen, to a still greater extent Mr. White thinks this plan would be pursued, whilst the rafting of logs from the Georgian Bay shores to Michigan would probably fall off some. Methods of handling lumber, I learned, are changing to a considerable extent in the United States. The commission man is gradually being wiped out. In Wisconsin and Duluth, Mr. White said, the mills were establishing their own yards and distributing their own lumber. This method of doing business was growing. Another change, as effecting the white pine trade, was to be seen in the steady demand for yellow pine in eastern markets. Mr. White said that for flooring, ceiling, joist and car sills, yellow pine was now being largely used, and the prices at which it could be brought into the east was something that white pine operators could hardly understand. A good clear lumber can be secured laid down in Michigan for $15. per thousand and the same wood can be laid down in Canada for 16.50 "We could not begin," said Mr. White, "to give any such grade of white pine for these figures." As a parting query I tapped Mr. White for information on the probable cut in the woods this winter, but as is the case with lumbermen generally, he felt that this was a subject that could not be touched upon with certainty so early in the season.

PUBLICATIONS.

Edward Bellamy, the author of "Looking Backward," is to tell in the next issue of The Ladies' Home Journal what he believes a "Christmas in the Year 2000" will be like.

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

NO decision has yet been reached in the matter of sawdust legislation. It is hoped, however, with the lumbermen of the Chaudiere and those of the Maritime provinces moving aggressively in one direction, that some amendment will be made to the law as it now stands to come into effect on May 1st. Locally, the question is a serious one for Ottawa. The distance between the saw mills and lumber limits has been gradually increasing in this district until now some lumbermen are talking of the necessity of placing their mills nearer to the limits and thus reducing materially the cost of log driving, as well as saving expense in other ways. If the proposed sawdust legislation should be rigidly enforced, the measure will go a long way to cause lumbermen here to take the step already, in a measure, premeditated. An estimate has been furnished J. R. Booth, showing that it would cost him $60,000 to have his mills at the Chaudiere altered so that the sawdust be destroyed by burners. The Hawkesbury Lumber Co. say that if the legislation is enforced they will be compelled to change the location of their mills, which would mean an expense hardly less than $300,000.

THE DUTY ON BOOM STICKS.

A strong deputation of Michigan lumbermen had an interview on the 6th inst. with members of the Cabinet, including Mr. Mackenzie Bowell, Minister of Trade and Commerce, who occupied the chair, and Messrs. Foster, Ouimet, Costigan, Daly and Angers. The deputation consisted of S. Eddy, S. O. Fisher, B. Boutell, S. G. M. Gates, E. T. Carrington and Temple Emery, of Bay City, and F. R. Potter and D. L. White, jr., of Saginaw. Mr. W. R. White, Q.C., Pembroke, brother of Speaker White, acted as Canadian counsel, and Mr. T. Weadock, congressman from Michigan, as American counsel. Mr. J. W. McRae, representing the lumbermen of the Ottawa Valley, introduced the delegation to the Ministers. I need hardly go over at length the arguments presented by the deputation, as these have been fully covered in various ways in your columns. I may say that the view of this question taken by the LUMBERMAN has been generally approved of by the trade in this district. Counsel White argued that it would take a big stretching of any of the clauses of the tariff to show that the boom sticks ought to be taxed as "packages" or as manufactured timber. Some 40% of the boom sticks were Canadian. They were used as such for a time and afterwards were sawn up with the other logs. Without these booms the steam tugs would not be of any value. In fact they were part and parcel of the tug, just the same as a barge for lumber was, or the tow rope. The United States government did not impose any such duty and its imposition by Canada might lead to an interference with free lumber, which would injure the whole trade. American Counsel Weadock in his address covered largely the same ground as Mr. White. He drew attention to the fact that the stumpage dues by Quebec were removed, because it was shown to be unfair, and no matter how it was viewed the duty on boom sticks was simply another way of imposing an export duty on logs. The Ministers listened attentively to the case of the American lumbermen, and whilst no decision was then given by the Cabinet, the deputation retired feeling satisfied with the treatment they had received and strong in the belief that there would be no further trouble in connection with this matter. Mr. Foster called the attention of Congressman Weadock to the fact that in British Columbia exporters of cedar to the United States had to face a duty of 25% under the Wilson Bill as against 15% under the McKinley tariff. The American lumbermen expressed surprise generally at this statement, saying that it was news to them and that it might be expected that Congress would remedy the difficulty.

INDIFFERENT LENGTHS.

Buell, Orr & Co.'s mill has closed down for the season, and the cut has been one of the largest made by this firm.

Contracts for 3,000,000 railway ties have been awarded by the Canadian Pacific Railway for the road west of Winnipeg.

Mr. Thomas Osborne, who has been engaged each season in towing saw logs, says that the number of logs passing down the Ottawa river to points below the capital has been very large this summer.

The railway companies, with the object of increasing their trade in the shipping of lumber, have reduced their charges to $1.25 a thousand feet, which is equivalent to a reduction of 25c. a thousand feet on the old rate or $2.50 on a car load.

About 20 miles of valuable virgin forest, heavily timbered, has been opened out through the construction of the Lothbiniere and Majentic railway. One mill employing 600 men has already been established in the district and others will likely follow. The contractors engaged in the work of the road state that in the course of constructing the railway the men cut 5,000,000 logs from 12 to 16 feet long, 1,000,000 sleepers, 300,000 telegraph poles, 3,000,000 fence posts, 200,000 cords of pulp wood, 2,000,000 cords of cordwood and 350,000 cords of hemlock bark.

It is said that the Hon. J. K. Ward, of Montreal, is negotiating for the sale of 500 square miles of timber limits on the River Rouge, which are convenient for taking out pulp wood. The sale, it is expected, will be arranged within a few days, the price being $100,000. The limits were worked years ago by Hamilton & Bros., of this city, and also by the Hawkesbury Co. The River Rouge is a tributary of the Ottawa, which enters into the latter near Grenville. The limits are in the counties of Ottawa, Argenteuil and Montcalm. The sale is another indication of the attention that is being paid to the spruce industry.

OTTAWA, CAN., Dec. 22, 1894.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE labor difficulties that had prevented the running of the Royal City Mills for a short period, have been overcome, and the mills are now busily engaged cutting. They expect to make one of the largest shipments of the season to the south shortly.

The barque India is loading at Hastings Mills for Valparaiso.

The American barque Colorado is loading at the Hastings Mill for Sidney.

The Brunette Saw Mills have been sending some large shipments to the east during the month.

The Moodyville Saw Mill is closed down, owing to the bursting of the engine. Vessels loading at the Moodyville Mills will complete their cargo at the Hastings Mill.

The Brunette Saw Mills have an order from the interior for 40 carloads of lumber, on which they are now at work. The lumber, it is understood, will be used in bridge building, replacing the structures swept away by the floods last June. The heavy sticks will all be clear of knots and flaws and of the finest Douglas fir.

NEW WESTMINSTER, B.C., Dec. 15, 1894.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN].

THE outlook in lumber in the Maritime provinces during the coming winter may, to some extent, be gleaned by certain expressions of opinion from local lumbermen. Mr. I. C. Prescott, of Albert, N. B., whose firm employs 100 men and cuts 3,000,000 feet a year, does not anticipate they will cut more than half their usual quantity of lumber, but would, probably, increase their handling of hardwood timber. Mr. Wm. Chisholm, of Halifax, places the lumber cut of Nova Scotia about the average cut of former years. Mr. D. J. McLaughlin, of St. John, will saw his usual quantity of from 4,000,000 to 5,000,000 feet. He anticipates an increased trade in American markets next year. Mr. Wright, of Salisbury, N. B., shares the same view. His firm saws 4,000,000 and 5,000,000 a year. F. O. Talbot, of Alma, N. B., who cuts 5,000,000 a year usually, is not likely to increase his output next year. E. J. Smith, of Shediac, will take out probably 2,500,000. Young Bros., of Newville and River Herbert, cut last year 8,500,000 feet of lumber and 8,000,000 laths. They expect to do fully as well the coming season. The firm has over 100 men in the woods. Messrs. C. F. & T. R. Eaton cut about 6,000,000 feet of deals at Eatonville this season and they will likely cut an equal amount next year.

In response to pressure brought upon the Intercolonial Railway for more favorable freight rates, Mr. J. G. Forbes, secretary of the lumber association of the Maritime provinces, has received a letter from J. J. Wallace, general freight agent at St. John, in which he says: "I have your letter of 11th inst., addressed to the general manager, with reference to the rebate on lumber for export, and asking what is meant by the twenty per cent. rebate. Formerly a car of lumber was estimated to weigh 20,000 lbs., which was equal to 8,000 superficial feet of soft wood or 5,000 superficial of hardwood. Supposing this was charged at five (5) cents per 100 lbs., it would be $10. We now propose to load the cars up to their capacity, or minimum of 25,000 lbs., equal to 10,000 superficial feet of soft wood, or 6,250 feet of hardwood which at five (5) cents per 100 lbs., would be equal to $12.50. Making a rebate of 20 per cent. would reduce the charges to $10, thus carrying 10,000 superficial feet of soft wood at the former rate for 8,000 superficial feet. I might say 6,250 feet of hardwood is estimated to weigh about the same as 10,000 superficial feet of soft wood.

It is thought that the cut of lumber in King's county will be larger this winter than last.

A large number of small mill concerns will operate on their own account this winter, and will dispose of their lumber in the spring to St. John buyers.

Lumber dealers say the cut on the St. Croix this winter will be between 25,000,000 and 30,000,000 feet, possibly not more than 25,000,000. Last year it was nearly 50,000,000.

Senator J. B. Snowball has expressed the opinion that the lumber cut along the North Shore will be larger this winter than last if the operators are not hindered by the snow as they were last year.

The Aberdeen mill, operated by McDonald & Fraser, has closed down for the winter. It did not commence cutting until August, and the total of the season's work is only about 3,000,000 feet.

ST. JOHN, N. B., Dec. 20., 1894.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE deputation of lumbermen that left the Saginaw Valley the early part of the month to interview the government at Ottawa, have returned home well satisfied with the outcome of their visit. True they have not brought back in their grip-sacks any official document showing that boom sticks will be free of duty in the future. This is not the way politicians handle the question, but they have every reason to believe, from the manner in which their complaint was received, and the reply, though in a measure non-committal, from the Hon. Mr. Bowell and his associates, that their request will be granted. Such a result is going to be beneficial, not alone to the lumber trades of the two countries, but will go a long way to remove any prejudice that may have existed in this country against the Canadian government, and help to make it easier in the future for the two countries to arrive at improved methods of trade.

With the business of the year, to all intents and purposes, at an end, the oft-recurring question of how far the forests of Michigan have become depleted of marketable timber, comes again to the front. And the more the subject is studied and looked into with care and exactness, the stronger becomes the verdict that Michigan has got to depend on Canada for her white pine. One piece of evidence in this direction is the statement made on good authority that taking an average of the annual cut for ten years past, that of 1894 will show a falling off of about 35%.

BITS OF LUMBER.

The Saginaw Lumber and Salt Co. has sold and shipped 30,000,000 feet this season.

It is thought that there will be an increased output of hardwood logs in Saginaw this winter.

From 800 to 1000 men, it is estimated, have gone from Saginaw Valley to Canada and Upper Michigan pineries this fall.

Over 151,000,000 feet of lumber has been moved by water from Bay City, whilst shipments by rail show a very large increase over any former season.

Cleveland heads off Tonawanda this season in its receipts of lumber from the Saginaw river, the figures standing 40,712,132 feet for the former and 39,831,147 feet for the latter.

The following figures, showing the aggregate lake shipments from the Saginaw river for a series of years, may be of service to readers, as a matter of reference and comparison:

	Lumber.	Shingles.
1868	430,128,000	74,141,195
1869	474,912,425	86,178,500
1870	487,489,268	130,448,490
1871	516,629,474	142,661,500
1872	492,834,900	87,204,500
1873	452,768,562	38,521,500
1874	448,707,652	82,164,500
1875	445,149,155	117,832,500
1876	456,227,252	105,743,000
1877	539,886,074	162,594,250
1878	525,282,098	86,699,380
1879	678,298,866	222,602,731
1880	769,573,000	168,145,400
1881	833,050,939	149,816,000
1882	858,344,000	176,376,500
1883	778,702,067	164,032,000
1884	734,938,469	153,333,000
1885	659,575,000	129,539,005
1886	591,013,100	117,494,000
1887	486,285,000	85,698,000
1888	451,391,000	75,892,000
1889	432,130,000	98,977,000
1890	409,972,000	89,249,000
1891	404,577,000	80,487,000
1892	347,866,091	50,447,000
1893	173,154,000	12,900,000
1894	182,600,017	12,011,000

Of a contemplated cut of 20,000,000 feet of logs by Eddy Bros. & Co., Canada will supply 16,000,000 feet. This firm has recently purchased 100,000,000 feet of Canada pine from Daniel Harden, of Saginaw, at a sum generally stated to be $250,000.

SAGINAW, MICH., Dec. 21, 1894.

THE NEWS.

—G. C. Crawford, sawmill, Zimmerman, Ont., is dead.

—Chew Bros. purpose enlarging their saw mills at Midland, Ont.

—Goodday, Benson & Co., lumber merchants, Quebec, have dissolved.

—J. Irwin Armstrong, lumber dealer, Belmont, Man., has assigned.

—Mr. Barker is erecting a saw mill at Burford, Ont., near Brantford.

—Benson & Co. is the name of a new firm of lumber dealers at Quebec.

—The Assiniboine Lumber Co., Brandon, Man., has been incorporated.

—The saw mill at Josephine, Ont., has been purchased by Mr. Baldwin.

—Vigars Bros., will get out a million feet of pine logs near Sand Lake, Ont.

—Murphy & Co. have formed a partnership in Quebec as lumber merchants.

—An addition will be erected to Buell Hurdman & Co.'s saw mill at Hull, Que.

—Gillies' Bros., of Braeside, Ont., are putting in two new engines at their saw mill.

—James Hayden's steam saw mill at Hartland, N. B., is about to resume operations.

—Jas. Playfair & Co., of Midland, Ont., are about to build a large tug similar to the Reliance.

—Duffy Bros. have again commenced operations with their steam saw mill at Lake Dore, Ont.

—It is stated that a new company will erect a saw mill at Rolling Dam, Charlotte Co., N. B.

—J. B. Smith & Sons and McBurney & Laycock have closed their saw mills at Calendar, for this season.

—The Edmonton Saw Mill Co., Edmonton, N. W. T., will take out about a million and a half feet of saw logs this winter.

—The Leishman Maundrell Co., lumber dealers, of Stratford, Ont., are developing an extensive trade in that city and surrounding country.

—A new engine has been placed in Prince's saw mill at Buckingham, Que. There will be about twenty-five men employed in the mill during the winter.

—G. K. McLeod has sold to C. & I. and G. D. Prescott his timber reserves on Benjamin river in Restigouche county, N. B. The price paid was about $5,000.

—The Sable and Spanish Boom and Slide Company, of Algoma, will ask Parliament to amend the schedule of tolls which it may collect on lumber passing through its booms and slides.

—The Drummond Lumber Co. are building a large saw mill at Forestdale, Quebec. They will build a dam across the Deschene River, about 7 miles from Forestdale, to supply power for the same.

—The widow of W. S. Spence, who met his death while adjusting a belt in Craig & Co.'s planing mill on Dundas street, Toronto, has entered suit against the company to recover the sum of $2,000 damages.

—It is expected that J. &. T. Conlon's new saw mill at Little Current, Ont., will be ready for cutting about the 1st of February. When completed it will be one of the best equipped mills on the Georgian Bay.

—Negotiations are said to be in progress between Eaton & Sons, of Calais, Me., and W. H. and J. Rourke of St. Martins, N. B., for the purchase of the mill property of the latter firm, together with considerable timber limits.

—The Newmarket Era states that Messrs. Wm. Cane & Sons have recently fitted up a portable saw mill for the purpose of converting the 60 cars of saw logs, which were brought down from Penetanguishene, into bolts from which pails and tubs are manufactured.

—Some dock lumber for the Montreal Transportation Company has been purchased in British Columbia. It will be shipped by boat via the Pacific ocean and up the Atlantic to the St. Lawrence river, and thence to Montreal. The trip will take four months.

—The St. Anthony Lumber Company, with chief place of business at Whitney, Ont., are applying for incorporation, with a capital stock of $1,500,000. E. M. Fowler, Chicago, Ill., E. C. Whitney, Minneapolis, Minn., and Arthur Hill, Saginaw, Mich., are to be the first directors.

—Mr. T. J. Ryan, Crown Lands Agent at Sudbury, Ont., who recently paid a visit to Toronto, states that the lumbering industry in that section has improved greatly owing to the changes in the American tariff, and there are more applications now being made for timber limits than at any time in the last four years.

—A cedar tree 407 feet in height and measuring seventy feet in circumference at the base has just been felled near Ocosta, Wash. It was sixty feet to the first limb of the tree and the limb itself was seven feet in diameter. It is estimated that the tree furnishes 100,000 feet of boards, enough to make over a hundred carloads of shingles.

—Incorporation is being asked for by the Niebergall Stave and Lumber Company, of Staples, Ont., with a capital stock of $45,000, to manufacture lumber, staves, etc. The first directors are Geo. Niebergall, Geo. Acheson and S. P. Halls, of Goderich, Ont.; Geo. M. McEwan, Hensall, Ont., and David R. Menzies, of Clinton, Ont.

—A London detective has recently returned from Dawn township, Lambton county, where he had been investigating the alleged robbery of timber from the estate of the late Sheriff Glass. He reports that acres of fine timber land have been stripped by the thieves. Four men are now confined in Petrolia gaol charged with complicity in the offence.

—Formal notice has been given of an application for an act to incorporate the Royal Paper Mill Company, of Sherbrooke, Que., to manufacture pulp, paper and lumber, with power to acquire the property of the Royal Pulp and Paper Company, of East Angus. The new company will have a capital of $400,000. The applicants are: W. B. Ives and F. P. Buck, of Sherbrooke; Rufus H. Pope, Cookshire, and George Van Dyke and Irving W. Drew, of Lancaster.

FIRES AND CASUALTIES.

FIRES.

—R. B. Jeffrey's saw mill at Victoria Road, Ont., was burned on the 7th of December. The loss is about $1,000, with no insurance.

—A fire around the wharves, near W. B. Hayford's mill, three miles up the river from St. John, N. B., destroyed about $6,000 worth of lumber the early part of last month.

—The shingle mill of Cowan & McGinty, at Marble Cove, N. B., was consumed by fire a couple of weeks ago. The mill was erected about seven years ago, at a cost of $14,000, but had not been in operation for the past eight months. The insurance is $4,000.

—About the middle of December Robert Gaw & Co.'s planing mill at Kingston, Ont., was destroyed by fire. Among the contents were a large quantity of sashes, doors and blinds ready for shipment, and many in the course of manufacture. Loss, $7,000; insurance, $6,000.

—The saw mill belonging to Messrs. Trueman Brothers, at Trumanville, N. S., about nine miles from Amherst, was totally destroyed by fire early in December. The mill was comparatively new and valued at about $2,000. It was a rotary mill, water power, and fully equipped with sawing apparatus and a grain mashing outfit.

CASUALTIES.

—While engaged in felling a tree in the lumber woods at Parry Sound, John O'Connor had one of his legs badly crushed. He was taken to the hospital at Toronto.

—Wm. Brotherston, foreman for the Georgian Bay Lumber Co., accidentally shot himself through the heart while handling a rifle, near Coldwater, a fortnight ago.

—Ed. Clapp, Bridgewater, was killed in the woods near Gilmour. A tree fell into the crutch of another, which gave way, one piece of it hitting him on the head; he lived only about an hour. Deceased was single and about twenty-four years of age.

—An employee of Mickle, Dyment & Co., named Alex. Sanville, recently met with an accident which resulted in his death. The unfortunate man was felling a tree, when a large limb struck him, breaking his back. He died in about twenty four hours. He was a hard-working, steady man, and leaves a widow and five small children to mourn his loss.

THE WORLD'S GREATEST ELMS.

THE elm (Ulmus Campetris) is an old and long familiar tree, the wood of which, however, according to Timber, of London, Eng., is of no great importance, and is used for a variety of purposes, while knobs or monstrosities found on the tree are cut into thin slices and polished, and employed by carpenters in the process of veneering. The wood is very durable, and the keels of troughs and waterpipes are always constructed of elm timber. The elm trees live to a great age, and some trees in Oxfordshire were famous even in the time of Queen Elizabeth. The "Long Walk" at Windsor was planted at the beginning of the last century, and is well known and greatly admired, though some of the trees have passed their prime. There is a great elm tree in the south of England that measures sixty-one feet in circumference. Its trunk is hollow and has a door fitted into it and fastened by a lock and key. Another great elm, near London, has a winding staircase cut within it, and a turret on top where at least twenty persons can stand. But the largest and finest elm tree in the world was (for it unfortunately is not) in the county of Kildare, Ireland. Two of the huge branches fell down of their own weight, and that on a still, calm day, when there was not a breath of wind. The timber of the branches was conveyed away and sold for guineas. The noble tree did not long survive the loss of the branches. It was already tottering to its fall, and a violent storm tore it up by the roots, a great mass of earth and rocks being torn up with them. The elm is taller than most of our forest trees, and the masses of light shade, formed by its abundant, yet loose, foliage, impart much beauty to a woodland scene.

IMPORTANT LUMBER SUIT.

A CASE of heavy litigation has come before Justice Ferguson at the sitting of the High Court of Justice for the Province of Ontario at Rat Portage. About a year and a half ago a trust was formed by which all the lumber properties at Rat Portage, Keewatin and Norman, excepting the Keewatin Lumber company were placed in the hands of trustees with the object of forming a combine under the name of the Ontario and Western Lumber Company, (limited). The trustees were W. P. Creighton, J. M. Savage, D. C. Cameron, John Dick, H. W. Kennedy and Walter Ross, and it was provided that certain parties interested in the various firms should obtain letters of incorporation under the name of the Western Ontario Lumber Company, (limited,) and that all the properties should be transferred to that Company, and that stock in that company should be issued in payment for the assets to be transferred. It was also provided that valuators should be appointed, and that the valuations of the various properties would be accepted by the owners, and that stock should issue in the new Company for the amount at which the valuation should be made.

James Pringle, of Montreal, and J. N. Johnston, of St. Paul, Minnesota, were appointed valuers and made valuations of the different properties, but there valuations were not satisfactory to some of the parties, and more particularly to Dennis Ryan, of St. Paul, who is the chief stockholder in the Minnesota & Ontario Lumber Company, whose mill and lumber property were affected by this arrangement.

An action was at once commenced by Mr. Ryan to set aside the agreement providing for the trust and for the formation of the new company, and the case has been adjourned from time to time, but is now on for hearing. In June another action was commenced in the name of the Attorney General of Canada, in which it is endeavored to set aside the letters patent to the new company, that is, of the Ontario and Western Lumber Company, (limited). The chief grounds upon which these letters patent are being attacked are, that while $500,000 worth of stock was subscribed for, there was not in reality a bonafide subscription for that amount. Another ground is, that while $50,000 deposit was required to be made before the application for the letters patent would be granted, that this matter was arranged by discounting a note for $50,000 which was afterwards retired by a cheque of the company for the same amount and although this is a very ordinary way of arranging a deposit for a charter, it is proposed to test the validity of it.

If the letters patent of the Ontario and Western Lumber Company are annulled financial complications of a very serious character, it is said, are quite possible.

S. H. Blake, Q. C., of Toronto, will represent Mr. Ryan and the Attorney-General of Canada. With him will be associated T. H. Gilmour, Q. C., and N. F. Hagel, Q. C., of Winnipeg; and the defendants will be represented by H. M. Howell, Q. C., W. H. Culver, Q. C., C. P. Wilson and James Fisher.

TRADE REVIEW.

Office of CANADA LUMBERMAN,
Dec. 26, 1894.

THE GENERAL SURVEY.

THE present season of the year in the lumber trades is one that marks a parting of the roads. It is the end of the year and no great attention is given to immediate business. There is no immediate business of any account to be done. Santa Claus claims everyone's attention these times. The calendar year ends the business year with most lumber concerns and we find the trade almost everywhere getting things in shape for the balancing of books and ascertaining just what the outcome of 1894 has been.

Nor has the trade commenced yet to look out into the future. After the books have been balanced the vision will be clearer. An impression prevails, however, notwithstanding the dullness of 1894, that better days are in store for the lumber trade, and these will commence to show themselves shortly after the turn of the new year.

Various figures are being given out to indicate the cut of the mills during the season of 1894 in all the important manufacturing centres. Considerable data of this character is in possession of the LUMBERMAN, which we shall put into shape with other matter that will come before us for our annual review of the trade that will appear in next month's issue of this journal.

The following official figures, for the quarter ending Sept. 30, though fragmentary and incomplete, will give some indication of the conditions of trade. Excepting Manitoba and British Columbia, the export of lumber, timber and logs from Canada to the United States, for the three months named, amounts to $3,648,807. Of lumber going forward $54,506 was shipped to the United States from Ontario in bond and of this amount $50,032 went from the Ottawa district. The shipments of logs to the United States from Quebec amounted to $23,281. Ontario wood exports to the United States were: Lath and shingles, $96,068; bark, $15,972; logs and timber, $1,501,550; lumber, $1,183,830; lumber for export, $54,506; picket and palings, $3,901; poles, telegraph and hop, $24,792; posts, $2,706; pulp, $43,353; hooks, staves, headings and bolts, $189,985; cordwood, $8,685; pulp wood, $70,670. Quebec exported to the United States during the same period: Hemlock bark, $2,930; lumber, $350,601; pulp wood, $72,784; railway ties, $17,732; match blocks, $6,302; shingles, $9,336; wood pulp, $13,071; clapboards, $26,163; logs, $23,281; all other wood products, $6,990. Nova Scotia, New Brunswick and Prince Edward Island sent to the United States: Lath and lumber, $535,039; firewood, $20,297; pulp wood, $14,967.

In New Brunswick the opinion grows that trade during the incoming year with the United States will show a considerable enlargement. The season closed has not been a very large one in the Lake of the Woods district, the cut amounting to only about 25,000,000 feet.

UNITED STATES.

It can seldom be written of December in the lumber business that trade has assumed large proportions. It is not the month for big business, and contrasted with November, where even in the dullest times trade runs into considerable size, the contrast is noticeable. Speaking distinctly of the white pine market, whatever the past may have shown, the outlook for the future is more encouraging. Manufacturers have resolved to enter with vigor into operations quickly after the opening of the new year, and this will mean an increase in trade. Then with occasional exceptions prices for pine are now being held with greater firmness. The feeling is that if prices do not advance in the near future there is no occasion that they should shrink, and the leaders in the lumber trade have come to the conclusion that they intend to make no sacrifice in prices when it is not required. A pretty correct census of stocks can now be ascertained from all important points, and if we except Minnesota, which has a large supply of logs and lumber, the stocks generally are by no means of a size to cause anxiety. This remark applies to the mill product and is equally applicable to the wholesale trade. The stock sheets that will be completed on Jan. 1st will, in neither case, show heavy holdings. The average trade, as a matter of fact, have purchased cautiously enough for months back to render heavy stocks an impossibility.

FOREIGN.

Trade is on the quiet side in the markets of Great Britain and the impression prevails that pine and spruce supplies shipped to these markets annually will, during next season, fall below the average. A stronger hope of increased trade from Australia is born of the departure of the Canadian commissioner to that colony. Just how far the lumber trades will be strengthened it is a little difficult to say, but Mr. Larke is of the opinion that an improved business can be done and new avenues of trade for lumber opened out. It is thought by some that the large order from South Africa placed with the McLaren, Ross Co., of British Columbia, will not be the only good sized order that will come from that section, trade there seeming to improve. A fair trade continues to be done with South America.

HARDWOODS.

Canadian hardwood men are by no means in good spirits. Whilst there is a demand for many lines of hardwood, prices do not encourage doing much business. The most hopeful sign in the hardwood trade is the growing impression that in the future hardwoods are going to cut an important figure in the lumber trade. They are being used in an increased degree in furniture manufacturing, for flooring, and in other ways that had not been common to them in the past. The conviction is taking hold of men who have been accustomed to large transactions in the pine trade, that it will pay them to secure hardwood timber lands, and hold them, rather than allow them to be sacrificed by the agriculturist, which is so often done now. It has seemed to the LUMBERMAN that the hardwood trade has been given the go-by very often of late years, where in some respects its possibilities are of the most encouraging character.

SHINGLES.

Dullness, with no let-up to it, has still to be written of the shingle trade, locally, or anywhere else. In the Washington territory red cedar shingle trade has been further demoralized through the big cut made by the Ballard Co., of Tacoma. This concern, it is said, has already received orders for over 40,000,000 shingles. This continual cutting is one of the unhealthy features of the trade.

TORONTO, ONT.

TORONTO, December 26, 1894.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		2 30
XX shingles 16 inch		1 40
Lath, No. 1		2 00
Lath, No. 2	1 80	1 85

HARDWOODS—PER M. FEET CAR LOTS.

Quality, 1s and 2s unless otherwise specified.

Ash, white, 1 to 2 in.	$26 00	$28 00	Elm, soft 1 to 1½	$14 00	$15 00
" " 2½ to 4..	30 00	32 00	" " 2	15 00	16 00
" black, 1 " 1½	18 00	20 00	" rock 1 " 1¾	16 00	18 00
" " 2 " 4..	20 00	24 00	" " 1½ " 3..	20 00	22 00
Birch, 1 " 1½	20 00	22 00	Hickory 1½ " 2..	28 00	30 00
" 2 " 4..	22 00	25 00	Maple 1 " 1½	16 00	18 00
" sqrs. 4x4 " 8x8	26 00	30 00	" 2 " 4..	18 00	20 00
Basswood 1 " 1¾	16 00	18 00	Oak, red, p'n 1 " 1½	28 00	30 00
" 1½ " 2..	19 00	19 00	" " 2 " 4..	30 00	32 00
" m. r. 1 " 1¾	14 00	16 00	" white " 1 " 1½	28 00	30 00
Butternut 1 " 1½	23 00	25 00	" " " 2 " 4..	30 00	35 00
" 2 " 3..	25 00	28 00	" quart'd 1 " 2..	48 00	52 00
Chestnut 1 " 2..	22 00	25 00	Walnut 1 " 3..	85 00	100 00
Cherry 1 " 1½	50 00	60 00	Whitewood 1 " 2..	32 00	36 00
" 2 " 4..	60 00	65 00			

OTTAWA, ONT.

OTTAWA, Dec. 26, 1894.

Pine, good sidings, per M feet, b.m	$32 00	40 00
Pine, good strips, " " "	27 00	35 00
Pine, good shorts, " " "	20 00	27 00
Pine, 2nd quality sidings, per M feet, b.m	20 00	25 00
Pine, 2nd quality strips, " " "	18 00	22 00
Pine, 2nd quality shorts, " " "	15 00	18 00
Pine, shipping cull stock, " " "	14 00	16 00
Pine, box cull stock, " " "	11 00	13 00
Pine, s.c. strips and sidings " " "	11 00	14 00
Pine, mill cull	8 00	10 00
Lath, per M	1 60	1 90

NEW YORK CITY.

NEW YORK, N. Y. Dec. 26th.—There is really nothing particularly noteworthy in this market. The trade generally are preparing themselves to sum up the season's trade and there will not be any great activity until the turn of the new year. White pine is slow and its competitor yellow pine is not cutting any particular figure in trade just now. Eastern spruce holds its place better almost than any other class of wood. There is an encouraging outlook for building operations for another year.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply, rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$40 00 @ 50 00	Building orders	$28 00 @ 40 00
Decking	45 00 55 00		

Per M.

W. P. bridge timber	$18 @ $35	
W. P. decking, 3 in. thick and up	44	45 } planed 1 s and 2 edg.
" " 2 and 2½ in. thick	46	50 } $1 per M extra.
" yacht decking	55	60—planed 4 s. $2 extra.
Building timber	26	32

ALBANY, N.Y.

ALBANY, N. Y., Dec. 26th.—Lumbermen are practically into their winter quarters, and trade has commenced to take on the quietude of the holiday season. November showed a measure of activity, which compared with the same month in other years was nothing to boast of, yet it was an improvement over what trade had been done so far the present season. Quotations for pine remain firm and spruce has advanced. Lumbermen are interesting themselves to some extent in an agitation for the deepening of the canal.

PINE.

2¼ in. and up, good	$56	$60	10-in. common	$15	$16
Fourths		58	12-in. dressing and better	28	34
Selects		50	Common	15	17
Pickings		45	1¼-in. siding, selected, 13 ft.	40	45
1¼ to 2-in. good	52	55	Common	15	17
Fourths	47	50	1-in. siding, selected	38	42
Selects	42	45	Common	15	17
Pickings	37	40	Norway, clear	22	25
1-in. good	52	55	Dressing	16	18
Fourths	47	50	Common	11	15
Selects	42	45	10-in. plank, 13 ft., dressing	c.	c.
Pickings	37	40	and better, each	42	55
Cutting-up	22	27	10-in. plank, 13-ft. culls, each	23	25
Bracket plank	30	35	10-in. boards, 13 ft., dressing		
Shelving boards, 12-in. up	30	32	and better, each	28	32
Dressing boards, narrow	19	21	10-in. boards, 13-ft. culls	17	21

LATH.

Pine	$2 25	Spruce	$2 00

SHINGLES.

Sawed Pine, ex. XXXX	$4 10	$4 25	Bound butts, 6 x 18	$5 90	$6 00
Clear butts	3 10	3 25	Hemlock	2 15	2 30
Smooth, 6 x 18	5 40	5 50	Spruce	2 20	2 30

OSWEGO, N.Y.

OSWEGO, N. Y., Dec. 26th.—Trade is quiet now, and with navigation closed and the holidays here, will remain so for some weeks at any rate.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$46 00	@47 00			
Pickings, " "	36 00	38 00			
No. 1, cutting up, " "	31 00	33 00			
No. 2, cutting up, " "	24 00	25 00			
In strips, 4 to 8 wide, selected for moulding	trips, 14 to 16 ft.		32 00	34 00	

SIDING.

1 in siding, cutting up			1¼ in selected	38 00	@43 00
1icks and uppers	32 00	@39 00	1¼ in dressing	20 00	22 00
1 in dressing	19 00	21 00	1¼ in No. 1 culls	15 00	17 00
1 in No. 1 culls	14 00	15 00	1¼ in No. 2 culls	14 00	15 00
1 in No. 2 culls	13 00	14 00	1 in. No 3 culls	11 00	12 00

1X12 INCH.

12 and 16 feet, mill run	21 00	24 00
12 and 16 feet, No. 1 and 2, barn boards	19 00	20 00
12 and 16 feet, dressing and better	27 00	31 00
12 and 16 feet, No. 2 culls	15 00	16 00

1X10 INCH.

12 and 13 feet, mill run, mill culls out	21 00	23 00
12 and 13 feet, dressing and better	26 00	28 00
1x10, 14 to 16 barn boards	18 00	19 00
12 and 13 feet, No. 1 culls	16 00	17 00
12 and 13 feet, No. 2 culls	14 00	15 00
14 to 16 feet, mill run mill culls out	21 00	23 00
14 to 16 feet, dressing and better	26 00	28 00
14 to 16 feet, No. 1 culls	17 00	18 00
14 to 16 feet, No. 2 culls	15 00	16 00
10 to 13 feet, No. 3 culls	11 00	12 00

1¼X10 INCHES.

Mill run, mill culls out.	$22 00	@25 00	No. 1 culls	17 00	18 00
Dressing and better	27 00	35 00	No. 2 culls	15 00	16 00

1X4 INCHES.

Mill run, mill culls out	17 00	21 00	No. 1 culls	14 00	15 00
Dressing and better	24 00	30 00	No. 2 culls	13 00	14 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20 00	25 00	6, 7 or 8, No. 1 culls	16 00	17 00
6, 7 or 8, drsg and better	25 00	30 00	6, 7 or 8, No. 2 culls	14 00	15 00

SHINGLES.

XXX, 18 in pine	3 70	3 90	XXX, 18 in. cedar	3 50	3 70
Clear butts, pine, 18 in.	2 70	2 90	Clear butt, 18 in. cedar	2 40	2 65
XXX, 16 in. pine	3 00	3 20	XX, 18 in. cedar	1 75	2 00
Stock cedars, 5 or 6 in.	4 50	5 00			

LATH.

No. 1, 1¼	1 85	No. 2, 1¼	1 75
No. 1, 1 in.	1 50		

SAGINAW, MICH.

SAGINAW, MICH., Dec. 26th.—With navigation closed for the season there is a dullness in the lumber market that is in contrast with even the slow-going trade that has been done here for some time past. A number of transactions have taken place during the month, but none of very remarkable size. We hear of one purchase of 1,500,000 feet for delivery next season. Prices for white pine do not stiffen as well as some had hoped for. There is an improvement in this respect over a few months ago, but complete confidence is not yet restored, and those who feel the necessity of doing business are not allowing prices to stand altogether in the way. A noticeable feature of trade is the steady increase in the shipments of lumber by rail, and a decline, that is likely to grow, in the shipments by water.

FINISHING LUMBER—ROUGH.

Uppers, 1, 1¼ and 1½	44 00	Fine common, 1 in	32 00
2 in	46 00	1¼ and 1½ in	34 00
Selects, 1 in	38 00	2 in	34 00
1¼ and 1½	38 00	C, 7, 8 and 9 in	30 00
2 in	38 00		

SIDING.

Clear, ½ in	24 00	C, ½ in	19 00
⅞ in	48 00	⅞ in	34 00
Select, ½ in	21 00	No. 1, ½ in	13 00
⅞ in	40 00	⅞ in	23 00

TIMBER, JOIST AND SCANTLING.

2x4 to 10x10, 12, 14 and 16 ft.	$11 00	20 ft	14 00
18 ft	13 00	22 and 24 ft	15 00

For each additional 2 ft. add $1; 12 in. plank and timber $1 extra; extra for sizes above 12 in.

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$10 00	1 in., 13 in. and up wide	$12 00
1 in., 6 in. wide	11 00	1¼, 1½ and 2 in., 7 in. and up wide	12 00
1 in., 7 in. wide and up	11 00		

SHINGLES, 18-IN.

Fancy brands, XXXX	3 25	Standard brands, river made, XXXX	3 00
Clear Butts	2 00	Clear Butts	2 00

WHITE PINE LATH.

No. 1	1 50	No. 2	1 25
		Hemlock	1 00

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N. Y., Dec. 26th.—Business in lumber is slow. The trade of the year, whether large or small, is concluded, and stock-taking and balancing of books is now the programme. Navigation has closed for the year, and the showing of receipts is, with all the dullness of trade, better than was expected.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in	$45 00	48 00	Shelving, No. 1, 13 in and up, 1 in	31 00@	33 00
2½ and 3 in	50 00	53 00	Dressing, 1¼ in	25 00	26 00
4 in	54 00	56 00	1¼x10 and 12		26 00
Selects, 1 in	38 00	39 00	1½ in	24 00	25 00
1¼ to 2 in	40 00	42 00	2 in	26 50	28 00
2½ and 3 in	47 00	50 00	Mold st'ps, 1 to 2 in	33 00	35 00
4 in		52 00	Barn, No. 1, 10 and 12 in	21 00	23 00
Fine common, 1 in	35 00	37 00	6 and 8 in	20 50	22 00
1¼ and 1½ in	37 00	38 00	No. 2, 10 and 12 in.	17 00	18 00
2 in	39 00	40 00	6 and 8 in	18 00	19 00
3 in		45 00	No. 3, 10 and 12 in.	14 00	16 00
4 in		45 00	6 and 8 in	13 50	15 50
Cut'g up, No. 1, 1 in.	27 00	29 00	Common, 1 in	16 00	18 00
1¼ to 2 in	32 00	33 00	1¼ and 1½ in	18 00	20 00
No. 2, 1 in	17 00	18 00	2 in	19 00	22 00
No. 2, 1¼ to 2 in	22 00	23 00			
No. 3, 1¼ to 2 in	18 00	19 00			

BOSTON, MASS.

BOSTON, MASS., Dec. 26th.—It is worth remarking of business at the present time that prices are being held stiff. There is a fair demand for clapboards and even shingles. Spruce holds the same favorable position that it assumed some months ago.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards		$12 00	¾ inch	$ 9 25	9 75
Coarse No. 5	15 00	16 00	11-16 inch		9 00
Refuse	12 00	12 50	⅝ inch		8 50
Outs	9 00		Clapboards, sap ext.	48 00	50 00
Boxboards, 1 inch	10 75	11 00	Sap clear	43 00	45 00
⅞ inch	9 75	10 00	Sap, 2nd clear	35 00	40 00
			No. 1	25 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in	$50 00@	51 00	Fine com., 3 and 4 in	43 00	45 00
1¼, 1½ and 2 in	52 00	53 00	No. 2, 1 in. Fine com.	28 00	30 00
3 and 4 in	59 00	63 00	1¼, 1½ and 2 in	29 00	31 00
Selects, 1 in	43 00	45 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in	45 00	47 00	No. 2	36 00	37 00
3 and 4 in	55 00	57 00	No. 3	28 00	30 00
Moulding boards, 7 to 11 in. clear	36 00	38 00	Cut ups, 1 to 2 in	24 00	32 00
60 per cent. clear	34 00	36 00	Coffin boards	19 00	20 00
Fine common, 1 in	38 00	40 00	Common all widths	22 00	26 00
1¼, 1½ and 2 in		42 00	Shipping culls, 1 in	15 00	15 50
			do 1¼ in.	15 50	16 50

SPRUCE.

Random cargoes, large sizes	12 50@	13 00	Mill random	11 00@	12 00
Ordinary	11 50	12 00	Northern, random boards	11 50	12 00
Narrow	10 00	11 00	Second boards		10 00
Shippers	13 00	13 25	Northern No. 1 stock boards, 12 feet	20 00	23 00
Planed, coarse		12 00	No. 2	13 50	14 00
Rough, coarse, narrow	10 00	11 00	Planed, narrow	10 50	11 00
Rough, coarse, wide	12 50	13 00	Wide		14 00
Spruce frames, cars ordinary	13 00	13 50	Clapboards, 4ft. extra	28 50	30 00
12 in	14 00	14 50	Clear	26 00	28 00
14 in	16 00	18 00	Second clear	20 00	24 00
Yard orders	12 50	13 00	No. 1	10 00	13 00
			No. 2	8 00	9 00

HEMLOCK.

Boards, rough	9 00@	10 00	No. 2	7 00@	9 50
Planed	11 00	11 50			

LATH.

Spruce		By cargo	1 80@ 1 90
By car	1 80@ 2 00		

LUMBERMEN'S SUPPLIES

SUGAR.

	c. per lb.	
Granulated	4 30	4 40
Extra bright refined	4	4⅛
Bright Yellow	3¾	3⅞
Medium Yellow	...	3⅝
Dark Yellow	3⅜	3½
Raw	...	...

SYRUPS AND MOLASSES.

SYRUPS.	Per gallon bbls.	½ bbls.
Dark	25	30
Medium	30	35
Bright	35	40
Very Bright	50	00
Redpath's Honey		40
" " 2 gal pails		1 25
" " 3 gal pails		1 50

MOLASSES.	Per gal.	
Trinadad, in puncheons	0 32	0 35
" bbls	0 36	0 37
" ½ bbls	0 40	0 40
New Orleans, in bbls	0 30	0 32
Porto Rico, hdds	0 38	0 40
" barrels	0 42	0 44
" ½ barrels	0 44	0 46

RICE, ETC.

	Per lb.	
Rice, Aracan	3½	3¾
" Patna	...	4¾
" Japan	...	5
" Imperial Secta	...	5½
" Extra Burmah	3⅞	4
" Java Extra	6½	6¾
" Genuine Carolina	9½	10
Grand Duke	6¼	6½
Sago	4¾	5½
Tapioca	4½	5½
White Beans, per bushel		1.50

FRUITS.

FOREIGN.	c. per lb.	
Currants, Provincial, bbls.	3½	4
" " ½ bbls	3⅝	4⅛
" Filiatras, bbls	4	4½
" " ½ bbls	4½	4¾
Currants, Patras, bbls	5	5½
" " ½ bbls	5¼	5¾
" " cases	5	6½
" Vostizzas, cases	6½	7½
" " ½ cases	6¾	7¾
" 5-crown Excelsior (cases)	8	8½
" " ½ case	8¼	8¾
Dates, Persian, boxes	5	5½
Figs, Elemes, 10lb. boxes	...	...
" 7-crown	...	...
" Natural Figs, 28lb bxs	...	...
Prunes, Bosnia, casks	4	4½
" " cases	5½	7
" " bags	...	...
" Anchor C, bags	...	...
" " E, "	...	...
" " G&J, cases	...	5½
Raisins, Valencia, off-stalk	4¾	...
Selected	5½	6

CANNED GOODS.

	Per doz.	
Apples, 3's	$1 00	$1 10
" gallons	2 65	2 80
Beans, 2	0 85	0 95
Corn, 2's	0 90	0 95
" Epicure	1 15	
Peas, 2's	0 85	0 95
" Sifted Select	1 45	
Peaches, 2's	2 00	2 25
" 3's	3 00	3 25
Plums, Gr. Gages, 2's	1 85	2 00
" Lombard	1 50	1 60
" Damson Blue	1 50	1 60
Pumpkins, 3's	0 90	1 00
" gallons	2 10	2 25
Tomatoes, 3's	0 85	0 90
'Thistle' Finnan Haddies	1 35	1 40
Salmon, talls	1 25	1 35
" flats	1 35	1 40

CANNED MEATS

(CANADIAN.)

Comp. Corn Beef 1lb cans	$1 50	$1 60
" " 2 "	2 60	2 65
" " 4 "	4 80	5 00
" " 6 "	7 50	7 75
" " 14 "	17 50	17 50

COFFEE.

GREEN.	c. per lb.	
Mocha	28	33
Old Government Java	25	35
Rio	20	22
Plantation Ceylon	29	31
Porto Rico	24	28
Guatemala	24	26
Jamaica	22	20
Maracaibo	24	24
Caffaroma, 1 and 2lb tins, asstd		33

DOMESTIC.

Apples, Dried, per lb	5½	6
" Evaporated	8	10

TOBACCO AND CIGARS.

British Consols, 4's; Twin Gold Bar, 's	59c
Ingots, rough and ready, 8's	57
Laurel, 3's	49
Brier, 7's	47
Index, 7's	44
Honeysuckle, 8's	56
Napoleon, 8's	50
Victoria 12's	47
Brunette, 12's	44
Prince of Wales, in caddies	48
" " in 40lb. boxes	48
Bright Smoking Plug Myrtle, T & B, 3's	60
Lily, 7's	47
Diamond Solace, 12's	50
Myrtle Cut Smoking, 1lb. tins	70
¼ lb. pg., 6 lb. boxes	70
oz. pg., 5 lb. boxes	70

THE SMALL MILL.

TO build a small mill and operate it with the least possible help, writes J. H. Miner in Lumber, would require a considerable outlay in machinery; but a small mill can make a thousand feet of lumber much cheaper than a large mill can. The mills among every class that make money run regularly. They have good machinery, have it set right, and take care of it.

Some small mills are run successfully with fifteen horse-power, the engine doing its work day by day very well. I have seen other mills that could not keep their engines from pounding. When the matter is summed up it will be found much cheaper to buy a good engine and boiler at the start. There is a comparatively new engine made now. It is of the self-contained side-crank type, very serviceable, and can be depended on for high speed, to run cool, and not to thump. With this style of engine, a good tubular boiler well set, and a good high stack, the motive power will be complete. Firebox or locomotive boilers are not the best, by any means, for a saw mill, because they are generally not taken care of. They are set in a low, wet place, where the lower part of the firebox is exposed to damp, which soon rusts it out. Again, they are unhandy to keep clean and are more dangerous when water gets low.

The saw mill should be of the proper size. Pony saw mills are dear, unless for the lightest possible sawing. One should have good, flat, broad-faced frictions, and should not meddle with the variable friction if one wishes to run the mill every day and lose no time.

Buy a good inserted-tooth saw and take care of it, and you will have a saw that can be depended on. It is a new saw every time new teeth are put in it.

Buy a carriage with large wheels and with the axle extending clear across. Use a rack and pinion. Set the works with Sawyer's lever set which allows the sawyer to do his setting correctly. Put in six-inch seasoned turned rollers, with polished journals set in true, and a boy can roll the lumber from the saw. Set the boiler so that a conveyor chain will carry the dust over the boiler and into the furnace, the surplus being run over to use in making steam.

A good swing saw should be set a good length from the saw and should be easily manipulated so as to cut all slabs, that will not make lath, into fuel. Slabs of all kinds will pay for the cutting and handling if made into stove wood.

Every piece of lumber that is not square should be trimmed. There is nothing that adds to the sale of lumber so much as to have it well trimmed.

For a boiler feeder put in a well built force pump and injector. While the mill is running, the pump will feed the boiler with more regularity than anything else will. The injector is used for emergencies. No mill can depend on the injector except for a time. They are more expensive than a pump, which will last for years. When the pump is set, a boy can look after the conveyor and feed the dust. The sawyer can do his own setting and with two more men can cut five thousand feet of lumber a day.

On the other hand, if a cheap engine and boiler are bought and poorly set, the whole business will go down hill from the start.

Buy the best of everything, if money is to be made. Use wide belts and large steel-rim pulleys, and there will be no trouble. Buy an extra brand and see that belts are neatly fastened. Do not run a belt in close places where the edge may be ruined.

A saw-mill built right, having the best machinery and properly cared for, will work like a charm.

DUBE V. THE TEMISCOUATA RAILWAY.

THE case of Mr. E. Dube, of Fraserville, against the Temiscouata Railway Co., was held before the Privy Council at Ottawa a week ago. The complainant was represented by Mr. W. J. White and the company by Mr. Hector Cameron, Q. C. Mr. Dube complained that he had been shipping ties off this road for several years and that the officers of the company had, during the past two seasons, become competitors in his business, and so increased the rate of freight as to make it impossible for him to continue this part of it. The company contended that there had been no discrimination, and that all shippers of ties had been charged the same rates. The witnesses examined were the complainant, who proved that in 1892 the rate was 2 cents per tie, in 1894 it was 3 cents and $2 for loading on the main line; in 1893 the rate became 5 cents per 100 pounds, and this for an average haul of thirty-two miles. A number of rates on other lines were produced to show that this rate was excessive. Mr. T. Crockett, the general manager of the Temiscouata railway, was then examined, and said that the total number of ties shipped off the road in 1894 was between 100,000 and 110,000. Of these about 90,000 had been shipped by Mr. Boswell, the president, Mr. Malcolm, one of the directors, and himself, to fill contracts which they had made on joint account. The reason he gave for the increase in the rate was the advance in the value of ties. Mr. Beauchemin, of the South Shore railway, proved that ties were cheaper in 1894 than in 1893, and gave the rate for ties over his road. The strength of Mr. Dube's complaint is in the contention that the Temiscouata Railway Co. has received over $700,000 for 117 miles of road from the Federal and local governments, and this being the case, it is an unfair method of competition with the regular shippers. From a business standpoint there is certainly much force in Mr. Dube's contention. Judgment has been reserved.

THE Department of Crown Lands for Ontario are inviting tenders until the 10th of January for the privilege of cutting pine on a small timber berth in Algoma.

A NUMBER of berths of crown land were offered at auction at Fredericton, N. B., on Dec. 19. Fifteen of them were knocked down to respective applicants at the upset price of $8 per mile, and one on the Waskahegan was bid in by F. H. Hale at $54 per mile. Another berth on the same stream went for $8.50 per mile.

TALKS WITH WOOD-WORKERS.

IN these occasional talks with wood-workers reference has been made before to the subject of wood bending. About this there are many features of special interest. I have come across a familiar talk on the question by Mr. W. J. Shepard, in the Wood Worker. He tells us that wood is subjected to but little longitudinal shrinkage, the minimum occurring in the direction of its length, a larger amount taking place transversely through the growth grain, and the maximum following the direction of the concentric rings. There being, then, but little longitudinal shrinkage, as long as the grain lies straight and regular there is but little tendency for a stick to crook from this cause ; but when the grain is turned aside from its straight course, to any great extent, by a knot or knarl, everyone knows the deflection, the twisting and crooking of the stick, that will be likely to occur in drying. When a stick is bent under end-pressure, great changes occur in its substance along the inner side of the bend. The grain layers lie no longer straight and regular. Under the powerful compression of the bending process, the substance of the wood at or near the point of bending, goes together wherever the density is least, each particular fibre writhing its way into every adjoining pore and cell, and twining itself about and interlacing itself with its neighbors, until the whole becomes a closely interwoven mass of fibre, much resembling a skein of tangled yarn.

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Anyone not intimately acquainted with the characteristics of wood bent in this way, will be astonished, upon investigation, at the extent of the change thus made in the nature and condition of the fibre. Little or no indications of it are to be discovered on the surface, if the bender has done his work well ; but as soon as an attempt is made to break or split a piece so treated, its changed nature becomes at once apparent. To split or break it is almost impossible. It will be found to have become literally tougher than whalebone. The compressed portion may be wrung and twisted and bent, in a cold condition after being taken from the form, but it will exhibit a marvellous tenacity, and will hang together and resist any attempt at splitting or breaking. Of course the fibre may be torn asunder by the application of sufficient force, but it will not come with a clean clevage, as wood splits, but will shred and tear, and show a very ragged edge, not unlike that which would be presented by a piece of heavy woven cloth, showing very clearly the interwoven character of the compressed fibre.

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It might naturally be supposed that the forcible disturbance of the substance of the wood by compression, would leave it in a broken and ruptured, and consequently a weakened, condition. But the exact opposite is the case. There is no wood that grows, which in its natural condition can for a moment equal, in point of toughness, a brashy piece of western ash as it may become under the skilful manipulation of the wood-bender. This may seem to many like a rash and unwarranted statement, but should the fact be doubted the writer stands ready to submit to the editor of this journal such specimens of toughened western ash, or of any one of a half-dozen other kinds of wood, as would, without doubt, convince the most skeptical of the needlessness of a comparative test. Another cause besides the interweaving of the fibres goes to produce this marvellous toughness of the compressed wood. In nearly all woods adapted to bending purposes, there is a starchy, glutinous substance in the grain cells which under the action of steam cooks up to a glue-like consistency and condition, and when the fibre is pressed into the cells by the compression of bending, this natural glue cements the whole very firmly together. Thus it will be seen that the fibres of the wood are not closely interwoven with each other, but they are virtually glued together in this tangled condition. The result of these two causes operating together, is such a toughening of the wood as would seem quite impossible to one having no acquaintance with the compressed fibre.

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Now to follow out the result of shrinkage on this altered condition of the wood. It should be borne in mind that along the strap side of the bent piece there is no compression, that the layers of grain there lie straight and undisturbed, the compression beginning more or less near the surface, according to the circumstances, and increasing progressively, its greatest amount being at the inner surface of the bend. There, will be, then, no perceptible longitudinal shrinkage on the strap side of the bent piece ; but on the form side, where the compressed fibre lies in an irregular, wavy, tangled mass, no longer parallel with the longitudinal surface of the stick, there will occur a contraction of the length of that surface as this mass of fibre shrinks together through drying, and as the inner surface contracts in length while the outer one does not, it necessarily results in curling up the bend to an increased acuteness. A Vienna chair seat, for instance, may be so bent, on a fourteen inch circle, that by mere drying, if left to itself, it will decrease in diameter to eleven or twelve inches. Thus it will be seen that this, at first sight, puzzling phenomenon, is of easy explanation, and but the natural result of shrinkage due to the changed condition of the compressed fibre.

CARELESSNESS AND WASTE OF LUMBER.

TO make good lumber simply to throw it away is folly so egregious as to be almost beyond belief. It would be entirely so, says the St. Louis Lumberman, were it not for the abundant evidence that such practice obtains among saw mill men to an extent that, could it be accurately known and stated, would be appalling. Millions of as good timber as ever grew in a tree is wasted annually in getting it from the saw to the user, involving losses to producers, that saved would speedily make them rich with good facilities for manufacture, a thorough knowledge of all its processes and abundant skill in manipulating them. Many fail of success because they do not understand how to handle stock after it is made. They are good loggers and saw-mill men to the point of being able to turn out lumber of excellent quality and in satisfactory quantity ; but they are not good lumbermen, because they fail to properly care for the product of their mills after getting it into merchantable shape.

At too many mills, especially small ones, lumber is still treated from the moment it leaves the saw. It is often improperly piled, imperfectly seasoned, and so carelessly and unskillfully handled as to be injured by many per cent, before it is even ready to ship, and in that operation it is not unlikely that a further injury is done, so that when the stock finally gets to the buyer, its value is only a fraction of what it ought to be, or what it actually was as it came from the mill. Even the most painstaking care will not save it from damage, unless it follows it from the moment of cutting to its delivery at destination and into the hands of the buyer. A case illustrating this came to notice a few days ago. A car load of clear yellow pine, dressed and sized, was recently unloaded that inspected more than two-thirds culls, merely because the shipper had put the stock, not fully dry, into a closed car and sealed it up. The heat with the absence of any ventilation, caused the sap in the lumber to ferment, and when the stock was taken out a large portion of it was so badly stained as to be worthless. Otherwise it was splendid lumber in every way. Perfectly sawed and dressed, every piece of even width, it was lumber to excite the admiration of everyone who saw it ; yet it was nothing but culls, worth probably several dollars a thousand less than the producer paid for putting it on the car. No doubt the report the receiver made on this lumber brought a vigorous remonstrance from the shipper, who no doubt found it hard to believe that the splendid stock which he put into the car could be nothing but worthless rubbish when it came out. Yet no judge of lumber who saw it unloaded could deny the justice and fairness of the inspection which made most of it cull. The damage would have been less had the stock been rough, as most of the stain would dress out, but it was ruinous to dress lumber, and for a dealer simply destroy its value entirely.

The fault here was improperly caring for the lumber in shipping, after it had been well handled up to the point of loading. Knowing that it would be some time on the road, the shipper should have either made sure that the stock was thoroughly dry or seen to it that it was so loaded as to provide for proper ventilation. If it had been suggested to him that he take the same stock and dead-pile it as it came from the planer, and allow it to remain so for two or three weeks, the party who sent this lumber to market would no doubt have been indignant, that anybody should assume that he could be so careless, yet he put the stuff without a second thought into a position far more hazardous, inasmuch as in the car, closely confined, there was no chance for a circulation of air or for the escape of moisture. It was simply a case of carelessness.

No lumbermen need be told that the possible profits of the lumber business are not sufficient to cover losses arising from such a needless waste as this. Every saw-mill operation is figured upon the assumption that the good lumber, and indeed all the lumber, that can be produced from the timber is to reach the market and to be worth the full market price. Allowance is made only for the legitimate cost of production, not for the loss that comes from the needless waste through carelessness and lack of skill. This is one reason why the preliminary calculations of their timber buyers are so seldom realized when they come to operate their saw-mill. A small percentage of stock reduced in grade through imperfect manufacture, imperfect methods of handling, or by sheer carelessness, will easily use up all the expected profit, leaving to the unlucky owners only the barren satisfaction of getting back what their timber and sawing cost, and often not even that. The frequency of failure in the mill business is familiar ; may it not be that carelessness in handling and shipping the lumber is one of its prime causes ?

THE DANGERS OF CHEAP BOILER INSURANCE.

THE danger of employing unqualified boiler inspectors was recently well exemplified in a small English town by a boiler explosion which did considerable damage to property in the immediate neighborhood of the scene of action. The boiler in question, it would seem, had gone the way that many boilers unfortunately do go, after having served nearly the full period of their usefulness, from its last place of fairly safe operation to the paint shop of a second-hand dealer, from which it emerged spick and span, ready to be sold again to someone unacquainted with its history and eager for a bargain. Paint has a wonderful rejuvenating power over boilers as well as some other things, and with the help of an unprincipled inspector's certificate, soon had this boiler again at work with the result, before long, of a wrecked boiler house, damaged buildings adjoining, though happily no loss of life, and a bill for the owner for the costs of the usual investigation by the local authorities. The payment of the costs was exacted "as a warning to other steam users who rely upon unqualified, incompetent inspection, because it is cheap, and afterward plead ignorance as an excuse for their conduct."

This episode pointedly directs attention once more to the subject of cheap boiler inspection and insurance, which off and on has been condemned for many years, though evidently not with sufficient vigor to have brought about its suppression. Cheap inspection and insurance rates, in fact, seems to possess an allurement to many boiler owners which is surprising, when even slight consideration will show that cheap service of any kind in connection with boilers is simply not worth having. It cannot be profitable, but certainly will prove dangerous. England, more than any other country, has suffered from a multiplicity of boiler inspection and insurance companies, and with growing competition among these and failure on the part of steam users to properly appreciate the value of thorough and conscientious examination of the boilers, decrease in price and corresponding decrease in the reliability of the service rendered have become natural and unavoidable results. There is a price, as has often been argued, below which a guarantee of faithful inspection cannot possibly be extended without seriously affecting the financial stability of any insurance company. A close approximation to what this price is could probably be made in most cases without much difficulty, and any offer of insurance and inspection at a much lower rate should be regarded with suspicion.—Cassier's Magazine.

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VIEWS AND INTERVIEWS.

Creosoting Timber.

Some of the drawbacks that come of creosoting timber are stated by the representative of a New Haven, Conn., firm, that has just finished working a lot of 60,000 feet of timber that had been creosoted for a building being erected at Yale College. It cost $11.50 per thousand to creosote it and a great deal of it was badly cracked and warped by the operation, so that from whatever benefits are gained by the creosoting must be taken the injury to the timber by the creosoting process. It would seem from this that the remedy in this case was as bad as the disease could have been.

Wood for Smoking Pipes.

There is good news for the smoker of a pipe, and there is a supply of comfort therein in the pipe, we mean. The official organ of the New South Wales agricultural department announces that a new and altogether superior wood from which to manufacture smoking pipes has recently been discovered in that province. It is obtained from a small tree or large bush which grows in moderate profusion in the interior. It is known by various names: the natives call it "ury," because it has prickly leaves it is called "needle-bush," because a supply of water can be obtained by the thirsty traveller from its fleshy roots it is called the "water tree," and on account of its color and texture it is called "beef wood." The official reporter recommends it thus: "Being a smoker, I can say confidently that it surpasses cherry, briar, or any other pipe material I have ever seen."

Wormy Oak

The theory usually given as to why oak does not always stay sound and firm, is that it passes through the prime of life like man, and after that time begins to decline. This is the most reasonable logic, but there is another reason given for wormy timber, and it seems correct, too, and that is the occasional falling of a tree knocks off limbs from other trees, and insects attack the broken branches near the body while fresh, and thus form an entrance into the trunk of the tree and destroy it. Standing a worm-rotten stick against the bark has been said to give the worm a chance to eat into the tree. The woodsman sometimes blazes a tree; hacks a chip or so out to remind him if he comes that way that he had been on that ground, and thus gives insects a chance to get a foothold. Woodpeckers, it is believed by some, cause worms to get into trees, but I would think they were a great benefit by hunting out the insect for food.

Wooden Clothes.

Time was when references to a "wooden overcoat" were understood as the irreverent equivalent of measuring a man for a coffin; but it would seem that suits of clothes made of wood may soon be an accomplished fact, says an English paper. The writer is indebted to a merchant of the city of cloth (Leeds) for a glimpse of a species of cloth, and also a sort of cotton, made wholly out of wood fibre, these two woven pieces having all the appearance of attractive articles of their own kind. Both these textile fabrics are the result of prolonged experiments with pine wood and spruce, which have been ingeniously torn to pieces in the first instance, and then bleached by an elaborate process. After several chemical treatments the wood becomes a soft white pulp, which is run through perforated plates, the resulting threads being dried by a steaming process. These threads can be woven, and the material is susceptible of taking readily any sort of dye. The fabric can be made at an astonishingly cheap cost; it looks well, has a certain amount of strength—experiments in this connection are now being carried out—and its appearance on the market, sooner or later, is absolutely certain, especially in the form of imitation cotton.

A THREE CENT STAMP DOES IT.

ON receipt of a three cent stamp we will mail free to any address a copy of our little hand-book entitled "Rules and Regulations for the inspection of pine and hardwood lumber," as adopted by the lumber section and sanctioned by the Council of the Board of Trade, of Toronto June 16, 1890. Address, CANADA LUMBERMAN, Toronto, Ont.

CIRCULAR RESAW MACHINES.

RESAW machines designed for running solid saws are usually comprehended, says Theron L. Hiles in the Wood Worker, within three sizes—for 24, 36 and 44-inch saws. There is also a heavier machine for 46-inch saws. The smaller size is principally used for resawing siding or clapboard stock, and is sometimes used for resawing cigar-box lumber and for making stove board stock, for which latter purpose two saws are run on the same arbor, making three pieces at each cut. The 36-inch machine will cut boards 14 inches wide and is used for resawing box and trunk lumber, panels, furniture stock, etc. Boards are resawed in the center and planks cut into three or more pieces.

The 44-inch machine will cut boards 18 inches wide and perform the same general line of work. The 46-inch machines are of the same general construction, but are heavier than the average; they have longer journals, larger bearings, heavier rolls and in other features are unusually substantial. All these machines have a similarity of design and operation, the salient features of which, being well known, will not be recounted here. The details of construction vary considerably, but the same ends are attained without any very radical variations being made.

All the manufacturers provide for setting the arbor nearer to the feed rolls as the saw is reduced in diameter. Only one maker, at least so far as the writer has observed, provides for raising and lowering the saw in the frame for cutting wide or narrow stock and using the top of the saw in both cases. There is an advantage in this: the teeth cutting more in the direction of the grain, the sawing is more easily done, and the friction is reduced to the minimum by using the thinnest portion of the saw only. Some attempts to accomplish the same end are made by sawyers who fit a board on top of the bed-plate, thus raising the lumber to be sawed. Some provision for readily raising and lowering the saw or the bed-plate would be a desirable feature on all resawing machines.

It sometimes occurs that where one board does not butt up against the end of the one preceding it in the rolls, the end of the latter, as soon as free from the pressure of the rolls and before the saw has cut entirely to the end of the board, is caught in the teeth of the saw and driven with great force against the bed-plate. The shock is usually damaging to the saw, often breaking out teeth, which lodge in the lumber and strip others off the saw before it can be stopped.

There have been some efforts made to extend the jaws at the back of the feed rolls so that they would support and hold the boards close up to the edge of the saw. This is an important point, but usually such jaws are not given sufficient support and fail in a measure to accomplish the end in view. Spreaders, attached to the bed-plate at the sides of the saw, are useful in relieving the side pressure and consequent heating of the saw. A large spreader is set at the rear of the saw.

It would prove the efficiency of some machines if the frame were extended above the rolls to give them more support on top and hold the lumber as surely on the top as on the bottom edge. Such a construction would also have the advantage of providing ample support for the jaws. There are some considerations in favor of extending a top frame to the back of the machine, having the easy adjustment of the bed-plate in view.

The arbors are of special importance in determining the proportions of resaw machines. They are better for having yoked bearings arranged for self-oiling and provided with dust-excluders. The bearings should be large and carefully fitted, as an arbor which runs hot cripples the saw.

The arbor collars are of more than passing interest, as a slight defect here will be multiplied many times at the tooth of the saw. Correctly-made, they clamp first at the extreme edge of the collar and do not strike the saw at all below a line three-fourths to one inch from the edge of the collar. The nut, if a tight fit, will pinch the collar on one side and cause the saw to run out of true.

Upon the form and weight of the frame depend many points for or against the successful operation of resaws. Weight and stiffness are essential. No possible strain from crooked lumber should cause any part to yield or spring from its place. The action of the pressure-bar must be sensitive to the slightest variations in the thickness of the lumber, and the force exerted very powerful.

The distribution and proportions of metal in the frame, to give support to all parts commensurate to the stress in different parts of the machine, is a subject which requires observation and experience combined with a thorough technical knowledge, to secure correct construction. If the frame is too light for the work it is given to do, it is soon out of condition and the saw not only lacks support but is subjected to strains and concussions which it is not designed for or able to bear. A frame not equally strong in all parts is little if any better than a slight one. The weak point determines the capacity of the machine.

The frames of resaw machines are self-contained and designed to be placed upon any level floor to which they can be secured. No recommendation as to the value of a solid, heavy foundation is usually given to the purchaser by the maker. There is a prevalent opinion that the machine, being self-contained, can be set up most anywhere. As the responsibility of the maker does not extend beyond the machine itself, the setting is usually left entirely with the user.

Indifference as to a lack of knowledge regarding the value of a proper foundation upon which to place machinery of this description, would be dispelled by a thoughtful consideration of the subject by almost any practical mill man. The sensitiveness of saws running at high speeds, and the thinness to which the plate is reduced, make it obvious that all strains and vibrations which it is practicable to avoid should be carefully eliminated.

There is a rapid variation in the resistance of the lumber to the saw. Wide or narrow boards; knots, few or many, hard or soft, transverse or shearing, tight or loose in their sockets; some boards sound, others shaky; some dry, others wet or green; some pieces hug the saw, others spring clear; some warped or winding, while others have short kinks—these and other variances produce many different effects on the saw and machine. Some cause a variation in power consumed in driving the saw; others act like a blow struck against the saw. Shocks and vibrations are absorbed or dissipated by a heavy foundation, which would otherwise give trouble. A steady power, ample for the heaviest demands, keeps the saw running up to speed. The accommodation of the feed to the peculiarities of the lumber depends upon the expertness of the sawyer.

Electricity will doubtless be applied both to driving resaws and feeding the lumber. A motor properly proportioned to the requirements of the saw and feed would furnish an ideal driving power. The current consumed by the motor varies directly with the labor to be performed, so that there is always just enough force to mantain the set conditions. Electro-magnets for feedways would have decided advantages over the prevalent arrangements of feed rolls. It is to be hoped that so promising a field for the extension of the practical application of electricity in the mechanical world, will not long remain unexplored.

TESTING MOISTURE IN STEAM.

A METHOD of testing the amount of moisture in steam has been discussed by the Institution of Engineers and Shipbuilders, Scotland. The principle in this case, more particularly applicable to marine engines, consists in comparing the saltness of the steam with that of the water in the boiler. The test, as explained, is carried out by means of nitrate of silver, and the reaction is so delicate that, with only one per cent. of salt in the boiler, 1 per cent. of priming water can be accurately determined to the second decimal. To one part of salt boiler water there is added 100 parts of pure condensed water, and into this is poured a small quantity of concentrated solution of yellow chromate of potash: then a nitrate of silver solution containing about 1-10 per cent. of this salt is slowly added. With each drop the salt water turns locally red, but this color disappears at first; later on, when all the salt has been acted on, the whole fluid changes color from pale yellow to orange. The quantity of nitrate solution is noted, and then the experiment is repeated on the condensed steam from the engine undiluted with distilled water. The ratio of the quantities of nitrate of silver solution used in the two tests expresses the amount of priming in per cent.

LUMBER TRADE WITH THE ARGENTINE REPUBLIC.

MR. J. Arthur Maguire, Consul-General for the Argentine Republic, when in St. John, N. B., a few weeks since was interviewed concerning the probable increase in duty on spruce going into that country. He said: The commission, which was appointed by the Argentine Republic on the tariff question thought the tariff bill, which passed the United States Congress would reduce the duties on all goods from the Argentine Republic, still more than under the existing reciprocity treaty between that country and the United States, and they recommended to their Government that the duty on hard pine from the States be lowered from $13 to $9, and that the duties on spruce and white pine from Canada be increased from $2.50 per 1,000 feet on the former to $4.37 and on white pine to $4.67 as compared to $2.50. These recommendations, he said, had not yet been carried out, and he did not think they ever would be. He had had cables and letters from Buenos Ayres and had not been notified of any change in the tariff. The Argentine Republic, said Mr. Maguire, grew large quantities of hard woods, equally as good as the United States pine, and if the duties on the latter article were reduced the Argentine merchants feared that the country would be flooded and the home wood could not be sold in its own market. If the suggested new tariff came into force pitch pine would take the place of spruce, as it could be purchased almost as cheaply in the States now and is almost equally as good for the Argentine requirements. In case the tariff is adopted he will take precautions to prevent the shipping of Quebec lumber from Portland as American lumber. He will have it so fixed that all Quebec lumber shipped through Portland will be accompanied by certificates of origin, so that the Americans cannot send the lumber forward as the product of their country. Portland, he says, can never compete with Quebec in the shipments of spruce and white pine. Personally, Mr. Maguire says, he would not have any fears of increased duties if he were sending a cargo to the Argentine Republic.

The other day Mr. Maguire was comparing the shipments of lumber from New Brunswick and Nova Scotia to the Argentine ports, and found that the two Provinces had sent forward four times as much this year as in 1892.

Mr. Maguire feels that the Argentines have a country of wonderful resources. Last year a million bushels of wheat were sent over the world from the Republic, and this year the shipments will amount to one million and a half bushels. Mr. Maguire sailed on Dec. 15th from Halifax for Europe, whence he will go to the Argentine Republic on business connected with his office. He expects to be absent about four months. Mr. Maguire's headquarters are at Quebec.

CHIMNEY DRAUGHT.

IF any one will look over the transactions of the mechanical engineer societies, says the Manufacturers' Gazette, and read the discussions on chimney draught, he will be surprised at the differences of opinion expressed by the learned men. But there is one fact as to which there can be no doubt, namely, to produce a good draught in any chimney, the height of the chimney is an essential factor for the economic combustion of fuel.

The draught power of chimneys is dependent on their area of cross section and height, other things being equal. The ordinary tables of formulæ for dimensions of chimneys for various horse powers of boilers are based on the following assumed or asserted data:

First—The draught power varies as the square root of the height.

Second—The power varies directly as the area of the shaft.

Boiler-makers as a rule assume the above to be correct. Now as to the facts in practice: The draught power based on the above for a chimney 48 inches in diameter and 150 feet high would be only sufficient for 425 horse-power boilers, whereas Le Van says he has actually produced 1,000 horse-power (based on 30 pounds of water evaporation) by a chimney of the above dimensions, and propose to add a 200 horse-power boiler as soon as may be required.

The above is cited to show the fallacy of all the formulæ as to draught power of chimneys. It is assumed, according to the above rule, that their height should be eight times the area of the chimney. The quality or kind of fuel is not stated.

The important factor, grate surface, depends on the different kinds of fuel used, and the conditions under which the fuel is burned. Again, the tables are also based on a temperature in the chimney of 600 degrees a very high temperature, it would seem, having in view proper economy. The intensity or degree of heat evolved by the fuel varies in proportion to the rate at which it burns; the greater the draught is the greater the amount of work produced from the same fuel.

The power of draught is directly proportional to the height of the chimney, and the velocity with which the external air flows in to supply the draught depends upon the temperature of the ascending gases. The higher the temperature is the lighter will be the gases, which consequently will produce a stronger draught.

There is draught in a chimney without fire. In a great many chimneys the infiltration of air through the masonry has, no doubt, a great influence to retard the velocity of the heated gases when in use. The intensity of draught is independent of the area, and depends upon the difference between the inside and outside temperature. The degrees of heat produced by the fuel vary in proportion to the rate at which it burns; the greater the draught, the greater the amount of work that will be produced from the same fuel.

This goes to show the importance of tall chimneys; therefore, the power of draught is directly proportional to the height of the chimney, and the velocity with which the external air flows in to supply the draught, depends upon the temperature of the ascending gases.

Air at 250 degrees temperature expands to double its volume at 32 degrees; therefore, the higher the temperature the lighter will be the gases, which, consequently, will create a stronger draught.

A rapid draught is, in one respect, equivalent to a large fire-grate area, since it enables more fuel to be burned in a given time, and thus increases the power of the boiler in generating steam. A rapid draught, however, has this advantage, that, inasmuch as the temperature of the furnace is higher when the same quality of heat is generated in a small space than it will be when generated in a large space, the heat is transmitted much more rapidly to the water in the boiler in the case of the strong draught, by reason of the higher temperature thus obtained. The manufacturing requirements of modern times demand the building of high chimneys, so as to enable more fuel to be burned in a given space of time, and thus increase the boiler.

HARDWOOD DIMENSION.

THE business of cutting dimension stock from hardwood is one that requires considerable study, and the average operator, not having much experience, usually works at a loss, says C. P. Crosby in an article in Hardwood. It must be remembered at all times that a manufacturer of chairs or tables, or any such goods, when buying dimension stock, insists on getting it as low as possible, say about 30 per cent. less than first and second lumber would cost him, and that he will inspect it in the most rigid manner. Should a piece be a trifle warped or checked, or should there be a knot on one side, even if the piece is to be so used that the knot will not show, that piece is culled.

I recently saw about three carloads of rock elm wagon stock that has been cut for a company and rejected, or rather the perfect stock was taken and the balance left at the mill Scarcely a piece had any more serious defect than a simple sun check or a knot one-quarter inch in diameter, or some other little thing like that; and had this wagon company cut the stock themselves from dry plank, they would most likely have used every piece. This illustrates how dimensions will be culled.

No. The way to do it is to cut all the good lumber out of these culls in the mill; then either work it to the size you want, or pile it by itself, where it can be reached easily when you have orders for it. But usually you can cut it to length and size in the saw mill, and then, if it is piled under cover, it will season without warping or checking.

Do not think you can take the dry culls from the yard and manufacture them as cheaply as the green stock. I will cite the case of a large concern in Wisconsin which pursued the plan of selling its common and better and piling back the culls, until there was as much cull as anything else in the yard. They would saw the log properly, turning it until the heart was reached, and finally leave a 3×8 or 3×10 heart plank. This heart plank they were in the habit of taking into the planing mill when dry and ripping for table legs, etc. But in many cases they would not get one piece out of a plank, and they were doing all this work for nothing. The one-inch stock they treated the same, but this of course had better material in it and yielded some bed and chair stock as well as some flooring. Still the manager of the company got so discouraged by the culls which seemed to accumulate faster than they could cut them up, that he resigned, and his place was filled by a younger man.

I advised the new man to cut his three-inch plank into wood and rip out all the good stock from the culls in the saw mill, but I have not been at the mill in question since the new management took control, and do not know what course was followed.

There are a number of dimension sizes which can be cut and sold green, and this is the best way to sell them, as they have no opportunity to check or warp. I especially allude to neck yokes, singletrees and doubletrees, which are preferable green, as they will turn up more easily than if dry.

A mill man soon gets discouraged trying to cut piece stuff out of culls, as the first contract he takes is usually a large one, and his first shipments are culled pretty liberally, while the price is so low that he can barely get out even when everything is accepted. A few shipments of this kind disgust him so that he stops cutting and disposes of his stock at any price he can get. But when he learns the business slowly, taking no contracts, but finds out where are salable sizes and cuts enough to make a carload or so, and then sells it and cuts some more, cautiously developing the business and gathering experience, he finds a vast field lying open to him, nowhere overstocked with good material; and by making an absolutely perfect article and cutting the sizes ordered, he can build up as large a business as he is able to handle, and will probably find it profitable.

Let him learn at the outset that there is no sense in cutting up a 3×10×16 to get one table leg worth five cents, and he has grasped the most important fact in the whole business. If his culls are worth $5 in the yard, he must get at least $15 for his product, or he is not doing a successful business. It takes fully as long to handle one table leg as it would to pile or load a piece of lumber that would scale eight or ten times as many feet. As one very bright mill man expressed it: "It takes a lumber piler just as long to pile a piece of 2×4×6 as it would a 2×10×16."

Every piece of dimension stock must be handled separately and examined on all sides before it goes into the car, and it takes a great deal of time to do it. The smaller the sizes, the lower is the price, and yet it costs a great deal more to handle them. After a man has gained experience in the business he can save considerable small stuff out of slabs and edgings, which is so much clear cash in his pockets. There is no limit to the sizes to be cut or to the time one might spend in discussing the question.

WORDS OF CHEER.

J. T. SCHELL, of Macpherson & Schell, Alexandria, Ont., writes: "I have for some years considered the CANADA LUMBERMAN the best of its kind we have had before us as a trade paper, giving general information, good market reports and conveying to my mind freedom from fads, booms and jingo bombast not always absent from lumber journals. Your weekly edition should be appreciated."

Mr. Banford, of the firm of Banford Bros., Listowel, Ont., was accidently killed in his planing mill at that place, while working with a circular saw.

Messrs. Cutler & Savage, of Michigan, have purchased from Cook Bros. limits 111 and 117 for $75,000. Mr. Barnet, of Barnet & Mackie, Renfrew, Ont., has bought No. 1 Paxton limit. The price in this case has not been disclosed.

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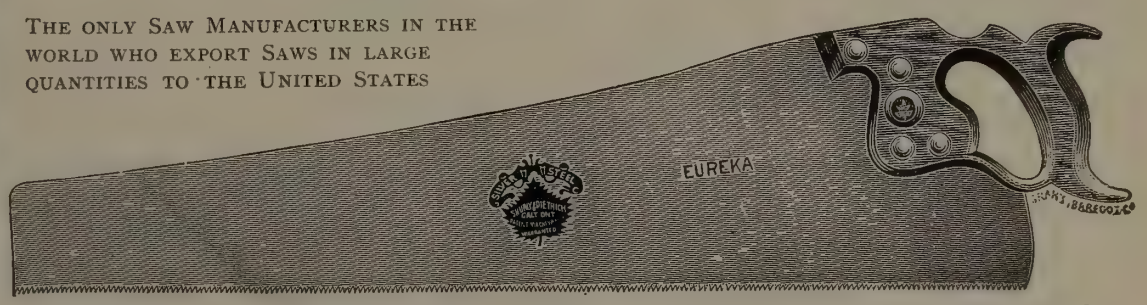

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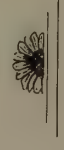

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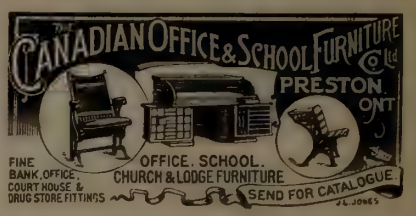

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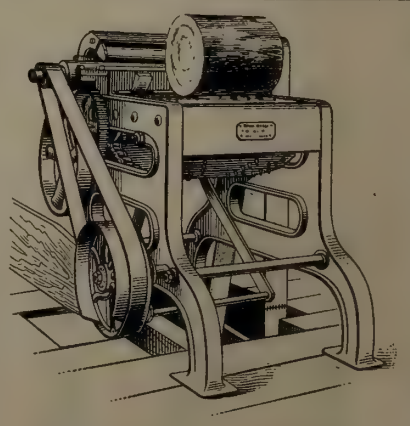

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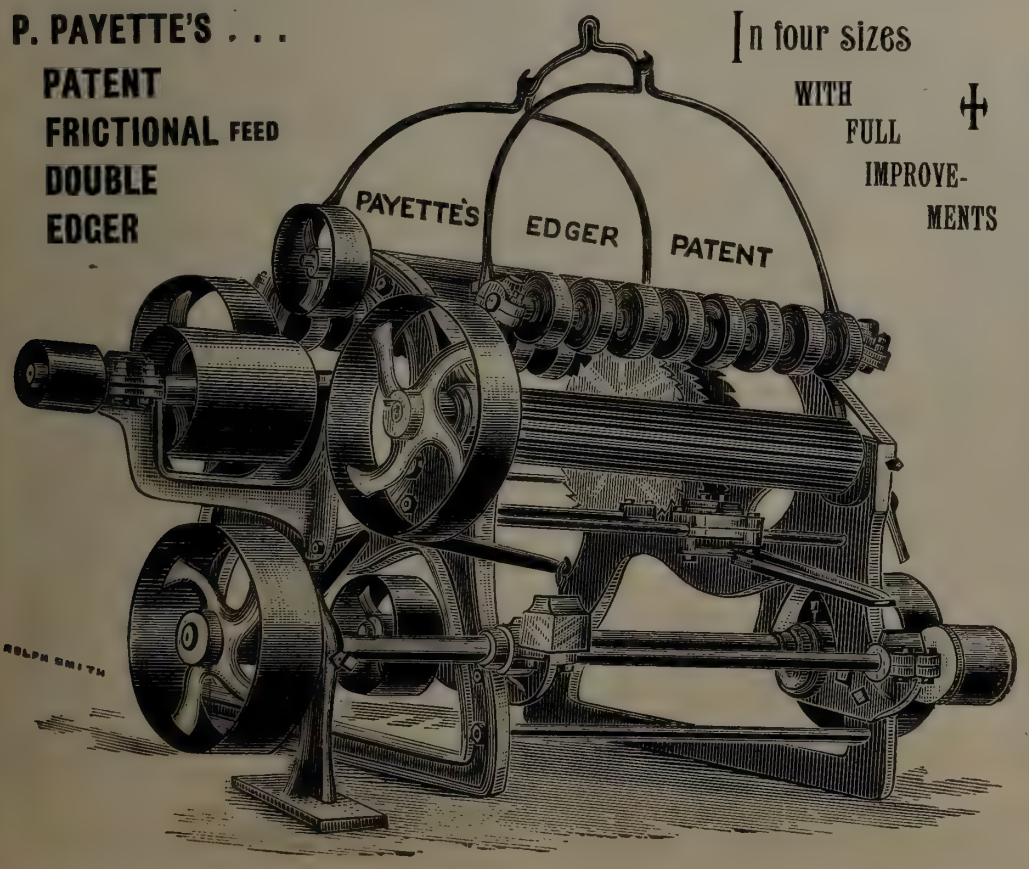

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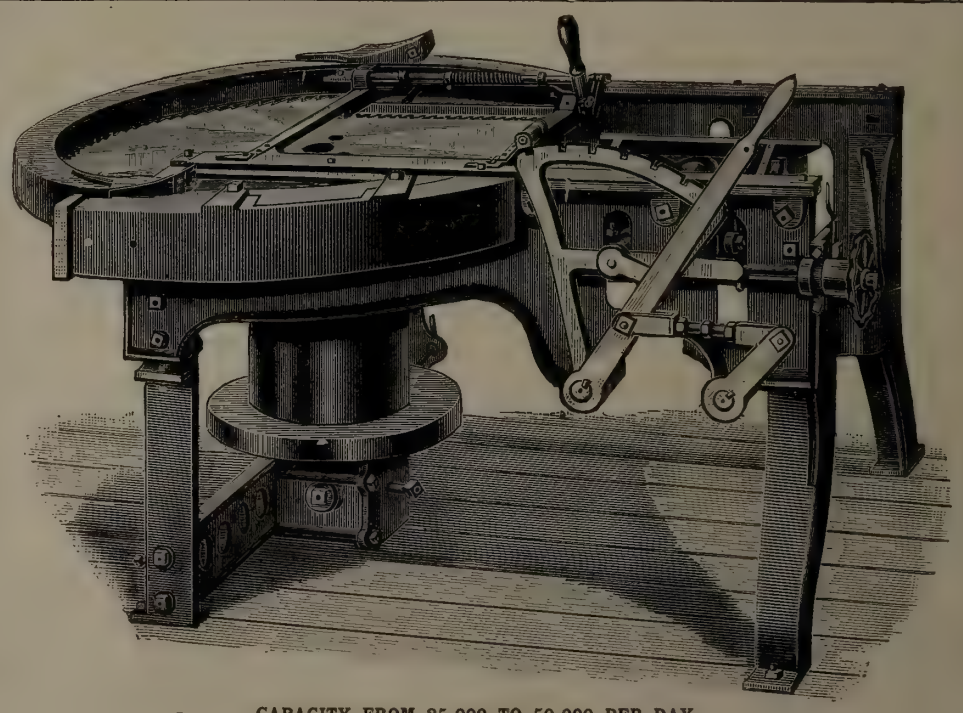

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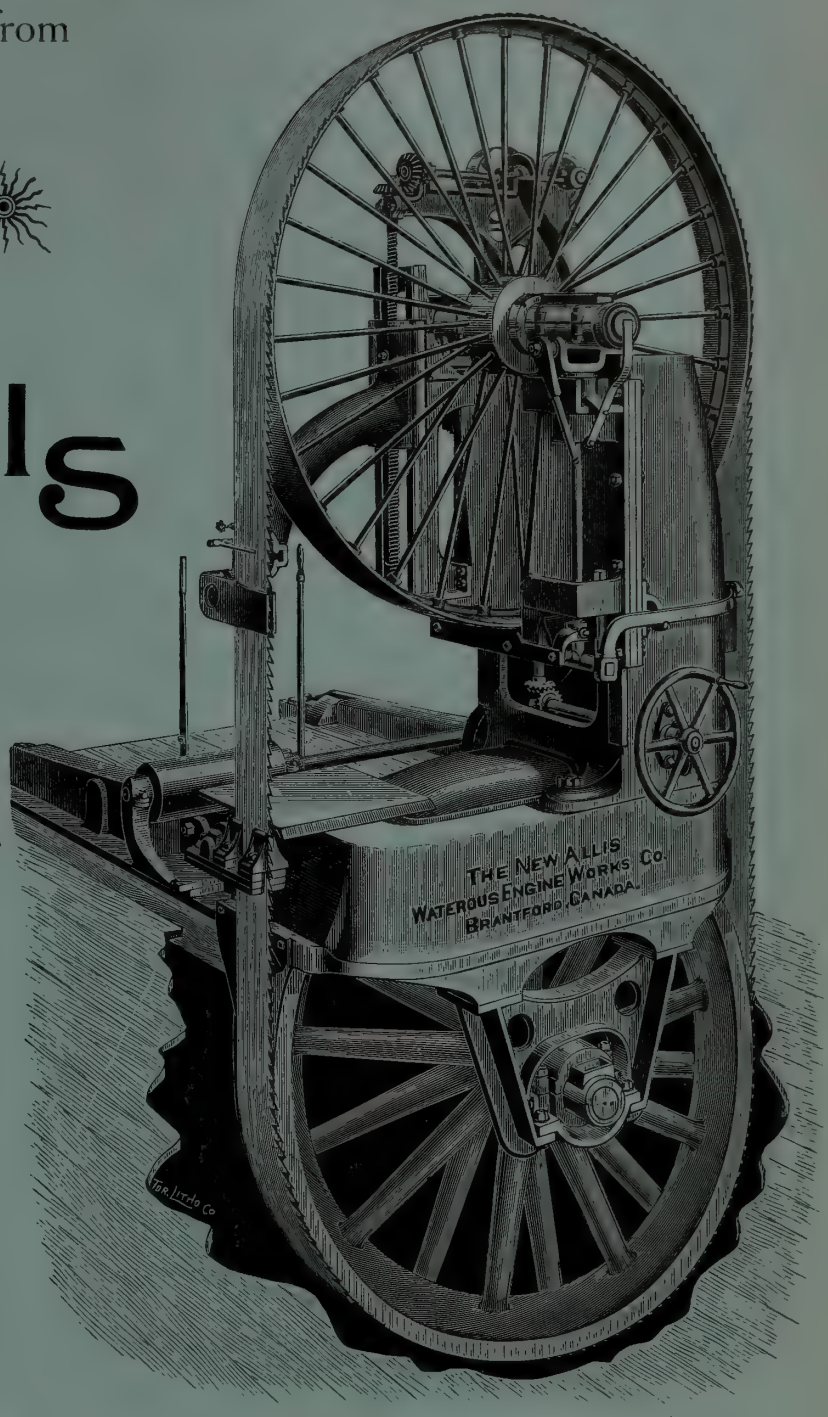

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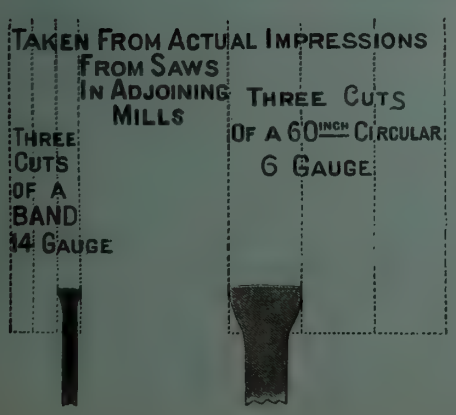

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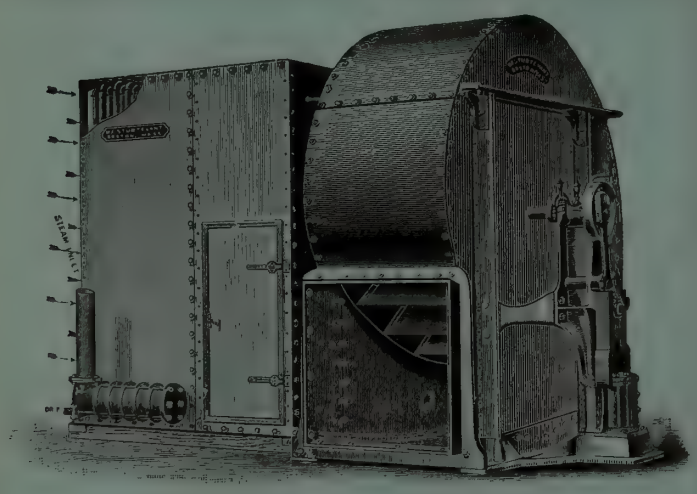

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THE CANADA LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XVI. NUMBER 2. | TORONTO, ONT., FEBRUARY, 1895 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

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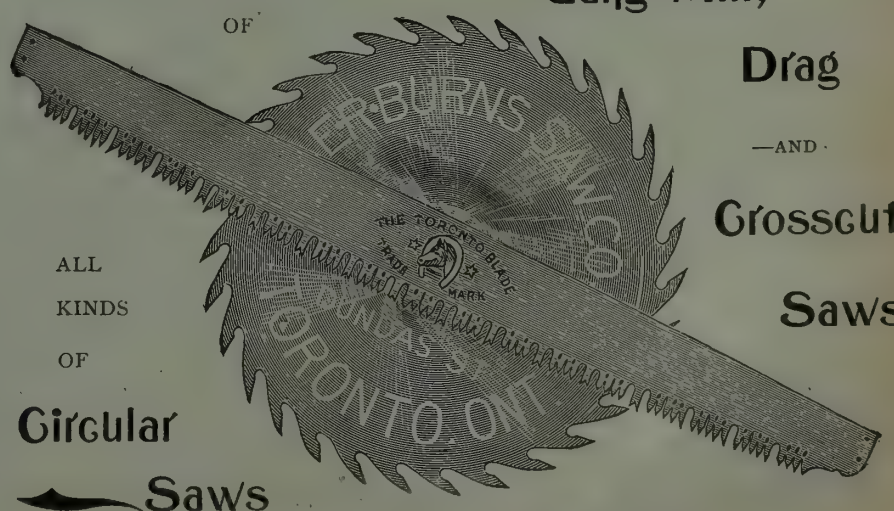

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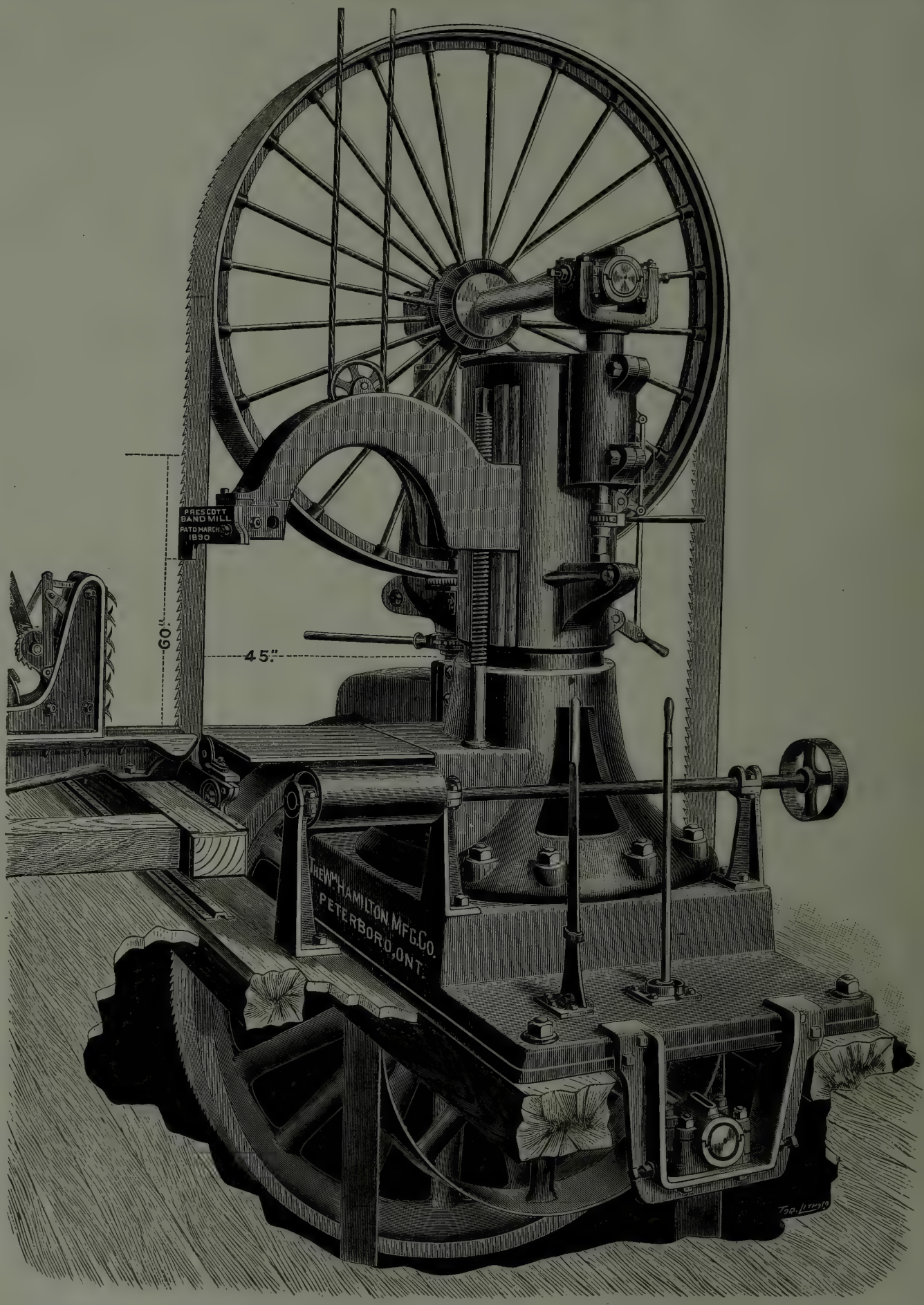

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THE CANADA LUMBERMAN

VOLUME XVI. NUMBER 2. } TORONTO, ONT., FEBRUARY, 1895 { TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

BY THE WAY.

THE lumber section of the Toronto Board of Trade is settling down to the business of the year. At a meeting a week ago the following officers were elected: Executive Committee, Ald. Jos. Oliver and James Scott, and Geo. Gall and John Firstbrook; Arbitration Committee, J. Donogh, Robert Laidlaw and C. Beck, of Penetanguishene. With an executive possessing men as thoroughly representative of the trade as is indicated by the names here recorded there is likely to be some active work done during the year. It is useless to say that lumbermen are different from those of other commercial bodies and have little or no occasion to get together at intervals and talk over and plan trade matters. We fear that sometimes this feeling takes hold of them and there is less of the *esprit de corps* than there might be among so important an interest. We do not take much stock in the Hoo-Hoo concatenations of the lumbermen of the United States. There would seem to be a lot of nonsense in connection with the affair, and yet back of it is the idea of lumbermen, whose relations with one another become sometimes a little strained through business transactions, coming together in fraternal intercourse and learning a little more of each other. Some Hoo-Hoo kittens might be brought to light in this country with gain in this particular.

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Those who are interested in the British Columbia lumber trade complain that so far they have been unable to enlist the influence of the Provincial Government in the way of inducing the Dominion authorities so to modify the regulations relating to towage and pilotage as to relieve them of the disabilities under which they labor when competing with the lumber mills of the Sound for the California and foreign trade. They claim—and very properly—that British Columbia lumber is superior to the article against which it has to compete, and in consequence is more highly esteemed, but the disability referred to is a most serious one, and ought to be removed.

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As indicating some of the changes of recent tariff legislation, Graham, Horne & Co., of Fort William, say: "Our trade heretofore has been wholly in Manitoba and the west. Free lumber brought Duluth and Minneapolis mills in direct competition with Canadian mills supplying that trade. The Americans have cut into the trade to some extent and probably will to some extent keep on sending lumber into Manitoba, so we look for no improvement as a result of free lumber west. On the other hand, our mill being on Lake Superior, with facility for shipping by water to the east, we think we can market a portion of our cut in the U. S. Having this in view, we have increased our log output this winter."

× × × ×

The little value that is often placed on an article of great value has found frequent illustration in all lines of commerce. We see cases in point every day in the lumber business. A news item tells the story that the farmers about Cadillac, Mich., are hauling bird's eye maple cut into stove wood into town and selling it at 90c. a cord. This timber would readily bring $20. a 1000 in the log. But the farmers there are not much less short sighted than those in many parts of Canada, who persist in cutting hardwoods for firing, that if allowed to remain in the standing tree, would in a few years prove a little gold mine to them. And it is only a matter of degree the short sightedness that is shown by shrewd lumbermen in the manner in which the forest products are slashed and cut for the lumber market. These are the days when, in Canada, not less than in other places, the little things count, and trees, that a few years ago lumbermen despised, are worth dollars.

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A despatch from Michigan says that Howry & Sons are about sending another gang of men from that State to Canada to push operations in the woods there. This firm now have a large interest in Canadian timber, and they are showing lots of push, both in the woods and other departments of lumbering. They have six camps at work and expect to supply 40,000,000 feet for their new mill at Fenelon Falls. At Little Current they have three camps going, and will get out about 11,000,000 feet, which will be rafted to Michigan to feed the firm's mills there. The output of the mills of this concern at Michigan during the past two seasons is shown in about 50,000,000 feet of lumber, the logs coming from Canada. The Howrys' are old residents of Saginaw.

HARDWOOD DIMENSIONS.

IN the LUMBERMAN of January we published an article from Hardwood on "Hardwood Dimensions". To some of the statements there made Mr. H. R. A. Baughman replies as follows in the Wood Worker:- There are a few points on which I differ with Mr. Crosby. One point is, where he advised the cutting of the three-inch culls from heart of logs, into wood. My advice would be to leave the logs in the tree in the wood, as they are of more value to the man that buys the land for the farm, than they are in the three-inch plank wood, or any where else. I have known of firms who paid from five to nine dollars per thousand feet to get their logs to the mill, when fully one-half the logs would make nothing but culls, and as there are always more or less culls from best logs it will readily be seen there is a heavy loss on the whole. Added to this must be the cost of cutting into lumber, piling, sorting, rehandling of culls and cuts, and loading on cars.

Another disadvantage that the northern mill man labors under (the north being the section of country that Mr. Crosby speaks of in particular), is that often their plant is too large and expensive for the amount of hardwood they cut; for after they have been running on pine a few years ago, many northern mill men said and believed that there would be more money in cutting off their hardwood than there was in pine. They did not realize that prices quoted for common and better meant that the grade should be in hardwood; a grade equal to a B select or better in pine, and for grade under this a price of not more than five or six dollars, and for a large per cent. of culls no sale at all. Most of them went into the hardwood business in the same way that they had been handling pine. They cut everything they could hold on the carriage, without regard to quality. Of course the sawyer must cut as much as he did in pine, which means thick and thin lumber. Then they barked large quantities of timbers and left them for worms to work on before they were cut into lumber. This would not be quite so bad in some of the states farther south, where more hardwood is used.

Building culls are selling from ten to twenty dollars per thousand feet, and best grades at forty to fifty dollars (these prices at retail), with demand for all lumber cut, of all grades. I have known farmers in these states to realize from one to two dollars per 100 feet this summer, for logs four to ten miles from the mills, and still the mill men seemed to be doing well, for the reason that they had good sale for this poor grade of lumber.

No doubt but the hardwood of the north will within a few years become so valuable as to make the cutting of common and cull logs profitable. It has been but some fifteen years since the writer saw many thousand feet of good pine culls go to the "hell holes" simply because the mill man refused to take them for saw bill and there was no sale for them. Since then the writer has sold many thousand feet of this same grade in Minnesota for eleven dollars per thousand, and in Wisconsin from five to eight dollars per thousand feet.

There is no doubt but hardwood will become as valuable as pine gives out, and the carpenter and builder gets over the prejudice of using it on account of its being harder to work. Already hardwood is being more extensively used in the central and western states than pine. Being stronger, more durable, taking a better polish, and having a fancier figure for finish work, it will come rapidly to the front. As the pine becomes scarcer, and the use of hardwood increases, prices for better grades will go up and there will be a correspondingly higher price for the lower grades, and in time it will pay to cut the common logs in hardwood as it has to cut the white pine.

Until that time comes I would advise in the first place to let all small timber stand, and cut only the larger logs, those that have a large percentage of common and better in them, in place of paying the railway company for hauling many thousand feet that will not pay freight bill. Put smaller mills near timber and cut only logs that will yield a profit, and pay railroads for hauling only lumber sold. It does not pay to put in logs to make only small dimension, for there is a waste of at least fifty per cent. in cutting and grading, and manufacturers will not pay a price for short dimension that will pay to handle it, so long as they can buy common and better at the low price that it can be bought to-day.

RECKLESS USE OF STEAM.

PERHAPS few people who pay for producing steam are as reckless in its use as owners of wood-working plants. Because the fuel used is generally mill refuse, they think economy in the use of steam a trifling matter. The enormous loss by radiation from long, unprotected steam pipes is seldom considered. This is a mistake. To drive saws and planers takes a great deal of power, which means plenty of good steam. If the engine lags when the saw is in the log or the big planer is thrown on, because of insufficient steam, there is a direct loss. The boiler may make enough steam to keep the mill or factory humming, but if much of the force of that steam is lost before it enters the cylinder of the engine, because of unprotected steam pipes poorly arranged, the owner of the concern loses good dollars every day he allows such conditions to exist. Of course, ample engine and boiler capacity is necessary, but its effect may be to a great extent lost through carelessness in various ways.

The circular saw is a tool that needs watching all the time. An exchange tells that a workman was carrying a saw under his arm, when he fell. The points of the saw penetrated two of the main arteries of his arm and the man bled to death.

A great deal has been published in engineering journals about scale in boilers, and yet very little has been said about the accumulation of it, in feed and blow-off pipes. There are men who maintain that scale can not accumulate in pipes in which the water is circulating constantly, or nearly so, as in the case of feed pipes and external or internal circulating pipes; but cases cited will show how fallacious such opinions are. As a matter of fact these pipes often fill up in a remarkable way, the deposit choking them to such an extent that it becomes a source of positive danger.

TALKS WITH WOOD-WORKERS.

TRADITIONS, however dear and venerable, must "go" when they collide with disproving facts and actual experience, says the Lumber World. Their gray whiskers will not save them, for science and investigation have respect only for that which is true, just, exact and reasonable. Woodworkers and users of wood in general have many traditions, some reasonable, but most of them absurd.

Last month a planing mill operative insisted on my believing him when he asserted that "it makes all the difference in the world, in planing wood, either by power or by hand, whether that wood is dried slowly or quickly, by heat or in the open air." When asked to prove his assertion, he confessed that he had no proof at all. He was working on tradition. He could not tell, when blindfolded, which he was planing with a hand-plane, wood heat-dried or wood air-dried. His tradition was shaky.

Another workman insists that wood planes easier and more smoothly when worked from the butt end towards the top. I asked him to make a trial of it with the common plane. I blindfolded him and placed a piece of pine on the bench. When placed into position with the plane in his hand, he made the regular cuts with the tool. To his surprise, he found out that he was cutting more easily and leaving a smoother surface when cutting from top to butt than when cutting from butt to top. He really could not tell which way he was cutting, from the "feel" as the plane moved. His tradition was at fault. He had held it for forty years without ever taking the trouble either to prove or disprove it.

A certain "professor" in a recent lecture made this assertion: "All farmers know posts set top-end down last longer than those set butt-end down." of course while many believe that theory, not a single farmer knows it to be untrue. A farmer gives some interesting testimony in connection with this tradition. He writes: "I helped to build about 50 rods of fence with chestnut posts and white pine and hemlock boards. We picked out three of as good posts as we could find, marked them with three hacks and set them about the middle of the fence top end in the ground. Twenty years and six months after the fence was built, I helped build it over, and found that the marked posts, which were set top-end down, were rotted off at the top of the ground the same as the others set butt-end down. It is said that one trial is not sufficient to determine a fact, but this one trial satisfied me. The pine boards were mostly sound enough to use again, but the hemlock were too dozy. The butt-ends of posts are usually put down because being larger, they are not so likely to be heaved out by the frost, and being larger, and stronger where strength is required." That is strong evidence against that tradition.

That same "professor" lecturing on "Preservation of Wood from Decay," mentioned as a "fact" another mere tradition about "water-seasoning" making timber more lasting, saying that he "had seen an old wagon on his father's farm the hubs of which (of the wagon, not of the farm!) where 'water seasoned elm,' that lasted 50 years." That would be a beautiful proof of the "water seasoned" tradition, but for one element in the case. Had those hubs been left the fifty years without the penetrating and preserving applications of grease and tar usual to wagon hubs, they would have been rotted in less than a quarter of fifty years. Every old observer knows old wagons, whose hubs are warranted not to be "water seasoned," that have been in use fifty years, all on account of the preservative tar and grease. The tradition is good as far as it goes, but it does not go as far through the hubs as the pores, grease and tar goes.

This same "professor" goes on to say: "Dry-rot is caused by a fungus which begins on the surface and pushes the threads of its spawn into the pores, and in time they ramify through the mass." Has not the "professor" got the cart before the horse, the effect confused with the cause? Does the fungus cause dry-rot, or does the dry-rot cause the fungus to grow? If dry-rot begins on the surface, why is it dry-rotted wood is generally sound, to all appearance, on the surface, and spongy and weak inside? Recently I saw-some wooden joists taken out of a building. When in position they had been almost completely free from contact with the air. They look bright and sound on the surface, but a man of ordinary strength could break one of them with his hands. Is "Professor" William H. Brewer very sure that his assertion concerning dry-rot and fungus is scientific? Why do not small timbers dry-rot? Why is it generally only large timbers, imperfectly dry in the center, that dry-rot? Why does not the dry-rot destroy the surface as well as the interior of the timbers? Why should this discriminating fungus attack only large timbers, and attack them only in the interior? Is not this tradition quite as shaky and fungus-infested as any one of the foregoing.

Workers in wood have heard the traditions connected with wood in countless ways, but they have only to test them to find them utterly ridiculous. One general tradition is that persons who use toothpicks from a white pine tree splintered by lightning, will never thereafter have the toothache. The stipulation in this tradition is that the splinters are to be used within three days after the lightning has converted the tree into toothpicks, and that they are not to be touched by any metal tool. I have known many cases of trial of this tradition, and in no case did it ever give the believer any immunity from toothache or any ailment. It is a tradition pure and proper.

One of the really singular traditions connected with wood is the tradition that wood fired by lightning will continue to burn in spite of all the water that may be poured upon the blaze. This tradition seems to extend over the world. According to its terms, the blaze started by lightning can be extinguished only by the use of milk or vinegar. Some of the traditionists, who claim to have tried it, assert that only sweet milk will put out a blaze started by lightning, while others claim it is buttermilk alone that can put it out. In countries where neither sweet nor sour milk is handy, this elastic tradition permits vinegar to do the work. Who does not know at least one farmer who has saved his house, when fired by lightning, by toting up from the cellars the well-filled milk-pans and pouring their lactic contents on the lightning-bred blaze.?

Even lumbermen, most of whom have seen this tradition refuted in the woods, where the lightning-started flames are promptly and invariably quenched by the rain, will let themselves cling to this tradition. They may see water put out a hundred such fires in a year, and yet some of them will go on believing and asserting that "fire started by lightning can not be put out by water." The believers in this tradition generally have heads harder than lignum-vitae and denser than lead, They are believers in spite of all visible, audible and tangible proofs of the falsity of their fad. Great is tradition. Particularly great is tradition relating to wood.

NEW USES FOR BABBITT METAL.

I SHALL attempt in this article, says a writer in the Tradesman, to give some of the numerous uses to which babbitt metal can be applied around the mill and workshop outside of its accustomed place in journal boxes. The writer of this was employed to fire a saw mill, and when I went and took charge of the machinery I noticed that the shaft of the rival pump that fed the boilers with water was sprung, caused by the plunger unscrewing from above, consequently lengthening it till it struck the bottom in running; the result was that when we started up the wabble of the eccentric soon broke that rod in two. As it was thirty miles to a machine shop we were in a dilemma. I took the broken parts and shaft out and took them to the proprietor and told him I would take them to the blacksmith and perhaps he could fix it. I told him also that if they could not, I thought I could make one out of babbitt metal. I took them to the shop and had the shaft straightened, but when they commenced work on the eccentric rod they broke it and it could not be repaired there. I then took the pieces with me and took a key hole saw and made my moulds out of wood. I then cast the broken parts out of the babbitt metal and got back to the mill in time to put it together and be ready for sawing the next day. I ran that mill two years and that babbitt machinery was just as good when I quit as when I first put it up.

I do not advise the use of babbitt metal in every case, nor where a person is close to a machine shop, but in cases like the above, where it would take a week or longer to get the repairs from the shop.

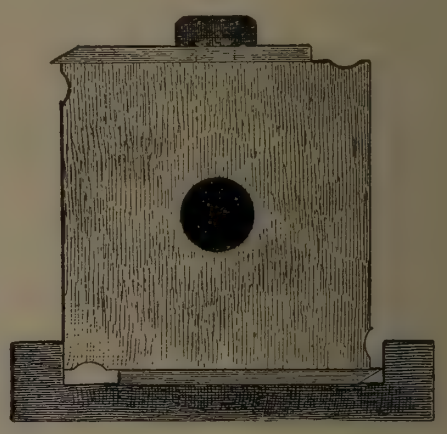
If you have a shaft to put up and have no cast bearings for it you can make them out of babbitt metal. I put up a two and one-quarter inch shaft and made the whole bearings out of babbitt metal, and it has been running six years and the bearings are apparently as good as when first made. I first made my bents and put them in place, having the top of the bents about one inch lower than the bottom of the shaft, when it was in place. I then put my shaft in place and got a cap block and cut a square notch in it about two inches larger than the diameter of the shaft. I placed this notch down over the shaft, the cap block resting on the bent with the shaft in the center of the notch. I then pinned the cap block solid to the bent. I then bored a hole down through the cap block to the notch to put a pin down against the shaft in order to have an oil hole when the box was run. We now fix the shaft in the center of the notch resting on outside supports. We now get some good clay and paste board to fix the ends of the notch ready to run, leaving a place at the top to pour the metal. If you have been careful, you will get a good boxing.

If your shafting is not perfectly round it is best to tie one thickness of paper around the shaft and run the metal around that, turning the shaft a few rounds by hand, when the babbitt gets nearly cold.

SETTING PLANER KNIVES.

A WRITER in Lumber tells of the following plan for setting planer knives, which he says he has used for a long time and found to be excellent :—

Simplicity in construction is the highest point in anything that has anything to do with the construction or



handling of machinery. Planing knives have for a long time been eyesores to many operators of planing machines. While we all know the good there is in making every knife cut alike, there are almost as many different ways of setting them as there are persons running machines. I never use this gauge on more than one wing, and the other knife or knives I set by the first one by holding the end of a stick up to the knife and, after throwing both belts off, turning the head by hand until both knives cut exactly alike. You don't want to screw your last knife down solid till you know that both knives do cut alike, for the bolt may draw the knife a little, or the knife may be sprung a trifle, so that, when the bolt draws the knife down, it will alter it a little. Draw down the knife a little and try it, and when it comes just right draw it down tight. For setting out the first knife I use the simple tool shown in sketch, made of a piece of three-sixteenths by one and one-fourth steel plate. I am always particular to use the same wing every time.

I challenge the wood-working fraternity for any tool more simple or more easily made than this one. The beauty of it is, there are no bolts or screws in it to get loose or break. I don't pretend to say, nor can any man say, positively, that every knife, however set, will cut alike, be there two or more. If they are set this way, however, they will cut so nearly alike that after once or twice sharpening and taking care to see which knife cuts, the operator can get them to cut very evenly. I never use but two knives on a four wing head for any kind of pine work. For oak it is well enough to add two more.

VIEWS AND INTERVIEWS.

Shoe Pegs.

The little town of Shelburne Falls, in Western Massachusetts, enjoys the peculiar distinction of having the products of its peg factory taken exclusively by parties in Germany as supplying a need which that country, for natural reasons, cannot furnish, there being no timber in Germany that equals the American white birch in the manufacture of pegs. The process of manufacture is simple. A four-foot stick is shaved of its bark and sawed into blocks the required length of the peg ; the knots and dead wood are cut out with a pressure auger, and then the thin wheel of wood is ready for the cutting and splitting machines. One operator thrusts two or more blocks into the jaws of the cutter and splitter at a time, and the manufactured article comes out on the other side to be brushed right and left, according to quality, into barrels. The pegs are thoroughly dried in heated cylinders and bleached white and firm. It is no uncommon thing to secure thirty bushels of fine pegs from a cord of white birch, and sometimes a much larger quantity.

A Curious Oak Tree.

Among the ruins of the wall which formerly surrounded the Abbey of Beaulieu, stood an oak, contiguous to a part of the wall, and extended one of its principal limbs in close contact along the summit of it. This limb, at the distance of about three yards from the parent tree, formed a second stem upon the wall by shooting a root into some fissure, in which it probably found a deposit of soil. This root, running along the bottom of the wall, and finding some crannies in it, rose twice again through it, and formed a third and a fourth considerable stem, each at a distance of about three yards from its neighbor. The fourth of these stems shot a branch again along the summit of the wall, and in close contact with it, forming a fifth stem in the same manner that the parent tree has formed the second. This last stem was again making an effort on the wall to extend its curious mode of vegetation still farther. In a great storm which happened in February, 1781, a part of the wall was blown down, and those two stems with it which were nearest the parent tree. Each of these stems was about four or five feet in diameter, and the timber of them was sold for 30s, which shows their bulk was not trifling.

Circular Saw with Diamond Teeth.

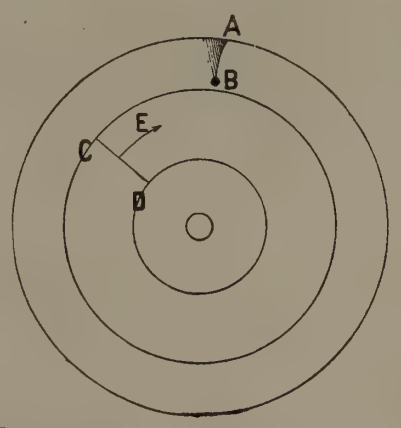
A circular saw with diamond teeth is used for cutting up stone in the quarries of Euville, Meuse, France. These saws consist of circular disks of steel 0.27 inch thick and about seven feet 3 inches in diameter. Rectangular notches are cut in the edge of this disk at intervals of about 1½ inches, into which are fitted blocks of steel carrying the diamonds, these being the inexpensive Brazilian variety used for diamond drills. The blocks are secured to the body of the saw by screws with countersunk heads, while diamonds are fitted in these heads by heating the latter to a bright red heat and forcing them in by pressure. The diamonds are mounted in groups of eight, those on the first and eighth blocks being in the periphery of the disk, the second and sixth at the edges, the fourth and fifth at the sides, and the third and seventh in intermediate positions ; and the instrument is said to be capable of cutting through blocks 3 feet thick, 20-horse power being required to run it. No statement is made as to the kind of stone cut by the apparatus, but it is recorded as having made a cut of 3¾ square feet in one minute. During the first twenty eight months it was at work it sawed over 420,000 square feet of stone, counting one face only, at a total cost of less than 2 cents a square foot, nineteen of the diamond carrier blocks being replaced at an average cost of $2 each.

Uses of Teakwood.

The gathering of this timber store has been an industry ever since man of any color inhabited the country, says the Century Magazine. Teak grows only in India and Burmah, and in old palaces and temples it has held indestructible place for many generations. From the color of sandal wood it changes with age to walnut brown. Big unpainted bungalows standing upon pillars of the wood, sided with it, shingled with it, latticed with it, defy heat and rain, and grow rich upon their poverty of oil and varnish. They stand, as brown as autumn, out of green compounds against summer itself. Vines wrap them, flowers garnish them, years add moss and lichen, but nothing destroys save flame. Railroad car wheels, spikes for laying track, pegs for bolts, implements of all sorts, are made of teak. No one save a shipwright knows just how many parts of a ship are built from this muscle of nature, but every one who has walked the deck of bark or steamer has a consciousness that no amount of holystoning or dragging of cargo over, or wear and tear of feet and traffic, can in an ordinary sense affect a teakwood floor. The Burmese wood-carver knows his art is almost hewn in stone when he coaxes leaf and flower, sacred cow and festival cart, grotesque sprites and elves, gods and Buddhas, out of rugged trunks. The little prow of the sampan, shaped like a wishbone, the stern of the paddy boat, as brown with age as the naked figure upon it is with the elements the strange plinths of stranger pillars, the embellishments of the temples, the playthings of the children—all these are carved from teak.

THE CARE OF CIRCULAR SAWS.

TO locate and take out fast places in a round saw is one of the first and very important things to do. In fact, if the saw is very uneven in tension it will be found very difficult and sometimes impossible to level it up properly without first regulating the tension to a great extent. A case in which this principle needs to be applied is where a saw has been cracked down a piece from the rim by being caught in the timber, and the plate at one side of the crack has been bent out of line,



TREATMENT OF A CRACKED CIRCULAR SAW.

as indicated in the cut from A to B. I have found invariably that the saw would need to be opened between the lines C and D. The steel was stretched at A and B when the saw was broken, and hammering it back would stretch it still more. I have always found that when the "fast" was all taken out of the plate, or a little more between the line C and the center, that there would be no trouble in straightening the rim.

The method that many employ to find the fast places is not always sure. The plan most commonly used is to lift up on the rim and bear down with the straight-edge. But this method will not detect many places that can be found by another way, used by only a few of our best sawmakers. By using a bolt with a head for the opposite side of the saw to catch under, and bearing down on the rim, every fast place will seem to give way from the straight-edge. This process will bring to light many fast places that can not otherwise be found. By getting a nice, uniform tension to commence with, before the saw is made as open as is required for fast motion, the saw will be in much better condition when finished, because, if not done then it will have the same unevenness when opened up, and it will be much more difficult to regulate the strain then.

Before the saw is put on the mandrel the collars should be carefully examined, because they are very liable to wear out of shape. The first thing is to see that there is a good bearing on the extreme outer edge, and just the least bit concave. The loose collar should be a trifle the more so, for when the nut is screwed up it will spring it a little. One cause of the saw's appearing to be sprung when on the mandrel is from raised places around the lug pins, caused by the pressure on them when the saw is in the cut. Of course, that must be removed.—A. Blackmer, in the Wood Worker.

PRACTICAL NOTES.

NOTHING helps the introduction of a new machine or device among practical mechanics more than simplicity of design and the absence of numerous joints and pieces, which tend to shorten the life of the machine as well as impair its efficiency. Joints are good things to avoid where possible, as the inevitable wear is followed by lost motion, which effects the accuracy of the machine.

It is a bad practice to put an over-loaded belt down out of sight, especially where there is any inflammable material. The slipping of a belt on its pulley from overload is a good heat producer, especially if the belt hooks happen to stop in contact with the pulley. The writer saw a case of this kind several years ago, and the streams of sparks that came from that pulley rim would have done credit to a Chinese pin-wheel. Such occurrences are dangerous, and precaution should be taken to render them impossible.—Machinery.

A very bad habit in mills where there are large driving belts, is shifting belts with a square stick, no regular shifters being used. The result of this is the belts are more or less injured on the edges. All heavy machines should have shifters to act so that they shift the belt over steadily, not putting too much strain on the driving belt too suddenly. Two pieces of gas pipe just large enough to revolve on round iron supports, for shifters, will lessen the friction on the edges of heavy belts as these pipes revolve while the belt is being shifted. It effects a great saving in long driving belts ; in fact, any belt at all, leather or rubber.

The transmission of power by ropes has been largely resorted to in England, the preference being given to what is known as the Lambeth cotton rope, which is made of four strands, the center or core of each strand being bunched and slightly twisted, the outside of the strand having a covering of yarns that are firmly twisted. The four strands are further laid with a core in the center to form a rope and twisted in the same way as any four-stranded rope. In this way a rope is formed possessing extreme flexibility, and the fibers will not break by bending on each other when run on pulleys, the rope also standing elongation or stretching some 12 inches in a length of 50 inches before breaking.

Rope transmission is an excellent thing in its way and is applicable under a great variety of conditions and in some cases it will give better results than belts. Where ropes are used the pulleys must be of the proper kind, and set in a manner to conform to the requirements, or the system will give considerable trouble. In one case the action of the ropes, where the distance was only nine feet between the centers of the shafts, was such as to condemn the use of ropes for any kind of transmission in that plant, because the superintendent and his men thought they should work in any way required of them. In this case the distance was too short for the ropes to get a good bearing on the pulleys, one of which was only 12 inches and the other 52 inches. The pulleys, also, were 2½ inches out of line. It was no wonder that the ropes slipped, unless drawn so tight that the bearings heated, and that the strands would fray and break after being in use a very short time. Where endless ropes are employed it is often noticed that one or more ropes are running slack ; this will take place in every case where the pulleys have too many grooves and all are used. More than eight ropes on a single pulley generally cause one or more of the strands to run loose. A speed of more than 5,000 feet per minute will cause the ropes to tend to adhere less closely to the pulley, on account of the centrifugal action, and will not drive as much with the same tension. At speeds lower than 5,000 feet per minute the ropes will give good results if the machinery is properly arranged.—Stationary Engineer.

A despatch from Winnipeg states that two Chicago capitalists are endeavoring to purchase the entire lumber cut of Rat Portage district mills for this year. The pine forests of Minnesota are rapidly being depleted, consequently the United States lumbermen are looking to the Northwestern Ontario woods for their supply.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

PUBLISHED ON THE FIRST OF EACH MONTH

—BY—

C. H. MORTIMER

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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

BIRCH TO THE FRONT.

VARIOUS circumstances go to show that birch is rapidly forging to the front as a wood that will be in strong demand in the future. The opinion of a Canadian lumberman was quoted in our weekly issue of a fortnight ago, that the time was near by when birch would hold a more firm position on the market than is the case with lines of hardwood that to-day are looked upon as being first in the list. As a cabinet wood birch is certainly coming into increased demand. Furniture manufacturers find that it fits in for their work in many desirable ways. To quite a large extent it is taking the place of cherry, and is susceptible of a degree of polish that enables it to fill a popular place where the price bars out cherry. One hardwood dealer, whose experience covers a knowledge of all classes of domestic hardwoods, has said that birch, with its susceptibility to a hard, highly polished and beautiful finish, even excells mahogany and is vastly better than oak, walnut, poplar, and, of course, the softer woods. Messrs. McRae & Co., of Ottawa, have found it to be better than any other wood for their special use in "mahoganizing," "ebonizing," etc., by their patent process.

A good-sized straw, that may be taken as showing which way the wind blows, is found in the statement made by Hardwood, of Chicago, that immense quantities of birch in New Brunswick and Nova Scotia are likely to pass into the control of Boston capitalists. These men are evidently taking a long view, and see that there is a good future ahead for this wood. An important question is, to what extent birch is to be found in any considerable quantities in Canada. An answer is suggested in the action of the Boston capitalists, here reported. This wood is found also in generous supply in the eastern sections of Ontario, and Quebec. An examination of the hardwoods that still exist throughout many of the counties of Ontario show that birch is there in, perhaps, as large quantities as any other class of timber. The mistake ought not to be made, however, of sacrificing this wood as though the supply was absolutely endless.

LUMBER A TRADE BAROMETER.

GOOD reason exists for the hope of business men that the lumber industry will show an encouraging revival this year. To what extent other lines of business rest upon the lumber industry can be, to some extent, understood, when it is known that according to the census of 1891 there are 34 industries or occupations which depend entirely or in part upon wood or timber as their raw material for manufacture or commerce. The total number of these is 17,577, all told employing 95,741 hands, the manufactured articles from which represent within a fraction of a hundred millions of dollars. The census figures are $95,029,828. Chief among these industries, according to the census report, the number of employees, and value of output, are :—

TIMBER INDUSTRIES.	FACTORIES.	HANDS.	VALUE PRODUCTS.
Agricultural implements	234	3,656	$ 4,406,397
Cabinet and furniture makers	1,169	6,957	4,471,742
Carpenters and joiners	2,494	5,702	3,893,910
Carriage-makers	3,143	8,703	6,579,082
Cooperages	1,430	3,277	1,808,929
Sawmills	5,390	42,085	38,569,652
Sash and blind factories	356	2,878	4,872,362
Shipyards	227	4,454	3,557,258
Shingle factories	801	2,389	776,998
Planing mills	66	633	992,201
Broom and brush factories	91	957	762,884
Match factories	22	1,062	511,250
Wood-turning establishments	80	604	431,797
Carving and gilding works	82	500	516,675
Trunk and box factories	49	626	677,877
Shook factories	35	80	228,785
Stave factories	31	265	168,520

The list does not include boat builders, basket makers, pump factories, pail and tub makers, and other lines of manufacture in which wood plays the leading part. Nor is there included in the list the car and locomotive factories of the Dominion, which number 17, and whose output is valued at $3,956,000 and employ 3,154 hands.

When lumber is slow, as it has been the past year, a large percentage of the industries here named, are not working nearly up to their full capacity, or as in many cases, no work whatever is being done. The current market conditions, a principal feature of the WEEKLY LUMBERMAN each week, have shown that since the new year, manufacturers who use wood, and have done little active business for some time past, have either started their factories on full time, or are making preparations so to do almost immediately. This is one reason why enquiries of the past few weeks in lumber are increasing.

Lumber may be recognized as a safe commercial barometer. If the trade of the next six months will show that largely increased shipments of forest products have been distributed throughout the various provinces of the Dominion, and as is the case with lumber, in a large degree, to countries beyond its borders, of necessity it follows that business in many other ways is moving actively and encouragingly, for lumber is not bought, simply to be stored away. No class of raw material goes more quickly into manufacture than does lumber. It is, therefore, to be easily understood why banks, monetary institutions and capitalists take a roseate view of affairs when the report comes to them that business in lumber is reviving.

EDITORIAL NOTES.

A MONTH ago an opinion was expressed in the ELI page that the red cedar shingles of British Columbia were lessened in durability because of being kiln dried. This month on the same page is published a reply from a Pacific coast shingle manufacturer who is disposed to challenge Ontario criticism. It is natural, perhaps, that white pine shingle manufacturers should resent this intrusion, as they may deem it, of red cedar shingles into Ontario. But this is a free country. What we want to get at are the facts in the case. Mr. Scott speaks plainly from his point of view. It is to be remarked that the criticism of Mr. McBean of last month is joined in by Buffalo dealers, who are raising the complaint there that the Washington territory red wood shingles are being injured by excessive kiln drying. On the other hand it is claimed that at the best this trade is in its experimental stage, and will come down to a system soon.

IF a large output meant always a paying business, Washington territory shingle manufacturers might lay claim to possessing the cake. The shingle shipments of that State for 1894 will not run far from 12,500 cars, or about 2,000,000,000 shingles. And yet there is, perhaps, no other district in the United States or Canada, and in a year when unprofitable trade was the rule all round, where business was more completely demoralized than in Washington territory. Big sales of shingles were made—that seemed to be the one ambition of the trade. But with hardly any exception sales were placed at a price that meant that the heavier the shipments the greater the loss. The trouble did not end there. Shingles were cut to such prices in Washington, and were shipped everywhere at this cut price, that every other market shared in the demoralization. Over and over again efforts were made by combinations to stem this current of unpaying business, but the combinations never held together any length of time. The hope will be that these things will improve in the right direction in 1895.

WITH the bicycle fever at its height the manufacture of wheels is proving a growing industry in Canada. True a large number of wheels are imported, but the demand is great enough to permit of this and at the same time allow of a large consumption of the home article. Those who favor a protective tariff are asking why additional encouragement should not be given to the manufacture of bicycles by placing a heavy duty on the imported wheel. The lumber industry has an interest in the bicycle manufacturing from the fact that rock elm, and hickory, but more particularly the former, has proven an excellent wood for the rims of bicycles. A large quantity of this wood, is, as a matter of fact, being shipped to Europe for bicycles. This is a good thing for the lumber business in, at least, a restricted degree. It would look as though bicycles had come to stay and the bottom is not likely to fall out of the trade, as has been the case with other fads, if we may so call them, where wood has been used. For a time an immense quantity of wood was used in the manufacture of roller skates, but then the craze did not last long, the same as when everbody, young and old, men and women, in Canada, as well as in the States, ran wild over base ball. The statistics show that at one time the lumber consumed in this manner was something very large, but it also suffered the fate of other fads of the kind, and wood in the manufacture of base ball clubs does not cut any large figure nowadays.

IT is time that an official announcement had been made from Ottawa concerning the exemption of boom sticks from duty. The new ministry under Sir Mackenzie Bowell has been installed in office and business is supposed to be running along in proper shape. Of course, there is no immediate hurry in the matter, so far as the rafting of logs is concerned. This is not the season for that kind of business. The point, however, is this: the matter should not be allowed to remain in abeyance, as a delay in settling the question is open to a wrong interpretation by the Washington authorities. The treasury department of the United States has made a rule exempting boom sticks from duty when coming from Canada, and this on the lines of tariff legislation is supposed to carry with it the understanding that when such action should be taken by the United States our government would reciprocate. We believe it will. The United States government, on the other hand, is dilatory in righting the matter of the duty on red cedar lumber. There is no doubt whatever, and the Michigan deputation who visited Ottawa in connection with boom sticks made the admission to the Minister of Finance, that it was never intended that a duty should be placed on red cedar lumber. This delay is exasperating to lumbermen in British Columbia, and has already been the means of the mills there losing considerable trade, besides possessing a disheartening influence. The LUMBERMAN has a letter from one of the largest concerns on the coast saying: "We have had a contract for a considerable amount of cedar clap boards offered us by communication in the United States, and although we have delayed the matter for the past two months we are still unable to close until we know how this thing is to be decided." There is as little reason for delay at Washington as there has been at Ottawa. Let both governments now get down to business, for business needs all the encouragement that can be given it.

A VISITOR to Toronto during January was Mr. D. C. Cameron, of Rat Portage, president of the Ontario and Western Lumber Co., which, more than a year ago obtained control of the milling interests of the Keewatin, Rat Portage and Norman districts, and in connection with which important litigation is now in progress. Mr. Cameron claims, as a result of this combination, that lumber to the consumer has been reduced all round about $1.00 per 1000. His company will continue on the lines on which it was organized. The removal of the duty on lumber has resulted in stimulating the bringing in of lumber to Manitoba from Minnesota, though he did not think that this was coming into the country in such quantities as to materially effect local trade. The lumber business of the northwest in the last two years, has shown a falling off of about 50%. The total consumption in 1892 in Manitoba had been between 80,000,000 and 100,000,000, whilst now it was under 50,000,000. This reduction in trade was attributed to the desire on the part of farmers to curtail expenditures on improvements and economize generally, because of the commercial depression. Time would right this difficulty, though Mr. Cameron does not anticipate any immediate boom in business.

* * * *

Quite a number of lumbermen, I find, are thinking along the line of establishing a supply yard in Toronto for the distribution of lumber. In my rounds the other day I met one man who longed for someone to drop in on him with $50,000 to make a start in this direction. He said the necessity for such a movement was showing itself at every point. He was speaking specially of the hardwood trades. "Our firm," said he, "are receiving orders for hardwood constantly that requires an effort sometimes to strike the spot where we can secure the particular wood needed. Hardwoods are so scattered, a little here and a little there, that when an order is received for a mixed carload of hardwoods it is sometimes impossible to fill it. If there was a central yard in Toronto, where a supply was kept all the time, much trade that goes past lumbermen to-day would be secured." I told my friend that if I came across somebody with an odd $50,000 I would let him know, but all the same I find that he voices the views of a good many others, though there seems to be difficulties in the way of getting such a movement set on foot. There is just too much want of cohesion amongst lumbermen in this part of the country.

* * * *

J. G. Scott, manager of the Pacific Coast Lumber Co., New Westminster, B.C.. writes: "In your ELI column, January number, I observe you talk some about shingles and publish the opinions of one Mr. McBean as to the longevity, of the B. C. red cedar article. Now, I hold that it is eminently unfair for you to give any publication to a vague, indefinite statement made by anyone on this point. Despite adverse criticism by parties interested, I feel assured that these shingles have got into Ontario to stay and will make a record for themselves, but if anyone has any points to bring out against them it will be interesting to the B. C. shingle makers to hear it expressed definitely and specifically. We want to know the particular lot referred to; if there was a visible defect in the manufacture or in the quality of the timber; if in laying on the roof they were jammed close together as might be done with green white pine shingles or if common sense was used in laying and the shingles laid an eighth of an inch apart, to prevent bulging when soaked, as is necessary with kiln dried shingles. If a case of dissatisfaction exist and particulars such as above are furnished, we may be able to trace the reason to a specific cause. As to the test these shingles are put to by the weather in this Province, let some one express an opinion on that who has spent twelve moons in this glorious climate and we may hear something of the intensity and penetrating powers of our rain storms; the east rains back home are simply not in it. No Mr. Eli we are not making a market for these shingles by abusing the merits of white pine or any other shingle but purely on their own merits and the users of them are the judges. We are not afraid of results where they are used and known, but we would just as soon you would not head us off where they are not known by prejudicing people against them before they have tried them."

* * * *

A week ago I dropped into the office of Mr. J. H. Eyer, lumber merchant, Toronto, and while we were chatting on lumber matters, Mr. D. C. Burke, of Hawkestone, Ont., joined us. Mr. Burke, at one time and another, has been an active man of affairs. Just at present he is operating a mill at the point named in Simcoe county. "I am cutting a good deal of black ash," said Mr. Burke, "though not having any very large quantity of this wood on my land; but what I have is of fine quality. There is also considerable birch where I am operating the mill, but the greatest drawback to cutting birch is the amount of culls that accumulate and are worth hardly anything. I shipped some birch culls to Toronto a few days ago that will hardly net me $3 a 1000." I asked Mr. Burke what he thought of the future of birch, seeing that there is considerable talk of this wood taking a front position. His reply was that he believed that there would be a larger demand for birch in the years to come than there had been in the past. "It is like this," he continued, "birch is a close-grained wood, and it makes up nicely for mantels, closets, as well as general articles of furniture. Only a short time ago I got out a number of samples of this wood for a manufacturer of mantels and closets, to be sent to Great Britain, and now I am gettting back good reports and will be able to place some of my timber for these purposes. In the manufacture of mantels and cabinet goods there is need for such stuff, and this gives a good opportunity to work up the small wood in birch." Mr. Burke is taken with the notion that there is an opening at a central point like Toronto for a mill that would make a specialty of cutting up hardwoods for manufacture. "The trouble is," he said, "when one operates a saw mill in a country district he is confined to the particular wood that is in his locality, and when it becomes exhausted he is obliged to get out and get somewhere else where there is a supply. In Toronto I could draw my supplies from a hundred different sources and obtain a good choice as well as a good variety." It was suggested by Mr. Eyer, in the conversation, that the trouble would be to secure favorable freight rates. Mr. Burke thought that this difficulty could be overcome if the railways saw that they were likely to secure a profitable trade for a continuous period of time, that it would be to their interests to make rates that would encourage this business. With some knowledge of how railways handle this kind of business, I am not so sure that Mr. Burke's sanguine expectations would be realized.

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Duluth, I notice, is bobbing up as a competitive point in white pine. We have heard of some shipments from there coming into Canada, but I do not know that there is anything to worry over in this particular. From a conversation, however, I had a few weeks since with Mr. C. H. Clark, I would fancy that Duluth pine is certain to come into competition on the American market with stocks from Canada and also Michigan. Mr. Clark, it will be remembered by many, was for a dozen years or more identified with the lumber trade in the Barrie section, and travelled extensively for Burton Bros. When their mill was destroyed by fire about a year ago, Mr. Clark found it necessary to look around for other fields to conquer. He made a trip through different parts of the States, and finally struck Duluth. He is quite enthusiastic of the possibilities of that country for lumbermen. There is no end of lumber there, he tells us, and some of the best mills in the country, in his judgment, are found in that district. Mr. Clark has about made up his mind, I think, to hang out his shingle in Duluth. At present he is spending a few weeks in Canada. He says that the pine of that district will compare favorably with Canadian white pine. In the better grades probably Canada is ahead, but for average quality they run parallel. A good deal of Duluth lumber has in the past gone into the western states, but the trade now are bidding vigorously for business in the eastern states, and it is there that it comes into competition with Canadian pine. I fear, as is the case too often with all new territories, the disposition is to make sales, without full regard to the real value of the timber sold. We see how this business is operating in southern lumber, as is remarked elsewhere by Mr. Meaney. Time rights all these difficulties, because after a while men see how foolish it is to throw away good money, but at the particular time havoc is played with trade by this constant throwing on the market of stocks at profitless prices. Speaking of Duluth conditions, I have come across an opinion expressed by Mr. J. J. Rupp, of Saginaw, who, with certain associates, owns about 400,000,000 feet of standing timber near Duluth. Mr. Rupp is also interested in Canadian lumbering, having a mill at Three Rivers, Que., which he is now working actively. So far as regards competition between United States and Canadian lumber, he has said: "Stumpage will average higher in Canada than in the Duluth district, and it costs considerable more to get in supplies and to manufacture; but, on the other hand, freight rates to Albany and New York are from $1 to $1.50 better than from the head of the lakes. There will be a continuous and good market for all the white pine now standing in Duluth."

* * * *

Speaking the other day with Mr. Thomas Meaney, manager at Toronto for Robt. Thomson & Co., I was interested in some of his comments on the change in lumber prices in a few years. To-day, everybody is bemoaning the condition of the shingle market. This has apparently been going from bad to worse for some time, so that the business to-day is a complete drug, whether one thinks of white pine shingles or of the red cedar shingles of British Columbia On the admission of the lumbermen of the Pacific Coast no money is being made there, and it is hard to know how anyone can get a profit out of white pine shingles, when prices have, in some cases, been cut as low as $1.70. "Go back eight or ten years," said Mr. Meaney, "and conditions were very different. Shingles were then bringing easily $2.50, but on the other hand common lumber was down as low as $6.00, where now shingles are down, and this lumber worth $11. or $12." I was interested in getting Mr. Meaney's view of southern pine. He said that certainly Georgia pine was being sold to no small extent in Ontario. Some of the southern mills are represented here, and their agents are doing all the business that will come along their way. He believed there was something in the complaint of the lumber section of the Board of Trade that architects and builders might, with advantage to their clients and help to the lumber industries of the country, use white pine, where in many cases they were recommending southern wood. It stood to reason that a pine that possesses as much resinous matter as yellow pine would help to feed a fire, as seems to have been proven by the unfortunate events in Toronto during the past month. The worst feature of business in southern pine and this view, as far as I know, is voiced by lumbermen in the eastern States as well as in Canada, is the ridiculous price at which it is sold. Just think of this pine being bought at the mills at $4. a 1000. Where comes any margin for labor, and allowance for capital invested in mills, and cost of managing the same? I reminded Mr. Meaney that even the southern lumbermen themselves were complaining of these conditions. Only during the past month several meetings and consultations among leading men in this line in Missouri and Arkansas have been held trying to devise some way to better their condition and raise prices up somewhere near a fair living profit. A plan is on foot to form a permanent organization taking in these two states and Texas, Louisiana and Georgia, if possible. As the Tradesman, Chattanooga, Tenn., has said, the great trouble with yellow pine men in the past has been a mutual disposition and unwillingness to let each other know the situation. Each one has kept his output and business entirely to himself, and been unwilling to let anyone else know what his condition was. To-day a result of this policy is plainly manifest in the lumbermen's bank accounts and dividends.

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

EVERYTHING connected with lumber has been exceedingly slow throughout January. The belief is that trade will open out encouragingly shortly, but there has been little for the lumber news gatherer to secure, so far, this month.

The St. Anthony Lumber Co. are pushing ahead with work on their new steam saw mill at Long Lake on the Ottawa, Arnprior and Parry Sound Railway. The machinery is now being put in position, and the mill will be ready to start operations in the early spring.

No information has yet been given out regarding the burning of sawdust and mill refuse. Lumbermen are anxious about the matter, as the change in the law, if insisted upon, for May 1st, will give rise to serious trouble with many of the mills.

OTTAWA, Can., Jan. 23, 1895.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN].

IN certain sections of New Brunswick in particular lumbermen are anxious of the outcome of the sawdust difficulty. If, despite the protests that have gone up from the trade, the law is brought into force in May, it may be resented in practical shape by lumbermen on the St. Croix River, between New Brunswick and Maine. They say that it would force the transferring of sawing operations from the Canadian side to the American side where most of these same men have mills. The loss in this case would come directly upon the province itself. It appears almost certain that whatever may be the merits of the law on general principles that it will have to be amended to provide for exceptional cases like this now cited.

Knight Bros., and the Musquash Lumber Co.. will get out 2,500,000 feet and 1,000,000 feet respectively.

Alex. Gibson will cut about 25,000,000 feet on the Nashwaak this winter, and the cut on the Tobique will be 20,000,000. In Queen's and St. John's counties the cut is expected to be quite heavy.

At Markhamville, King's County, a portable steam mill has been erected by John Lynch. who will cut in the vicinity probably 700,000 feet of lumber. Robt. Mill will put in about 400,000 feet in the same section.

Weather conditions, on the whole, are favorable to logging, though complaint is made of the heavy crust in the woods in some sections consequent upon heavy rains. A considerable quantity of snow has fallen at most all points.

ST. JOHN, N. B., Jan. 22, 1895.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

WITH the expectation that business will revive in the near future many of the mills have been undergoing repairs. Though not what might be wished for enquiries from foreign ports are improving, and it is expected that a more profitable trade will be done this year than in 1894. A fair trade continues to be done with California since the change in duty, and there is no reason why B. C. lumbermen should not ship with profit to that country.

The band mill is likely to be introduced into one or more of our mills the coming spring and the experiment will be watched with interest by lumbermen.

H. H. Spicer & Co,. expect to do a profitable trade this spring throughout the New England States. Mr. Spicer has lately been on a visit to these states and formed, it is believed, some useful business connections.

Leamy & Kyle and George Cassidy & Co., operating mills on False Creek, Vancouver, have formed a business combination under the name of George Cassidy & Co., Ltd. In addition to the plants owned by the concern they have also about 10,000 acres of timber limits. The capital of the new company is placed at $40,000.

The shingle situation does not improve. What the spring will bring forth it is hard to say. Mr. J. G. Scott, of the Pacific Coast Lumber Co., has recently ex ressed the view that there is no man in the trade in the province that is not of the opinion that a 16-in. six to two shingles made properly should bring at least $1.50 net at the mills.

NEW WESTMINSTER, B. C., Jan. 18, 1895.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

REPORTS from different parts of the state would indicate that loggers are in good heart, as recent heavy falls of snow have helped matters materially in the woods. It looks now as though there would be a good cut, and that everything would come along in fine shape in a short time.

No large amount of business has been done in this district during January. The proverbial dullness of the first month of the year has hung around here in all its completeness. A good feeling, however, exists and though the lumber business in Michigan is not what it used to be in the past, it is by no means at an end yet, and the amount of lumber likely to be handled during the year 1895 will run into large figures. Bay City is the point that, more than any other, seems to be the active distributing center for lumber, and is a favorite point for buyers to visit.

BITS OF LUMBER.

The new Hardwood Lumber Co., at South Bay City, is likely to be an important industry for that locality.

The firm of Ring, Merrill & Tillotson, of Saginaw, has been dissolved and the company has gone out of business.

It is predicted at Saginaw that the business of Tittabawassee Boom Co. will be of insignificant proportions in 1895.

Geo. W. Hotchkiss, of Chicago, is gathering material in Michigan for a history of the lumber business of that state.

Six inches of snow fell at Menominee a few days ago and large numbers of woodsmen, who had left the logging woods, have started back.

The Central Lumber Co. has selected the following officers for the new year: A. T. Bliss, president; John Quinn, vice-president; A. J. Linton, treasurer, and A. F. Cook, secretary. The company expects to put in from 12,000,000 to 15,000,000 feet of logs.

Wm. Peter, of Bay City, who is well known as an active saw mill man in Canada, will test the question whether salt can be produced with a profit with coal as a fuel. What the influences are that have suggested this possible change to Mr. Peter I do not know, but on the face of it it would look as though wood was becoming scarce in this great pine state when coal is to take its place in salt manufacturing.

SAGINAW, MICH., Jan. 25, 1895.

WHAT SHALL IT BE CALLED.

WHEN timber is so placed on the carriage that it is cut across the annular layers of growth, thus making the edges of these grains, rather than the surface of them, show on the surface of the board, the lumber thus produced is variously called quarter-sawed, rift-sawed, vertical-grained, straight-grained and edge-grained. What is the use of this diverse nomenclature, asks the Timberman, and why would it not be good sense and good policy to settle down to some term that is as accurately descriptive as may be, and abandon the rest of them? We presume that a great many of our readers would cast their vote in favor of the term "quarter-sawed," for it has the warrant of long use and is derived from the method by which such lumber was originally produced.

Quarter-sawed lumber was made by cutting a log into four right-angled segments, longitudinally, thus making quarters of it; then placing the round side of each quarter down on the carriage and cutting the pieces up into lumber.

Theoretically but one, or possibly two, pieces from each quarter would be exactly quarter-sawed, yet for all practical purposes the larger part of the product will pass as quarter-sawed lumber: that is, the grain will be substantially perpendicular to the surface of the board.

By another method the board is cut into eight longitudinal sections. This is a more perfect way of accomplishing the desired result, but no one has as yet thought of adopting the expression "octagonal-sawed" lumber. The same result is obtained oftentimes by taking off cants each side of the heart and sawing them up into strips or boards perpendicular to the first line of cutting. In yellow pine much of the quarter-sawed stock (or whatever it may be called) is not cut with reference thereto at all, but the ordinary method of four-sided manufacture is used. In the vast majority of cases, therefore, the term "quarter-sawed" does not express the method used.

The term "rift-sawed" is also largely meaningless. The three other terms are used particularly in yellow pine manufacture, though expressing the same idea as to the character of the product.

"Vertical-grained" flooring is a term which appears in many price-lists, particularly in the eastern part of the yellow pine field, but not one per cent of the flooring is what may be strictly called "vertical-grained," for the line of the grain runs at all angles to the surface of the board from ninety to forty-five degrees; in fact, it has been necessary to make a definition which says in regard to quarter-sawed, rift-sawed, vertical-edge or straight-grained flooring, that the angle of the grain with the face of the board shall not be less than forty-five degrees.

The term "vertical," therefore, does not apply to it. The term "straight-grained" refers to the appearance of the surface of the board in which the lines of the grain appear approximately straight on the surface in contradistinction to the appearance of the pieces that are bastard or flat-sawed, where curved and returning lines abound.

The term "edge grained" remains apparently the most accurate and descriptive of any. It does not refer to any particular manipulation of the timber in manufacture; it does not by implication limit the angle of the grain to ninety degrees; it does not, also by implication, require that the timber should necessarily be of absolutely straight growth and that the lines of the grain should run parallel to the piece; it simply means that the edge of the grain shall show on the surface of the board. This, with the customary limitations as to the angle of the grain seems to be all that is required in a universally applicable term.

We fancy that the hardwood branch of trade, particularly in regard to oak, would insist on the term "quarter-sawed," and yet quarter-sawed oak is not quarter-sawed in a majority of cases, and, moreover, when you have said quarter-sawed, you have still left it necessary to say "figured stock," because it is only in a comparatively few pieces that the surface runs directly at right angles to the annular rings of the tree.

We do not put forward this term "edge-grained" in any decisive way, but simply as the opinion of some well-posted lumbermen, who think that the customs of the trade in this respect should be unified, and who believe that this term best expresses what is intended by the various ones now in use.

DEATH OF TWO CANADIAN LUMBERMEN.

HON. DAVID MCLELLAN, NEW BRUNSWICK.

During the month of January death claimed the Hon. David McLellan, formerly provincial secretary of New Brunswick. Mr. McLellan was born in the city of Portland on January 20th, 1839 and was therefore in his 56th year. His early undertakings in business were as a surveyor and dealer in lumber and afterwards he entered into partnership with the Hon. J. Holly. This firm carried on an extensive lumber business for years handling over 60,000 superficial feet of logs annually. In 1878 Mr. McLellan was elected to the provincial legislature. He was elected again in 1882 and in 1883 he became a member of the Executive Council and was appointed provincial secretary. At the general election in 1892 deceased was again returned. After the last general election he retired from politics and at the death of Mr. Drury accepted the position of registrar of deeds and wills.

MR. A. R. CHRISTIE, TORONTO.

Some years ago few men were better known in the lumber trade in Ontario than Mr. Alexander R. Christie, who died suddenly of heart disease at his residence, Toronto, a fortnight ago, aged 79 years. Mr. Christie was born in Perth, Scotland, in 1816 and in 1831 came to Montreal, where he engaged in the grocery business, under his uncle, Mr. Wm. Christie. In 1839 he came to Niagara-on-the-Lake and a little later purchased a large saw mill at the mouth of the Severn river. His partner in this enterprise was Mr. Andrew Heron. The mill was twice burned to the ground entailing heavy losses.

The mill later was rebuilt and enlarged, and in 1872 the property was sold to the Georgian Bay Lumber Co. The deceased about this time took up his residence in Toronto, and obtained a partnership in the firm of S. C. Kennedy & Co., lumbermen. Later a new partnership was formed under the name of Christie, Kerr & Co. This firm carried on an extensive lumber business, owning mills at Collingwood, Severn Bridge, Bradford and Michaels Bay. Their annual turnover in lumber amounting to over 50,000,000. Mr. Christie was also, for many years, president of the Michaels Bay Lumber Co. Some years ago the firm met with reverses and went out of business. Since then Mr. Christie has devoted his attention largely to marine matters, having the management of the steam barges, Africa and Severn, which he owned. Prominent among those who attended the funeral were many well-known lumbermen, including John Bertram, James Tennant, W. F. Tennant, W. N. Tennant, and H. Lovering, of Coldwater.

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THE NEWS.

—J. A. Johnson will erect a planing mill at St. Mary's Ont.

—A. Ferris & Co. are building a new planing mill at Sudbury, Ont.

—C. Greason's planing mill at London, Ont., was sold by auction on the 12th ultimo.

—Achison & Dolman have leased the saw mill at Petrolea, Ont., owned by Mr. Stirrett.

—Richard Smith, of Beebe Plain, Que., is considering the removal of his saw mill to Sherbrooke.

—Mr. McArthur has about 60 men at work in the Riding Mountain district getting out logs for his mill at Birtle, Man.

—B F. Young, who operates a planing mill at Stratford, Ont., is reported in financial difficulties and is asking for an extension of time.

—J. H. Milton & Son, Moncton, N. B., have removed their sawmill to a new site at Foley Hill, on the line of the Albert Railway.

—Alexander Scott, manager of the Buckingham Pulp Co., proposes to erect a saw mill a few miles up river. Chiefly hard woods will be manufactured.

—H. Hetu of the Edmonton Saw Mill Co., Edmonton, N. W. T., is taking out two million feet of logs this winter to be sawed at the mill up the river.

—McMillan & Haynes, saw manufacturers, St. Catherines, Ont., have leased the old battery factory adjoining their works, and will also extend their present factory.

—The saw mill belonging to the Norris estate, St. Catherines, Ont., was sold at auction a short time ago to John Sully, representing a Canadian syndicate, for $34,000.

—A carload of pine from British Columbia has arrived at Quebec via the Canadian Pacific railway for the Marine Department, to be used in steamship decking.

—Huge logs of hardwood are being hauled into the city mills at Chatham, Ont., some of them containing more than 1,000 feet of lumber. They will be cut into ship plank for export.

—W. H. Schneider, of Mildmay, has sold his saw mill and flour mill property to Fred. Glebe, of Shelburne, Ont., for the sum of $12,500. Mr. Glebe took posession on the 10th of January.

—W. J. Munro, of Pembroke, has purchased the Snider limits from the Ontario Government, containing about 27 square miles of timber. It is the intention of Mr. Munro to commence cutting at once.

—James Playfair & Co. have purchased from Burton Bros., of Collingwood, the tug Metamora, three barges and a large quantity of booms, which they will use in connection with their lumbering business.

—J. A. Christie, of the Brandon mill, has two camps numbering forty men and twenty teams at work in the Riding Mountains, Manitoba, and expects to get out about one and a half million feet of logs this winter.

—The McLaughlin Carriage Company, of Oshawa, has resumed operations. A new seventy-five horse-power engine and ninety horse-power boiler have been put in, also a large saw mill to cut lumber from the log.

—The Toronto Hoop and Veneer Co., of Toronto, are applying for incorporation, with a capital stock of $50,000, to manufacture hoops, staves, veneers, etc. The operations of the company are to carried on at Eugenia, Ont.

—The Niebergall Stave and Lumber Co., of Staples, Ont., are applying for incorporation, with a capital stock of $45,000. Among the directors are G. Niebergall, of Goderich; G. M. McEwan, of Hensall, and D. R. Menzies, of Clinton.

—W. W. Parsons, of Rankin, Ont., has purchased from Mr. R. Reeves a twenty horse power portable steam saw mill. He intends placing it on the mountain north of Lake Dore, where he has taken a contract to cut 500,000 feet of lumber.

—We are informed that Findlay & Lewis, of Collingwood, have made preparations to start a sash and door factory in Parry Sound as soon as navigation opens. The factory will be equipped with the latest machinery for turning out dressed lumber, mouldings, sash and doors.

—The Winnipeg Commercial states that a peculiar phase has developed in the lumber trade in Western Ontario lately, it being the presence on the market of pine lumber from the United States. This lumber was sawn in Michigan from logs originally towed across the lake from Canada. The lumber in question is understood to have come as far west as London, and to have sold at figures some fifty cents per thousand feet below the price at which it would cost dealers to lay it down there, leaving altogether out of the question the matter of profits.

—On the 11th of September last the Collector of Customs at Detroit seized a carload of pulp entered by the Laurentides Pulp Company, of Three Rivers, Que., for undervaluation. The company had entered it at $13.44 per long ton of 2,240 pounds, and the collector held it at $15 a short ton of 2,000 pounds. Shortly afterwards another carload was seized on the same grounds of under-valuation. The company appealed to the Board of General Appraisers in New York, with the result that a decision was given against the collector and in favor of the Laurentides Company, fixing the valuation of wood pulp at 60 cents a 100. This victory for the Canadian company will no doubt be the means of bringing American capital to Canada for investment in timber preserves and pulp mills.

—A. Ferguson, an American lumberman. has recently been looking over the lumber business at Rat Portage and vicinity. In reply to enquiries, he said: "Forest fires will necessitate the cutting of at least one hundred millions of timber within the next fifteen months in Northern Minnesota, that from its location must find an outlet in the Lake of the Woods. The present companies doing business at Rat Portage, from having a large stock on hand as well as having extensive timber limits on the Canadian side, do not see their way clear to make any new contracts for American timber, so that holders of timber lands in Northern Minnesota must look after their own interests. I am advised of a meeting to be held in St. Paul in a few days to devise means to facilitate the handling of it. Although a great deal of the timber has been bought up by wealthy pine dealers, yet a large amount of it is still in the hands of homesteaders.

TRADE NOTES.

Messrs. Shurly & Dietrich, of Galt, Ont., have recently made extensive shipments of their saws to Tacoma and other points in Washington Territory.

Bingham & Finney's saw factory at the Chaudiere, Ottawa, which has been in course of construction for some time, is now completed, and the proprietors have commenced the manufacture of saws.

STACKING LUMBER.

By John Shaw, in "Lumber."

IN the preparation of lumber to be worked into any form, or for any process in which machinery is brought into use to partially or completely finish it for the builder's use, there is no part that demands more careful attention than stacking.

It is thought by a large number of persons, and many actually in the lumber trade, that if boards are only stuck up, that is quite sufficient for all purposes. They give no heed to the amount of waste and consequent shrinkage that there is in piles of poorly-slacked lumber of any kind. Whatever help we may employ in this work, it is very necessary that the man in charge should properly understand the whole business, from the blocking to the last board that is put on, and then to properly cover the pile up.

The foundation for the pile is of the first importance, and should be made on good, solid ground, or on good, permanent piling. Being satisfied that the timber is well anchored on solid foundation, the next thing is to level it up and see that the bearings are out of the wind and have the proper pitch. There is a great difference of opinion in this matter, as well as in everything else, but as a general thing not less than six inches pitch in stock sixteen feet long should be given. This is a good one for water to quickly flow off after a storm, so the piles can rapidly dry out. The process of drying should go on as uninterruptedly as possible, or, if the stock is already quite dry, it should be kept in such a condition that it can be worked into any desired shape.

The sticks for boards are very often too few. I contend that any stock of boards from twelve to eighteen feet long should not have less than four sticks, and boards from eighteen to twenty-four feet should have five. The stick in the front end should come flush with the end of the pile, so sticks and board ends should form one solid block. Front sticks should not be less than three inches in width. Now, while I do not claim that for all piles the whole of the sticks must be fully up to that width, I do claim that they should be of good width, and never less than two inches, and three inches is very much better.

One thing should be positively attended to, and that is that every picket should be exactly placed, one above the other, as the pile goes up. Very many concerns are careless about this, and the consequence is that their stuff is full of short kinks, and it is impossible to make good work of any kind with boards in such shape. Matched flooring will never come nice if stock comes along in such shape, and oftentimes it costs more to smooth up a floor than the lumber comes to. If many owners of lumber yards who own and run mills in connection with their places would take pains to stack their lumber well, they would often find a large margin in their favor when they balance their yearly account.

The necessity of covering up piles should receive particular attention, and it is strange that this part of lumber piling has not received closer attention. I know it takes quite an amount of stock to cover a large amount of lumber, but we must take into account the fact that it can be used over and over again. If it is properly cared for it loses but little from year to year. It is like everything else, however, if roughly handled it goes into the wood pile, or the wood pickers will gobble it up, and the owner will be grumbling at the cost of covering up his lumber. A boss never takes into account how much covering saves him.

Covering piles saves in two ways. If the lumber is to be sold again the top of the pile comes out good, instead of being warped and crooked and in many cases split so as to be partly or wholly lost. This splitting and warping always make trouble in the mill, if either being worked full width or being sawed into strips for flooring or ceiling, or perhaps for moldings. Splitting obliges us to put the lumber into either No. 2 or No. 3 stock or throw it away entirely.

There seems to be the greatest disregard of proper methods of stacking up planks of any thickness, from two to four inches. Men utterly disregard the idea that cross sticks should be put in the ends, and instead put them two or three feet from each end, and one only in the middle, of whatever length the lumber may be. It is no wonder that mills work stuff poorly under these conditions, or that men have hard work to get stuff through their mills at all without breaking them. Men expect that machines will do good work whether the stuff which is brought to them is crooked or straight, or flat or warped. If the stuff does not come out of the machines good, it must be the fault either of the machine or the operator, or both. Some people never take into consideration the condition the stuff is in. Very few dealers think of this, and expect mill men to get for them good gold dollars from poor and damaged stock. It is curious that these things are so rarely taken into account until the stock is either spoiled, or so far damaged that its value is made so much less that in many cases the first cost is not realized, much less the percentage of profit which should be made to pay the expense of handling.

It is too often said that a man, or the men, "only know enough to stack lumber."

I consider that any man who can stack up a pile of lumber well, from bottom to top, is a good workman, and ought to be well paid. If looks had anything to do with it we would say that, if only for looks' sake, the owners of lumber should insist that all the piles be of uniform width and height and of the same pitch, so as to have the whole row appear like a well-kept street, clean and free from broken pieces and all kinds of rubbish.

Of course the rubbish does not add to or detract from the value of the lumber in the piles. If, however, the surroundings are nice, the probabilities are that the proprietor uses a good system all through his business, and whatever he produces, whether by machinery or otherwise, will be well and thoroughly finished.

I have not written of this because it is a common custom for lumber dealers to be negligent about piling up lumber, for, as a general thing, they are not, but because among the great number we find many who have an idea that if the lumber is only piled up it will answer the purpose. I think, as a matter of fact, that such proprietors are always grumbling about hard times, are always slow in paying their bills, are slack in getting out orders, and that their work is always poorly done. Men show their character in their businesses, and there is no better business to show them in than the lumber trade.

CANADA'S LUMBER TRADE IN 1894

A Review of the Business of the Year.

THE GENERAL SURVEY.

A CAREFUL study of lumber conditions in the Dominion in 1894 tells the one story of a quiet year. In Ontario, more in some respects than in the other provinces, trade suffered from unsettled tariff conditions in the United States during the season when lumber should have been at its best. Fortunately the year did not close without a settlement in this matter having been reached and a brief respite from the dullness of the preceding months was manifest during October and November. There is reason to suppose that in 1895 Ontario lumbermen will secure some practical benefits from free lumber. Quebec reports for the year are not encouraging. Quebec port is losing its old time preeminence as a lumber shipping port, whilst Montreal is putting on trade that had hitherto gone there. The annual report of the Harbor Master of Montreal shows that there were shipped from that port during the season to the United Kingdom and continental ports 176,405,425 feet, board measure, and to River Plate, 10,466,000 feet board measure, making a grand total of 187,871,425 feet, or an increase of 49,158,629 feet over the previous year. Prices in Quebec during the season advanced, but these did not keep pace with the increased value of timber limits and standing pine. A fair trade was done with South America. The year 1895 was not favorable to lumbering in the Maritime provinces. A severe winter in 1893 and 1894 was productive of a small output of logs, but fortunately the season of 1894-95 gives promise of much better things. It is noticeable of the trade in these provinces that the stock of merchantable deals on hand at the close of 1894 is phenominally small. New trade is expected with the United States as a result of free lumber, and the change in tariff relations with France is expected to open out a trade with that country, a start having already been made. The story from Manitoba, the Northwest Territories and British Columbia is not a very encouraging one.

ONTARIO.

As in the other provinces of the Dominion the lumber trade in Ontario in 1894 showed many signs of dullness. In the early months of the year it was possible to write encouragingly of the outlook. The sale of timber limits that took place in Ottawa in January of 1894 commanded prices that augured hopefully for the season's trade. In the first month of the year Ottawa mill men also closed sales for lumber represented by several million dollars. Elsewhere at lumber points in the province enquiries and sales during the first two months of the year were of a character to build up the hopes of the lumber trade. Not many moons had passed, however, before darkness covered the horizon, and the clouds continued to gather and add to their blackness from month to month. The prolonged discussion over the tariff bill of the United States, and which was only completed late in the year, aggravated these conditions. During the months from April until September lumbermen could not force trade to any extent, even when the price was made a temptation. No one wanted to buy and the wisest heads did not want to sell, for it was difficult to know how satisfactorily accounts would be paid. Within a month of the passing of the tariff bill some activity showed itself and shipments from Ottawa as also from the Georgian Bay district, began to move. The season, however, was too far advanced for any remarkable impetus to be given to trade.

The response to the enquiry of the LUMBERMAN, "What was the output of your mill in 1894, and how did this compare with 1893?" has shown in Ontario, at least in important sections, where other conditions did not alter the case, that a conservative policy was pursued and the cut was light. The answer to the enquiry touching the volume of trade done and prices in 1894, as compared with 1893, brought the almost universal reply that business was restricted in volume and prices were lower. One large wholesale firm, for example, said, "Volume reduced one-half; prices average decline 5 to 6 per cent." Others place the decline in prices greater. Stocks carried over in the Georgian Bay district, with some exceptions, were larger at the end of 1894 than they were in 1893. The heavier shipments from this district go to the United States, and herein is the explanation of heavy stocks. The same conditions did not apply in Ottawa, as a large portion of the stocks go to the United Kingdom and other foreign markets, and in some cases the entire output of the mills was contracted for early in the year. These conditions therefore prevail, that where heavy stocks are found at some points in our North Shore territories, the stocks at Ottawa are comparatively light.

The estimate of the lumber sawn in the various mills on the Ottawa valley during the past season is given as follows:

J. R. Booth, Ottawa	90,000,000 feet.
Bronson and Weston, Ottawa	73,000,000 "
Buell, Orr & Hurdman, Hull	70,000,000 "
W. C. Edwards & Co., Rockland	65,000,000 "
Hawkesbury Lumber Co.	55,000,000 "
McLachlin Bros., Arnprior	50,000,000 "
Gilmour & Hughson, Hull	40,000,000 "
McLaren & Tate, Buckingham	35,000,000 "
W. E. Edwards, New Edinburgh	25,000,000 "
Gillies Brothers, Braeside	25,000,000 "
Ross Brothers, Buckingham	10,000,000 "
Making a total of	538,000,000 feet.

The United States consul at Ottawa furnishes the following figures of shipments of lumber recorded at his office for 1894:

Quarter ending	March 31.	June 30.	Sept. 30.	Dec. 31.
Hemlock Bark	$	$ 1,056	$	$
Lath & Shingles	5,039.89	19,872.39	16,648.02	15,122.26
Lumber in bond for export (principally S. Am.)	64,563.20	22,354.88	50,032.45	860.27
Lumber to United States (⅞ pine, balance hemlock and spruce)	443,733.74	609,809.87	599,498.91	666,745.02
Pickets	409.40	2,724.46	3,107.54	13,493.69
Match blocks		1,200.00		1,406.88
Wood Pulp			2,160.00	214 28
Timber				267.22
Railroad Ties				2,440.93
Total	$513,746.23	$657,017.60	$671,446.92	$700,550.55

Exports from Ottawa to United States from Jan. 1st to December 31st, 1894, not including square or flatted timber, were as follows:

	Quantity.	Value.
Planks and Boards	195,469 M feet.	$2,769,704
Laths	32,406 M.	48,746
Shingles	15,077 M.	25,329
Bark	1,282 cords.	6,906
Firewood	4,165 "	5,371
Sleepers and Railway Ties	15,640 pieces.	3,089
Wood Pulp		6,281
Hop Poles		3,566
Posts, Cedar		285
Telegraph Poles		75
Other articles of the forest, (Match Blocks, Curtain Sticks, etc.)		40,227
MANUFACTURED.		
Doors		1,085
Wood Pulp		120,386
252 000,000 ft. shipped to Montreal and Quebec for re-shipment to Great Britain, etc., at $13.50 per M ft.		3,402,000.
Total		$6,433,050

The trade of 1895 opens out with free lumber as the policy of the United States and Canada, and as business generally returns to normal conditions, there is reason to expect that the lumber trade of Ontario will revive. Operations in the woods are about on a parallel with 1894. Possibly the cut will be a little heavier. Conditions in hardwoods encourage the expectation that there will be a distinct improvement in 1895. Shingle manufacturing in the province suffered during 1894. Manufacturers, however, will curtail the product of 1895, and this, it is hoped, will have a tendency to bring up the trade to something like a decent level, both in point of consumption, and especially in prices.

QUEBEC.

WE are indebted for the particulars of the Quebec lumber trade of 1894, embodied in the following review, to the J. Bell Forsyth & Co. circular, which has been issued regularly by this firm for many years past. The facilities enjoyed by the compiler to secure his statistics at first hand, gives unusual value to the document.

A continued decrease in the business of Quebec is noted. The growing scarcity of some descriptions of timber, and the advanced cost of others, have reduced the supply on the one hand, and limited the export by diminishing the consumption on the other.

The concession of the use of steam in taking on board timber, obtained by the shipping merchants from the ship laborers, in connection with steamers, has resulted in a transfer of an increased proportion of the export carrying trade from sail to steam, and has to some considerable extent checked the tendency to send timber from Montreal by steamer in preference to shipping from Quebec.

With similar concessions and arrangements in the handling and stowing of deals, tending to lower the present cost, it is felt an increased volume of business must be the result, which will be to the advantage of all interested and connected with the trade of Quebec port.

WHITE PINE.—The supply again shows a striking diminution, although it includes considerably more than a million feet produced for the preceding season and wintered above Quebec. The reduction in stock, when this is is taken into consideration, is remarkable, amounting to nearly one and three quarter million feet, as only an inconsiderable quantity of last winter's production failed to reach market.

Prices have advanced during the season, and recent sales, for average and quality sold, are at figures beyond anything previously paid in the history of the trade. Even these extreme prices have, however, been insufficient to stimulate production as against the greatly increased value of timber limits and standing pine.

The higher grade of square pine of deckplank dimensions and lengthy waney pine of medium girth, are especially scarce. Unless higher prices than hitherto can be obtained in the United Kingdom, the export of white pine in the log must shortly come to an end.

		Supply.	Export.	Stock.
1894	Square	838,246	3,468,600	1,656,993 Square.
	Waney	2,288,663		1,610,571 Waney.
1893	Square	1,121,102	4,092,280	2,134,281 Square.
	Waney	3,117,285		1,627,936 Waney.

RED PINE.—Has not been in demand this year, pitch pine from the Southern States having largely replaced it in the United Kingdom. The stock on hand, though reduced, is still ample. Fresh wood is scarce and the manufacture has almost ceased.

	Supply.	Export.	Stock.
1894	59,835	146,120	282,084.
1893	303,391	312,640	339,789.

OAK.—The supply has been in excess of the export, having an increased wintering stock. Choice wood is difficult to procure, and any fall in value would certainly cause the production of this article to cease.

	Supply.	Export.	Stock.
1894	1,276,869	937,840	699,205
1893	1,156,746	1,013,160	376,141

ELM.—With reduced supply shows a diminished stock. The quantity will be supplemented by new wood received early in the season, and is ample.

	Supply.	Export.	Stock.
1894	528,761	528,880	244,145
1893	588,478	421,840	391,452

ASH.—Has not been in request and shows an increased stock. The production will be restricted, as choice wood is difficult to procure and the larger averages are scarce.

	Supply.	Export.	Stock.
1894	183,626	134,920	99,659
1893	172,136	168,840	56,761

BIRCH.—Has not been in demand, the consumption in Great Britain having been greatly curtailed by the abundance and cheapness of African and other low grade mahogany. In view of this the production will be moderate.

	Supply.	Export.	Stock.
1894	131,191	189,920	13,242
1893	164,478	121,480	29,254

STAVES.—The commerce in staves, which was years ago a large and profitable one, has come to an end as far as Quebec is concerned.

Staves are now largely shipped to the loading ports in Great Britain from the United States as dunnage at nominal freights, and are distributed on the other side by steam coasters to the smaller ports.

		Supply.	Export.	Stock.
1894	Pipe	..	..	..
	Puncheon	..	..	..
1893	Pipe	5	..	..
	Puncheon	16	..	..

PINE DEALS.—Are no longer produced to any extent in the neigborhood of Quebec.

The business is still largely carried on by Quebec merchants who have branch offices in Montreal, and who purchase largely in Ottawa and elsewhere.

The wintering stocks are extremely light, especially in fourth quality, which has been largely taken for the United States markets. The removal of all duty on sawn lumber going into that country will, on the revival of business there, certainly cause a serious advance in the lower grades of pine deals and possibly in all qualities. First of regulars and broad dimensions have been

dull in the markets of the United Kingdom, but undersized firsts and all dimensions in other grades have been in good request throughout the season.

	Supply.	Export.	Stock.
1894	647,408	479,700	63,624
1893	931,583	728,300	145,916

SPRUCE DEALS.—Opened in the spring of 1894, rather heavily, but improved as the season advanced. Take all through, the business is considered a very fair one. The stock wintering over is a light one. The production of logs this coming winter, it is said, will be on a moderate scale.

	Supply.	Export.	Stock.
1894	3,447,856	3,462,800	579,774
1893	4,005,160	3,540,000	844,718

SAWN LUMBER.—South American Lumber.—The market this season has been fairly active, both direct from the Province of Quebec, and via Portland, Boston and other North American ports. From the ports of Maritime Provinces the spruce trade to the Argentine Republic has been unusually active, and from Montreal heavy shipments of pine to same destination were made near close of season. Prices ranged—Spruce $11 to $13.50 per 1000 feet B. M., according to specification. —Pine $17.50 per 1000 feet B. M. for common, to $50 for clear pine.

Owing to the depression in the United States, the lumber market there has not been as good as expected; still all good lots of spruce suitable for that market have realized about the same price as in 1893, and manufacturers expect an increase of at least $1.00 per M. for the 1895 cut.

FREIGHTS.—Opened at about 16s. Clyde and 18s. Liverpool, for sail from Quebec, and at 40s. for deals by steam from Montreal.

Timber rates remained without any change till advanced insurance towards end of season prevented timber shipments except by steam, for which the rates ruled from 62s. to 70s. per Petersburg Standard intake, according to port of discharge.

Steam freights from Montreal were greatly depressed during the greater part of the season, and for some time rates previously unheard of, such as 30s. for Glasgow, Avonmouth and Liverpool, with 35s. for London, were current, closing at some advance, especially for Liverpool.

COMPARATIVE STATEMENT OF SAILING VESSELS CLEARED AT THE PORT OF QUEBEC, FOR SEA, (LUMBER-LADEN,) 1879 TO 1894, FROM THE OPENING TO THE CLOSE OF NAVIGATION.

COMPILED BY MR. F. JOHNSTON, QUEBEC EXCHANGE.

1879	433	Vessels	364,628 Tons.
1880	634	"	555,451 "
1881	459	"	380,186 "
1882	426	"	359,025 "
1883	487	"	416,169 "
1884	366	"	291,398 "
1885	369	"	294,789 "
1886	325	"	250,635 "
1887	271	"	206,172 "
1888	227	"	195,928 "
1889	275	"	240,892 "
1890	250	"	238,162 "
1891	205	"	182,615 "
1892	244	"	225,008 "
1893	177	"	146,970 "
1894	136	"	115,639 "

OCEAN STEAMSHIPS.

1893	46	Steamers	67,731 Tons.
1894	51	"	72,531 "

STATEMENT SHOWING THE QUANTITY AND VALUE OF WOOD EXPORTED FROM THE PORTS OF MONTREAL, THREE RIVERS, BATISCAN AND SOREL, FROM MAY 1ST TO NOVEMBER 30TH, 1894.

PORTS.	ARTICLES.	QUANTITY.	VALUE.
Montreal	Pine Deals	58,180 Std. H	$2,251,354
	Spruce Deals	8,173 "	239,691
	Deal Ends	6,782 "	277,961
	Planks, Boards, &c.	14,755 M. ft.	377,734
	Other Headings		306,737
	Square Timber	8,766 Tons	146,558
	Total		$3,600,035
Three Rivers	Pine Deals	2,140 Std. H.	$ 90,000
	Spruce Deals	1,881 "	48,363
	Deal Ends	148 "	5,351
	Planks, Boards, &c.	21,589 M. ft.	205,616
	Spruce Pulp-Wood		98,243
	Total		$ 447,573
Batiscan	Spruce Deals	1,617 Std. H.	$ 37,227
Sorel	Deals	2,151 Std. H.	$ 93,000
	Planks, Boards, &c.	2,105 "	50,000
	Total		$ 143,000

MARITIME PROVINCES.

The data found below, touching the lumber trade of New Brunswick and Nova Scotia for the year 1894, has been obtained from the annual wood trade circular of Mr. J. B. Snowball, of Chatham, N. B., a guarantee of its completeness and reliable character.

The year's business opened under the conditions existing for some time previously, and which were by no means encouraging, because of the continued general depression of trade in Great Britain and on the continent. The advance of prices which usually accompanies the fall increase of insurance rates, was not realized on account of the heavy failures in the trade in England, which caused several cargoes to be forced on the market and sold at prices even below current values.

The winter of 1893-4 was the most severe on record for forest operations in New Brunswick. The result was a comparatively small output of logs, at a maximum cost of production. The present winter has, so far, been favorable for log getting, and although a smaller output than that of last season was anticipated when operations were begun in the woods, the output depends largely on the continuance of favorable weather.

The present stock of merchantable deals and logs on hand, on the Miramichi, only 4,200 standards, is the smallest ever held, and less than a third of an average stock. If there is any revival of River Plate and United States business, it will leave the stock to be placed in the European markets in a very moderate compass.

Two cargoes were shipped from Chatham to Rio Janeiro the past season, and several enquiries are now in the market for cargoes for next season's shipment. A few cargoes of spruce deals, chiefly 9 x 3 and 11 x 3, were lately shipped from St. John to United States ports, and produced a much better result than trans-Atlantic shipments. This was brought about by the recent abolition of the United States import duty on lumber.

Twelve cargoes were shipped from this port to France during the past season—all by Marseilles—in the face of the disadvantage the trade was under as regards the import duty; but now that Canada is about to enjoy the favored nation clause under the recently ratified treaty, a large revival of our exports to that country is looked for.

In the exports from New Brunswick, there is an increase this year over last of nearly fourteen millions sup. feet.—Miramichi, Dalhousie and Monction show increases; St. John, Bathurst, Richibucto and Shediac show a marked decrease, while Sackville and outports remain stationary.

In Nova Scotia, the export has decreased about three millions sup. feet. St. Mary's River and Liscomb have more than doubled their exports, while every other port in the Province shows a decrease. Of the export from Halifax three and a half millions sup. feet was hardwood.

The stock of merchantable deals wintering here is 3,600 St. Petersburg standards, against 7,600 standards last year and 7,000 standards in 1892. The stock of logs is only 600 standards, against 4,000 standards last year.

SHIPMENTS FROM MIRAMICHI FOR 12 YEARS, FROM 1883 TO 1894, INCLUSIVE.

Sup. Feet.	Sup. Feet.	Sup. Feet.
1883—149 millions.	1887— 68 millions.	1891—72 millions.
1884—108 "	1888— 73 "	1892—95 "
1885— 87 "	1889—110 "	1893—83 "
1886— 72 "	1890— 88 "	1894—96 "

SHIPPERS FROM PORT OF MIRAMICHI, SEASON OF 1894.

Shippers.	No. Vessels.	Tons.	Sup. ft. Deals, Scantling Ends and Boards.	Palings Pcs.
J. B. Snowball	40	28,059	24,506,837	2,323,331
W. M. McKay	28	28,250	27,447,797	42,040
D. & J. Ritchie & Co.	19	11,424	11,088,762	72,600
Ernest Hutchison	11	9,836	9,318,892	10,000
F. E. Neale	13	9,501	8,730,980	
Geo. Burchill & Sons	6	5,114	7,389,000	12,000
Wm. Richards	7	5,923	5,993,193	13,775
W. A. Hickson	1	1,260	1,124,168	
Clarke, Skilling & Co.	3	2,584	5,556	
Jas. Aiton	Part.			
Totals	128	101,951	95,605,185	2,473,746

D. & J. Ritchie & Co., pine timber, 9 tons; birch timber, 7 tons. Clarke, Skilling & Co., spool wood, 1,539,733 pieces. Jas. Aiton, spool wood, 405,152 pieces.

DISTRIBUTION OF MIRAMICHI SHIPMENTS.

Country.	No. Vessels.	Tons.	Sup. ft. Deals, Scantling Ends, and Boards.	Palings Pcs.
Great Britain	65	56,985	53,549,292	2,339,531
Ireland	44	32,890	31,090,061	134,215
France	12	7,313	6,712,589	
Spain	4	2,247	2,079,210	
Australia	1	1,359	1,125,356	
Africa	2	1,157	1,048,677	
6	128	101,951	95,605,185	2,473,746

Great Britain, spool wood, 1,994,885 pieces; pine timber, 9 tons; birch timber 7 tons.

ST. JOHN, N. B., SHIPMENTS OF DEALS, &C., TO TRANS-ATLANTIC PORTS, 1894.

Shippers.	No. of Ships.	Tons reg.	Sup. ft. deals, &c.	Tons Timber.
Alexander Gibson	59	81,636	80,130,668	1,192
W. M. McKay	64	64,606	52,597,468	3,823
George McKean	22	22,150	18,661,127	
Others	5	3,397	2,083,813	
Totals	150	171,789	153,473,076	5,015

DISTRIBUTION BY PORTS OF ST. JOHN SHIPMENTS, 1894.

Countries and Ports.	No. of Ships.	Tons reg.	Sup ft. Deals, &c..	Tons Timber.
Australia	2	2,618	2,322,781	
Barrow	2	3,832	4,400,949	
Fleetwood	8	10,522	10,317,153	
France	3	2,374	2,135,572	
Garston	2	2,502	2,780,688	
Ireland	41	33,009	32,178,659	4
Liverpool	30	44,176	41,382,395	4,697
London	11	15,300	1,742,075	
Newport	3	2,826	2,728,461	
Penarth Roads, for orders	11	14,540	14,454,608	
Runcorn	1	1,145	1,130,281	
Scotland	4	5,156	5,680,732	
Sharpness	3	3,975	4,205,855	
Wales	24	25,149	23,751,823	314
Other ports	5	4,665	4,261,044	
Totals	150	171,789	153,473,076	5,015

SHIPMENTS FROM ST. JOHN TO TRANS-ATLANTIC PORTS FOR THE PAST 17 YEARS.

	Total Sup. ft. deals, &c.	Timber (tons) Birch.	Timber (tons) Pine.
1878	188,168,610	7,989	2,493
1879	153,279,357	11,548	3,237
1880	215,485,000	16,035	2,441
1881	210,281,730	5,134	1,734
1882	201,413,717	7,576	3,332
1883	181,517,932	11,778	3,883
1884	164,829,825	14,006	3,836
1885	152,543,026	13,769	3,686
1886	138,934,392	7,354	4,313
1887	118,450,590	5,197	1,587
1888	153,184,187	4,721	457
1889	180,167,488	7,221	487
1890	132,608,516	1,311	4,317
1891	122,242,682	5,004	——
1892	146,529,309	10,200	——
1893	156,653,334	5,294	——
1894	153,473,076	5,015	——

TOTAL TRANS-ATLANTIC SHIPMENTS OF NEW BRUNSWICK IN 1893, COMPARED WITH 1894.

—1893—

Ports.	No. Vessels.	Tons.	Sup. ft. Deals, &c.	Tons Timber.
Miramichi	113	88,523	85,230,472	
St. John	166	181,099	156,653,334	5,294
Bathurst	18	11,810	10,176,000	102
Dalhousie (including Campbellton)	32	21,054	17,610,241	341
Richibucto (including Buctouche)	22	11,188	10,557,663	
Shediac	25	13,099	11,763,215	
Sackville (including Baie Verte)	21	14,395	13,382,475	
Outports of Moncton. (Hillsboro, Harvey, Cocagne, Alma)	8	7,040	6,870,085	
Totals	405	348,208	312,243,485	5,737

—1894—

Ports.	No. Vessels.	Tons.	Sup. ft. Deals, &c.	Tons Timber.
Miramichi	128	101,951	95,605,185	16
St. John	150	171,789	153,473,076	5,015
Bathurst	12	9,947	8,829,000	43
Dalhousie (including Campbellton)	39	24,444	20,451,756	203
Richibucto (including Buctouche	13	6,130	5,936,920	
Shediac	20	10,331	9,806,100	
Sackville (including Baie Verte)	23	13,626	13,402,771	
Outports of Moncton. (Hillsboro, Harvey, Cocagne, Alma)	20	19,081	18,675,813	
Totals	405	357,299	326,180,621	5,277

The trans-Atlantic shipments from the Province of New Brunswick for the past ten years were :

Sup. feet.		Sup. feet.	
1885—292	millions.	1890—293	millions.
1886—276	"	1891—253	"
1887—250	"	1892—325	"
1888—277	"	1893—312	"
1889—369	"	1894—326	"

SHIPMENTS FROM NOVA SCOTIA, 1894.

Ports.	No. Vessels.	Tons.	Sup. ft. deals, &c.	Tons Birch Tbr.
Outports of Amherst. Pugwash	13	8,649	15,262,020	
Outports of Amherst. Northport	9	8,209		
Outports of Amherst. Tidnish	4	2,667		
Halifax	52	36,430	31,631,250	
Jordan River	1	474	422,798	
Parrsboro	40	43,496	39,519,639	
Pictou	10	8,259	5,491,000	1,180
St. Mary's River & Liscomb	15	10,565	10,151,760	
St. Margaret's Bay	3	1,481	1,454,295	
Ship Harbor	2	1,030	942,120	
Sheet Harbor	3	1,560	1,452,368	
Totals	152	122,820	106,327,250	1,180

The shipment of deals from Nova Scotia to trans-Atlantic ports for the following years were :

1883	77,918,000	1889	92,605,488
1884	69,159,000	1890	99,512,924
1885	79,647,765	1891	78,603,742
1886	87,280,125	1892	87,861,398
1887	82,959,589	1893	109,252,930
1888	85,070,005	1894	106,327,250

MANITOBA AND THE NORTHWEST.

No large amount of business was done in lumber in Manitoba and the Northwest in 1894. The consumption of lumber for the year is given at 40,000,000, which is from 25 to 50 per cent. of a reduction over the previous year. Trade in Manitoba and the Northwest depends, to a large extent, upon the condition of the farming community, and the disposition in 1894 was to withhold expenditures for buildings and improvements. After the change in the tariff, increased quantities of lumber were brought in from the United States, and it is, perhaps, to be expected that that thing will continue. Lumbermen in the Lake of the Woods district are pursuing a policy of restriction, not anticipating a large trade 1895.

BRITISH COLUMBIA.

The lumbering industry in British Columbia in 1894 was much depressed. Domestic trade, at the best, was not large, and what was done was not of the most profitable character. It was hoped early in the year that business would brighten up in Australia, and as an important export point for Pacific coast lumber that some gain would come from that source. This improvement, however, did not take place, nor did the trade of South America develop as was expected, though conditions there have been better than in the Antipodes. Another unfortunate feature of the trade was the unprofitable price at which lumber was sold. It is calculated that in the case of vessels loading for foreign points that a considerable loss was effected on some of the shipments. A policy of economy was practised by mill owners, the wages of employes and other items of expenditure being curtailed. After the tariff bill had been passed in the United States an opening was made for the shipment of stocks to California and some impetus was given to business in that direction. Quite a number of shipments were made during the closing months of 1894, and it looks as though a fair trade, at least, would be cultivated between British Columbia and California. If one turns to the shingle trade, which is a large item of manufacture on the coast, there is nothing of encouragement to be gleaned. All through the year the shingle market was in bad shape, and the product of the mills was, in many cases, sold without a profit. The situation is summed up in a sentence by a large shingle manufacturer of New Westminster : " We certainly are tired of consuming our handiest timber and wasting our work and energy in doing business without adequate profit, and if the truth be told, our bankers are just as tired of it as we are." Mill men are slow to speak of what the outcome will be for 1895. They are hoping for an improvement, and the year will likely show up better than that of 1894, but to what extent it is hardly safe to predict at this time.

Mr. Joseph Smith, a prominent lumberman of Ottawa, Ont., died early in January, aged 75 years.

SHOP TESTS FOR BELTS.

THERE are mechanics who believe that belts will sometimes get tired and cranky, and refuse to work. Whether that is actually true or not, the writer operated a little cross belt at one time that acted very much like it. At intervals of several days the belt would fly off without any provocation. I would put it on, and immediately it would fly off again, and would keep so doing for a number of times.

Finally, however, it would resume operations in a regular way without any more breaks, for days at a time, when it would take another fit and do the flying-off act again. I got used to it, and when it took the notion to fly off I curbed my temper, and drew upon my reserve of patience, and as often as it flew off I would quietly put it on, knowing that when the fit was over it would resume work, and it always did. I did not know then what caused the trouble, and do not know yet, unless it was of a cranky disposition, or was tanned from the hide of a Texas steer.

Speaking of that reminds me of cross belts in general. Take for instance, a cross belt running off a large driving to a small driven pulley. The first thing it does, when put to work, is to crowd over on the small pulley, and before the operator is aware of it, it will be running one-half on the pulley and the other half off. If not accustomed to the tricks of cross belts, he at once jumps to the conclusion that the pulleys are not in line, and so stops the machinery to investigate. A one-eye glance shows the pulleys to be all right, and he tries it again, thinking perhaps the first time was an optical or some other kind of a delusion. The second trial proves there was no delusion, for there it runs half on and half off. There being no other alternative, the pulley is moved on the shaft to accommodate the belt, and although the belt resents this interference with its right to run as it pleases, by trying to crowd still further over, still, if the pulley is moved far enough it can be kept fairly on it so long as it runs just that way.

By and by, however, it gets slack and needs taking up. It is unlaced, a piece cut off one end, and the belt is laced again. When put on the pulley this time, much to the astonishment of all hands and the engineer, it flies entirely off the little pulley on the other side, and no matter how often it is put on, it will just as often fly off.

In nine cases out of ten the parties operating it cannot tell what is the matter with the belt. They all think it is cranky, but in this case it is not ; on the contrary, its actions are perfectly natural.

When a cross belt runs from a large to a very small pulley, the cross comes close to the latter and the taut fold of the belt presses hard against the slack side and crowds it over on the pulley, much as a shifter moves a belt from a tight to a loose pulley, or the reverse. That was the trouble in the first instance. In the second instance the belt had been crossed the other way, and hence the reason why it ran off on the other side of the pulley.

There was nothing cranky about the belt. It was simply obeying natural law. It is the mechanics who are cranky for crossing a belt on a large driving and small driven pulley. It should never be done when it is possible to avoid it. It is practically enough to cross belts on pulleys that are near the same diameter, or at least the small pulley should be large enough to throw the cross so far away from it that the tight side of the belt could have no effect on the slack side.

When so arranged a cross belt will work about as evenly as an open belt, and is a better transmitter of power, because it increases the lap of the belt on the pulleys. It is better not to cross a rapidly running belt except when actually necessary, as for reversing motion, etc.

Controversies as to the adhering and transmitting qualities of various kinds of belting are common, and makers of new kinds often take advantage of this difference of opinion among experts, and the users of belting in general, to make loud claims for the superior transmitting qualities of their belts ; and without some way of demonstrating the truth or falsity of these claims the purchasers of belting have to take the word of the makers. It is, however, not necessary for any user of belting to take anybody's word on a question of that kind if he is not afraid of a very small expense and a very little trouble.

Every shop and every mill can have a very simple tester rigged up in this way. Select a short piece of shafting, say three feet long, on which fit a pulley of from sixteen to twenty-four inches in diameter and six inches face. Fasten the pulley securely to the shaft, as is ordinarily done for work ; then fix clamp supports as substitutes for journal boxes, and hang the shaft about four feet above the floor at any convenient place that will be out of the way. Clamp the shaft tightly so that it cannot turn, and the tester is ready for business.

Throw a piece of six-inch belt over the pulley and attach a tension weight to one end of it with the weight resting on the floor. To the other end, by means of a hook, hang a small platform on which all sorts, sizes, and descriptions of weights can be piled. Pieces of iron of any kind can be used, or lead, or anything that has weight to it. With these odds and ends the platform is to be loaded until the belt slips and raises the tension weight from the floor. The platform weights can then be weighed, and a record made of the weight.

The standard test should be made with a piece of new leather belt of good quality, and by its record all other belts should be measured. The bottom of the platform ought to be at least one foot from the floor when empty, so as to have some distance to fall through when a belt is being tested.

By this standard all other kinds of belts may be measured, and every dealer in belts desirous of placing his goods should be asked to furnish a short piece of six-inch belting with which to make a test. If it requires more weight to slip the belt on the pulley, with the same tension, then it is a better power-transmitter than the leather belt. If it slips with less weight, then it is not so good. In this simple way all kinds of belts can be tested in relation to each other, and records kept for convenient reference.—R. J. Abernathy, in Power.

PUBLICATIONS.

Albert Lynch, the famous French artist, who received the highest Salon prize for his panel of "Spring," has been engaged by the Ladies Home Journal to draw a series of designs for the cover for that magazine, which, as the reading public knows, changes its cover design every month.

Give credit where credit is due, and acting out the principle in this axiom, we have pleasure in complimenting the Tradesman, of Chattanooga, Tenn., in the appearance and character of the Tradesman Annual of 1894, which has come to our table. We have seen special issues of trade journals that evidence more glitter, but rarely has there come into our hands a trade annual so brimful of useful information, covering the particular field the journal represents. The Tradesman Annual is a complete cyclopedia of the manufacturing interests of the southern states. Every department of trade seems to have been covered, the special articles touching each being written by such men as Edward Atkinson and other recognized authorities on business and statistical topics.

TESTING OILS.

AN authority on oils gives the following easy method of testing lubricating oils : " Place single drops of each oil to be tested near the end of a piece of plate glass about two feet long, one end being about six inches higher than the other. The quality of the oil for lubricating purposes is shown by the distance travelled by each drop. Thus, on the first day sperm oil will be found in the rear, but it will pass most of the others in time and retain its power of motion after the others have dried up. A light-boided oil flows quickly, like water, but soon dries, whereas, what is wanted is a good body combined with liquid flow. Many oils have a good body but tend to gum, which will be shown on the glass." This shows just one thing—to our mind—that is, the relative qualities of different oils for running down glass. As a test of lubricating value it seems quite unreliable. The conditions of an oil running down glass and of working upon a running bearing are widely different. No one would think of using sperm oil upon heavy work because it ran down a piece of glass quicker or better than some other oil !—Engineer.

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CORRESPONDENCE

Letters are invited from our readers on matters of practical and timely interest to the lumber trades. To secure insertion all communications must be accompanied with name and address of writer, not necessarily for publication. The publisher will not hold himself responsible for opinions of correspondents.

IGNORANCE OR WASTE.

To the Editor of the CANADA LUMBERMAN:

SIR,—A certain mill-owner, well known to the writer, in reproving one of his empolyes, was met with the rejoinder beginning with, "I thought," but got no further, as he was promptly interrupted with, "You thought? Who told you to think? You have spoiled every piece in that pile. I want you to know that I am doing the thinking for this business, and if you do not do as I tell you, you will pay the cost of your thinking."

Without expressing an opinion upon the wisdom or disposition of the mill man, as shown above, I have often thought of the force of the sentiments expressed, when my business brings me into our country saw mills cutting hard woods. It is probably a safe assertion that ninety per cent. of the slabs other than pine go to the wood pile without so much as a "thought" being expended upon them, but I came across an instance of thinking and doing, backed up with experience and figures, which may be of benefit to many a man, if the facts are understood.

In one of the mills of Macpherson & Schell, of Alexandria, is a saw-table of special construction upon which is worked up the slabs and edgings into marketable shape.

The basswood slabs are cut into cigar box stock 3-16 in. thick and of suitable widths and lengths, usually four feet long, and some into piling boards for rolling mills, trunk slats and other uses. Ash slabs and edgings were cut into wainscot lumber ⅞ in. thick, three and four in. wide and three and four feet long, and an examination of the finished stock showed a grain and surface not possible to equal from lumber from the body of the log. Birch and hard maple were cut into furniture stock, and soft maple into wainscot, making a fine white finish.

For working up small second growth basswood into box boards, drawer stock and other furniture uses, the same firm have a miniature sawmill, of their own special make, self-contained, easily removable if needed. We were informed that over two-thirds of the expense of operating the mill was cleared from the slab-sawing venture of the firm. Surely the above "experience" should cause many mill men to indulge in some thinking of a profitable nature, and if some of the "lumber merchants" would take up the matter with manufacturers, a more profitable trade awaits them than often is the case with larger operations.

We would say to the mill men, look up a market, stop the waste, and "pick up the money under your feet."

WHITE BASSWOOD.

POINTERS ON TRADE JOURNALS.

IT is a prominent and indisputable fact that those periodicals known as trade journals are great factors in individual success at the present day. This is owing to their educational character and to the care and judgment exercised in their preparation. And while the field of trade journalism may be in many instances overcrowded, still there are few papers of this class which do not possess a peculiar merit that entitles them to consideration.

In the distribution of advertising patronage the importance of trade journals as mediums is too frequently overlooked, or else a proper value is not placed upon the quality of the publicity which they can give their patrons. Few general advertisers give thoughtful consideration to the claims which such papers present, and consequently fail to do justice to their worth; but indefatigable efforts on the part of the journals themselves must ere long bring to them the recognition they deserve. When an advertiser prepares to dispute his patronage there are three facts in connection with the different advertising mediums which he takes into account—quantity of circulation, quality of circulation and space rates. These, then, are the facts to be considered in regard to the value of trade journals to advertisers.

First, as regards quantity of circulation. It cannot be expected that a class publication will enjoy the same field favorable to the acquirement of enormous circulation figures that is accorded to newspapers. Being published for a class, it is of necessity confined to that class in securing readers, and its circulation is therefore limited to the magnitude of its class. But, notwithstanding this fact, a study of the American Newspaper Directory will reveal a number of trade journals that possess a clientage surprisingly large, and there can be no doubt that the leading exponents of each line of business go to a very large percentage of the members of its own trade brotherhood.

But the shrewd advertiser well knows that the true merit of a medium does not lie in the size of its edition only. He looks deeper than this before investing in its pages, and it is here that the trade journal will bear the closest investigation and comparison. In the quality of its circulation, it possesses an unquestioned superiority over any other sort of publication. It fills a place that no newspaper or magazine can occupy, because it is of individual interest, while the latter is of general interest. It talks only about subjects that concern its class of readers, teaching them new business methods and the most profitable manner of applying these methods, so that it becomes a veritable schoolmaster in its own particular field. Thus by its educational facilities it contributes to the final success of many a young struggling business man, helping him over the rough places and guiding him to safer paths. It therefore follows that each issue of such a journal is regarded by its readers as a thing of value and carefully studied as a source of profit to themselves. It is preserved for future reference, and the advertisement it contains bring forth fruit long after those that have appeared in a newspaper are forgotten. I think it will be admitted that these valuable characteristics entitled the trade journal to a high position among advertising media.

Now, a word about rates. It is true that class publications, as a rule, ask more for their space than newspapers, but take into consideration the quality of this space and then tell me if they do not deserve all they ask. Of course excellent judgment must be used in selecting the class of journals in which to advertise a certain kind of goods, but after this has been happily done compare the results with newspaper results in proportion to circulation. All articles can not be profitably advertised in class journals, but many can be, and to advertise the latter I would rather pay five cents per line per thousand of circulation of trade papers than one half-cent to newspapers. Results will justify this assertion.—Printers' Ink.

THE GROWING OF THE FOREST.

NOW, when the superabundant vegetation of summer no longer cumbereth the ground, is the time to walk along the edge of a woodland and learn how forests grow, rising through the grass, sometimes only a few inches, sometimes only a foot or more, one now sees the younglings of the forest, seedlings from nuts and every form of forest fruit sown last autumn, or perhaps the year before. Nature in her reckless profusion sows her forest seeds right and left, at the root of the parent tree and by the aid of the wind out beyond the edge of the woodland. Millions rot upon the surface of the ground or are eaten by birds, beasts or insects. Comparatively few are covered with earth and germinate. Many of those few perish by a thousand accidents when they first peep above ground. Some fractional percentage of the whole number of seeds sown alive to the end of their first year, and it is these that now greet the eye upon the woodland's edge, pretty mimics of their giant parents.

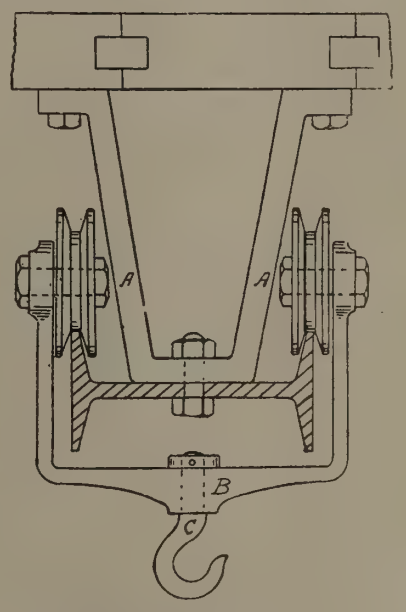
One gets a notion of the forest tree's tenacity of life when one attempts to uproot the baby tree. A yearling hickory is found with deep struck tap root thicker than the stem above ground and often longer. Only a strong arm can uproot the infant from the spot where he has set a firm foot in his native soil, as if he knew his destined towering height and six feet of girth. So the oak; his infant tap root exceeds in length its height above ground, and he braces himself with lateral rootlets, as if he felt the tempest in his locks a century hence.

The nobler forest trees, too, in their youth have to make provision for the needs of age, to dive down into the bowels of the earth and draw thence the stuff from which giants are molded, the water that shall serve for life and growth when droughts destroy the puny annuals towering in their mushroom growth of a season above the tiny oak, with its heritage of centuries. The birches are less firmly rooted. They content themselves with a modest depth and a wide lateral spread of branching roots. The beech spreads wide and sinks deep in preparation of the time when the secret alchemy of its cells shall transmute the food drawn from earth and air into the marvel of its giant limbs.

There is a peculiar charm in the infancy of these future giants. The tiny young oaks of the larger varieties sometimes exceed their parents in the size and richness of their leaves, and for some years the growing oak has a peculiar autumn splendor that comes late and lingers long. The leaves of the young pin oak are more delicate than those of the parent. They take on early the tints that glorify this variety of oak. The almost pentagonal leaves of the seeding tulip tree also are tiny, with a transparency unknown to the broad, rich greenery of the well-grown tree. The foot-high elm wears his dark-green flannel leaves far into the autumn and seems to escape the beetle. The baby birch when uprooted has a pretty secret to reveal of the way her kind grows in sisterhoods of three, four, five or more. All about the base of the baby trunks, just beneath the surface of the ground, are little buds that will in time develop into independent trunks, at least such seems their promise. The elms propagate abundantly. So do the maples, growing in single tall, straight wands. The tulip tree is also the parent of a great brood, and the young wild cherries spring abundantly. The oaks seem less prolific, probably because the acorn is an excellent food for a great number of creatures. So, too, the chestnut, whose seed escapes the worm only to fall into the cluthes of the schoolboy. The birches spring up in all directions, but the beech is less commonly found in its infancy. The sassafras surrounds itself with a whole colony of young shoots from its far spreading roots. Hence the charm of the natural plantations of the sassafras. The beauty of its family groups should be a perpetual reminder to human families that few of us in the mass are so well worth the photographer's art as the spontaneous vegetable products of nature.

A HOME-MADE TRAVELLING CRANE.

THE travelling crane shown herewith is quite easily constructed and is of great utility. The frame AA is simply to hold the I beam which forms the track in place, and one is supplied at as frequent intervals as



A HOME-MADE TRAVELLING CRANE.

strength demands. The upper edges of the I beam form the track, and the rollers are cast iron, governed as shown, and are held in the yoke B by the studs shown. These are fastened solidly in the yoke and form the shaft or axle for the rollers. A swivel crane hook C completes the equipment and makes a very handy addition to almost any shop, mill or plant. The cost is very little and should not deter anyone from making it who has use for one.—Machinery.

SOME PECULIARITIES OF TREE GROWTH.

THE forest-lover and botanist can always find an abundance of vegetable curiosities that will escape the observation of less interested persons. While each of nature's kingdom has many things to attract and hold the undivided attention of its devotees, the student of botany, whether an amateur or a professional, will yield nothing in behalf of the vegetable kingdom. Especially is this true of him who makes a study of forestry. The forest-lover makes friends and companions of trees. He learns their moods, their habits and peculiarities of growth, while they in turn teach him wonderful lessons.

There is a beneficence about a forest that must always have its effect upon dwellers within its influence, where there is companionship in single trees, if familiar to one from day to day.

Even the brute creation acknowledges the former, the highest types being found in timber lands; only the lower ones approaching the reptilian in form, being found as permanent denizens of the vast sandy or alkali treeless plains of either hemisphere. It might be claimed that the buffalo, the splendid game quadruped of the western world, was, in history, exception to this rule. But the real fact is that he reached his greatest perfection in those prairie sections which were interspersed with natural shelter belts of heavy timber, such as forest-lined rivers and creeks, or wooded ridges, that gave ample protection from the fierce sun of summer, or the fierce blasts of winter.

Forest peculiarities include a mass of interesting knowledge which is withheld from the general public. For instance, who among the non-professionals can explain why the deciduous growth follows the destruction of conifera? Or why certain species accompany one another? And yet these are common, and every-day facts.

The more one studies this subject the more interesting it becomes, and a few illustrations may serve to draw attention to it. There is a tree, habitant of the foothills of the mountain ranges of the Pacific Coast, called the madrona (Arbutus Menziesii, Pursh.), that is always in foliage, though not a conifer. The old leaves roll up into brown balls during the heat of the dry season, after which the new ones have nearly matured, after which they separate from the branch with a sharp report, like the cracking of fire-crackers, producing a rather startling effect upon the uninitiated traveller.

In addition this tree sheds bark early in the summer, previous to changing its foliage. At the proper time the bark splits from the ground up to the extreme points of the last year's growth on the minutest twigs, whence it rolls up and falls to the ground. At maturity the old bark is of a rich coffee color, and smooth and hard. The new bark presents a beautiful shade of dark pea green when first exposed, which darkens from day to day to maturity.

In the Sierra Nevada Mountains the flowering dogwood grows to the size of a respectable tree. In the eastern part of Amado county, Cal., at an elevation of 37,000 feet, at a bend in a road built to a lumbering camp and saw mill, there stands two such trees, about 16 inches in diameter at the ground, and about thirty inches apart. At the height of ten feet from the ground the trees are joined together by a regular Siamese union. At the points of junction the trees are fully 12 inches in diameter, and the connecting growth is upwards of five inches in diameter in the center, increasing largely toward each trunk. Examination shows that the trees have no connections at the roots, being two separate and distinct trees.

The location was a wild and unfrequented one, away from any trail, until the road was located less than five years ago. There is no appearance of two branches having been grafted together artificially, but there is every evidence of its being a simple freak of Dame nature herself.

Again, certain trees, like certain animals, become extinct in particular localities, without any apparent cause. This giant sequois of California will never be reproduced. They are the survival of a prehistoric age that could alone produce them, being the oldest living specimens of forest growth on the continent—older than large areas of the continent itself.

Certain trees are inimical to others, it being impossible to make them grow side by side, while on the other hand certain species exert a benign influence over others to such an extent as to almost necessitate their planting together, if the best results are desired.

Who can explain why the conifera as a rule (the sequois being an exception), can be propagated only by seeds, while a large majority of deciduous trees renew themselves from sprouts, from old roots, or can be propagated from slips?

Men, clearing a black ash swamp in Northen Michigan, discovered a white pine stump of great size, inside of which was a hemlock stump, also very large, and inside the hemlock two yellow cedars of good size, joined at the roots. The stump puller took the whole mass out together, when an examination showed that the shell of the white pine was still about 16 inches thick and sound, while the hemlock had a shell of over a foot in thickness, hard and sound, the cedars being sound with the exception of a small heart and each about one foot in diameter.

Computing the age of each from the number of rings in the shells, the pine must have been at least 1,500 years old when it ceased growing; the hemlock was fully 600 years old, and the cedars were 140 years old.

A reasonable allowance for an interim between the death of the pine and the seeding of the hemlock, and the death of the latter and the seeding of the cedar, makes it appear that the pine must have sprung from a seed more than 3,000 years ago.

This clashes with the theories of the geologists as the formation of that part of the State, which arises a question between them and the believers in the "ring" theory of annual growth.—Hardwood.

FORETHOUGHT VS. AFTERTHOUGHT.

By W. H. Wakeman.

IT is said of some men that their "foresight is hindsight" and their "forethought always comes afterward." This is not a very handsome expression, but it answers the purpose very well in describing the characters referred to. When one of these men is put in charge of a steam plant, there is trouble almost continually, and the plant is frequently shut down, that his hindsight may be made use of and his lack of forethought made prominent. Such a man never makes it his business to inspect the lacings in his main belt at short intervals to see that it is in good order, but allows it to run as long as possible, and when all the machines in the factory are running, thus bringing a heavy strain on the nearly worn out lacing, it fails and the whole factory is shut down for about an hour while a new lacing is put in; or perhaps a part of the lacing gives way first and the belt is thrown to one side of the pulley, is caught by the floor or wall and badly torn, making it necessary to get a new piece and put it in, and as the job must be done in a hurry, there is no time to properly scarf, cement and rivet it, so that it is laced on, and ever afterwards there are two lacings to care for instead of one. It does not really need to be a very large factory to make such a shut down cost as much as is paid the engineer for a week's work, consequently a man who watches such things and avoids the shut down saves his employer many dollars.

It is a good plan to draw in pieces of old lacing over the new simply to protect the lacing which holds the belt together from wear as it runs over the pulleys. These pieces will then wear out first and so give warning, when they may be renewed and the others kept intact.

Such a man as forms the subject of this article, does not remove small accumulations of sediment from his sight-feed oilers, but waits until the dirt is about half an inch deep in them and the oil passages choked up with it, and as the bearings are not oiled, hot boxes are the result. He is then not slow in applying some heroic remedy and boasting of his skill in curing the evil. The flange joints in his cast iron main steam pipe are leaking drops of water while his engine is shut down, but he has not foresight sufficient to enable him to know that unless they receive proper attention, the packings will be blown out and it will be necessary to shut down to renew them.

If the packing around his piston rod begins to leak, he simply screws up the nuts which hold the gland in place, and when it leaks again he repeats the process, but does not heed the warning that new packing is needed, until some morning after starting up he finds that he can no longer stop the hiss of steam in this way, consequently throughout the entire day, at each revolution of the engine it sounds as if it were about a hundred geese in the engine room, and visitors and employes are not slow to take note of it and rate him accordingly.

This man has an injector in his boiler room which formerly worked very well, but of late it will break occasionally, and frequently he finds it difficult to make it start as it should. This tells him that it is becoming coated with scale on the inside. He should have foresight to enable him to determine that in a short time it will become so filled up as to make it useless, but he lacks this most desirable qualification, and when his pump is being repaired the injector refuses to work and he can not feed his boilers. To cover up his blunder he advances the idea that no injector will last long anyway, and that they fail without giving warning, when the truth is that they do give such warning, but he either does not understand the story they tell, or is too indifferent to profit by it. It matters little which it is, as the result is the same in either case.

With a man in charge who lacks foresight, when the girth seams on the under side of his boilers commence to leak, he does not look ahead and calculate what the result will be if this leakage continues, but proceeds to calk up the leaky seams, and continues the same practice that caused the trouble in the first place. He can not foresee that if he fills a hot boiler with cold water, severe contraction will be the result, or that if he feeds cold water into the bottom of a boiler while under steam pressure, the cold water will settle to the bottom and cause the seams to leak.

His boiler is badly scaled and he introduces some scale resolvent to remove it, but does not possess sufficient foresight to enable him to see that if his remedy is of any value whatever, it will throw down a large quantity of scale which will lodge on the parts immediately over the fire and prevent the water from coming in contact with the iron, the consequence being burned plates and leaky seams.

If a small hole appears in the blow-off pipe, he puts a slip patch over it to stop the leak temporarily, but does not have forethought enough to show him that if corrosion has weakened the pipe in one place it soon will be in others; but when this pipe fails and his boiler room is filled with clouds of steam and the boiler is unceremoniously emptied of its contents, his afterthought has a chance to secure a prominent position.

If an oil agent offers him a commission on all of the oil that he buys of a certain kind, he repeats the old axiom that "a bird in the hand is worth two in the bush," without taking into consideration the fact that he has made a wrong application of it. He can not see into the future enough to discover that he will soon be no longer a free man, but will be under obligations to those from whom he has taken bribes, forgetting that all of these deals are brought to light sooner or later and always to the disadvantage of those who are concerned in them. The engineer who is capable of getting out of scrapes in short order, often passes as a hero, while the unassuming engineer who is thoughtful, and by his thoughtfulness keeps out of scrapes, attracts but little attention and frequently fails to get as much credit as is really his due. When he leaves a situation where he has had but little trouble, and where shut-downs were few and far between, and is replaced by a man whose forethought comes afterward, the difference is often plainly to be discerned without the aid of a magnifying glass.

There is one more point which I wish to mention, as follows: When a man takes charge of a steam plant, he should have foresight enough to study out the characteristics of his employer, know just what his ideas are as far as possible, and then govern himself accordingly. By this I do not mean that he should sacrifice any of his own opinions or ideas which are proven to be correct, for this is not at all necessary, but he should adapt himself to circumstances and by skillful management of affairs, secure the respect and confidence of his employers.

MOLDING CUTTERS.

THE care and skill required in fitting up a pair of molding cutters so that each may be the exact counterpart of the other and perform the same work in every part, and still be in perfect running balance, has led many operators into the pernicious practice of using but one perfect cutter and upon the opposite side of the head a piece of iron of the same weight, to act as a counterbalance. If this were a practical thing, and the feed reduced accordingly, there would be no particular objection to this practice, but it is simply impossible to properly balance a cutterhead in this manner. A standing balance may be obtained in this manner, but a running balance never. To obtain a running balance the counterbalance must not only be of same weight but every part of it must revolve in the same circle, for the centrifugal force of a body moving with different velocities in the same circle are proportioned as the square of the velocities, and a body revolving 1,000 revolutions per minute has four times the centrifugal strain as one revolving 500, while the centrifugal force of two unequal bodies moving with unequal velocities and at different distances from the center, are in compound proportion or ratio to the quantity of matter and the square of their velocities. So it is evident that, though the weight of the counterbalance may be the same as the cutter, still as the shape is not the same and every part of it can not revolve in the same circle, a good running balance is out of the question.

SPLIT PULLEYS.

HAS it ever occurred to you, says a writer in the Iron Trade Review, that there are some methods coming into vogue that are cheaper in the long run to use than to be without? Among these is the split pulley. It costs money, and big money, too, at times, to cut a keyway in a shaft when a new pulley is to be located. Have you ever used a good split pulley? If not, do so. A short time since I fitted out a whole shop with pulleys and shafting, and used nothing but split wooden pulleys. Hold? Well, not at first. Each pulley was tightened as well as we could do the work at the start and then watched. At the first indication of a slip the wrench was put on again and that settled the matter for all time. I had those pulleys driving every conceivable kind of ironworking tool, from a light drill to a heavy hammer, and never had the slightest indication of trouble. Then, when new tools were bought and old ones had to be shifted, ten minutes sufficed to take down the pulley. But when I did that job, I did not know as much as I do now. I allowed builders to sell me tight and loose pulleys on the counter-shafting, so that for every machine having a four-inch belt I had to buy a nine-inch split pulley. In future I will specify clutches.

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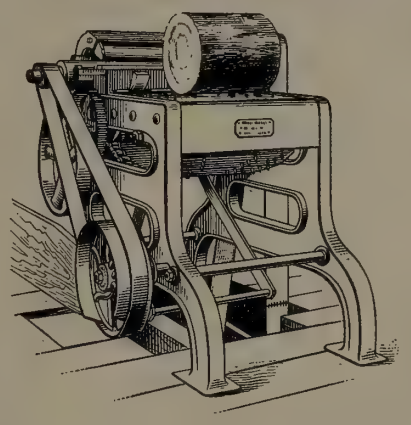

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SUPERIORITY OF WIRE ROPE.

WIRE rope making is a comparatively recent industry, at least its production upon a commercial scale has been limited to the last half century. Its manufacture in England during recent years has been growing rapidly, says the Machinery Market, and this may be largely accounted for by the many advantages derived from the substitution of flexible or rigid material, which has naturally widened the field of its application. Early attempts at wire rope making from either charcoal or B. B. iron were soon improved upon when steel was substituted, and now iron ropes are seldom used at all, whether for haulage or collieries or for the rigging of ships.

The principal objection urged against the use of wire rope in the earlier days was its stiffness; but, as we have already said, recent developments have removed this drawback. The flexibility of any rope can, of course, be largely increased by the multiplication of the number of wires of which it is made, and by the method of uniting them. The number of wires of which a rope is made in England generally falls between thirty-six and four hundred. The fewer the number of strands the easier to make the rope, of course, and vice versa, great skill being called into requisition in the arrangement of the wires when a large number are employed.

The superiority of steel wire rope is generally admitted. As an instance of this may be mentioned the towing of the armor-clad Caledonia from Liverpool to Plymouth by a 4-inch steel wire hawser, weighing 12 cwt.; a 13½-inch hemp hawser, weighing 45 cwt., and a 1½-inch stream chain, weighing 130 cwt., having broken in the endeavor to do the same work.

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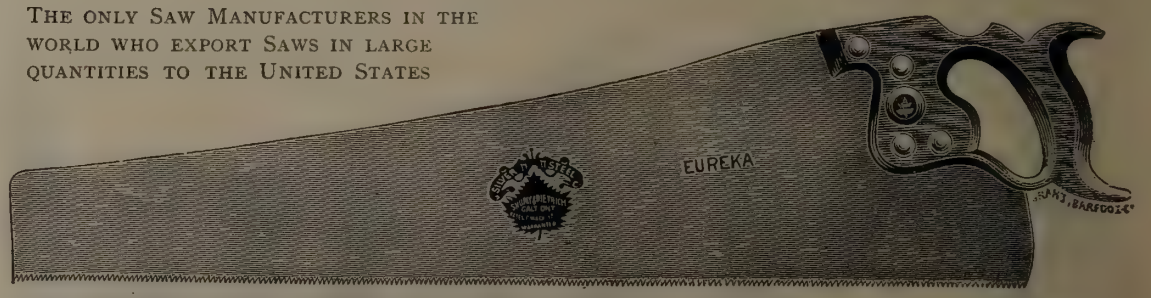

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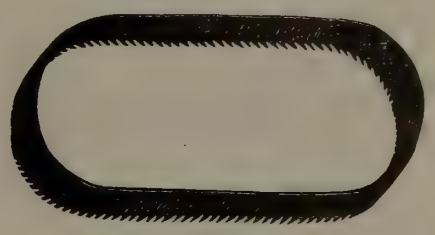

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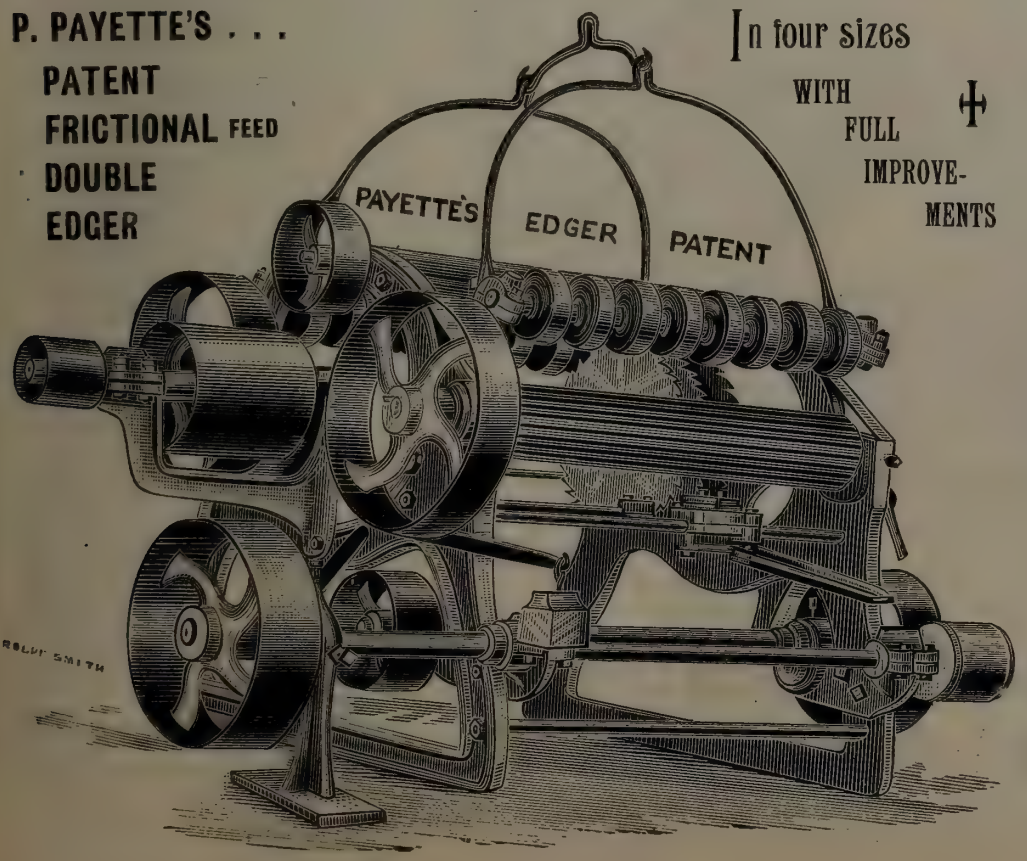

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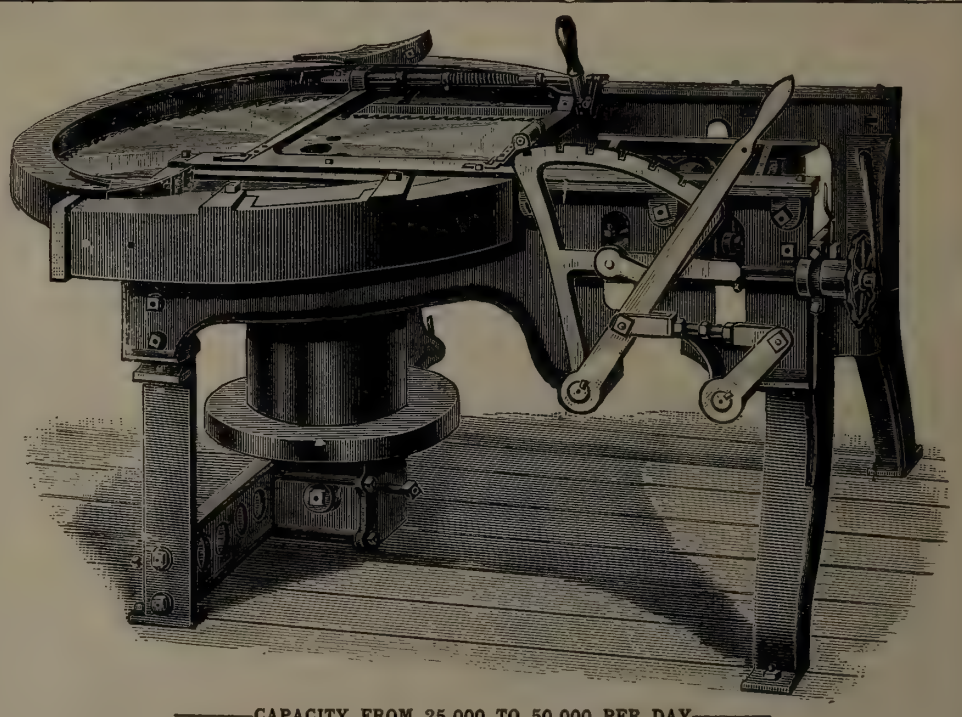

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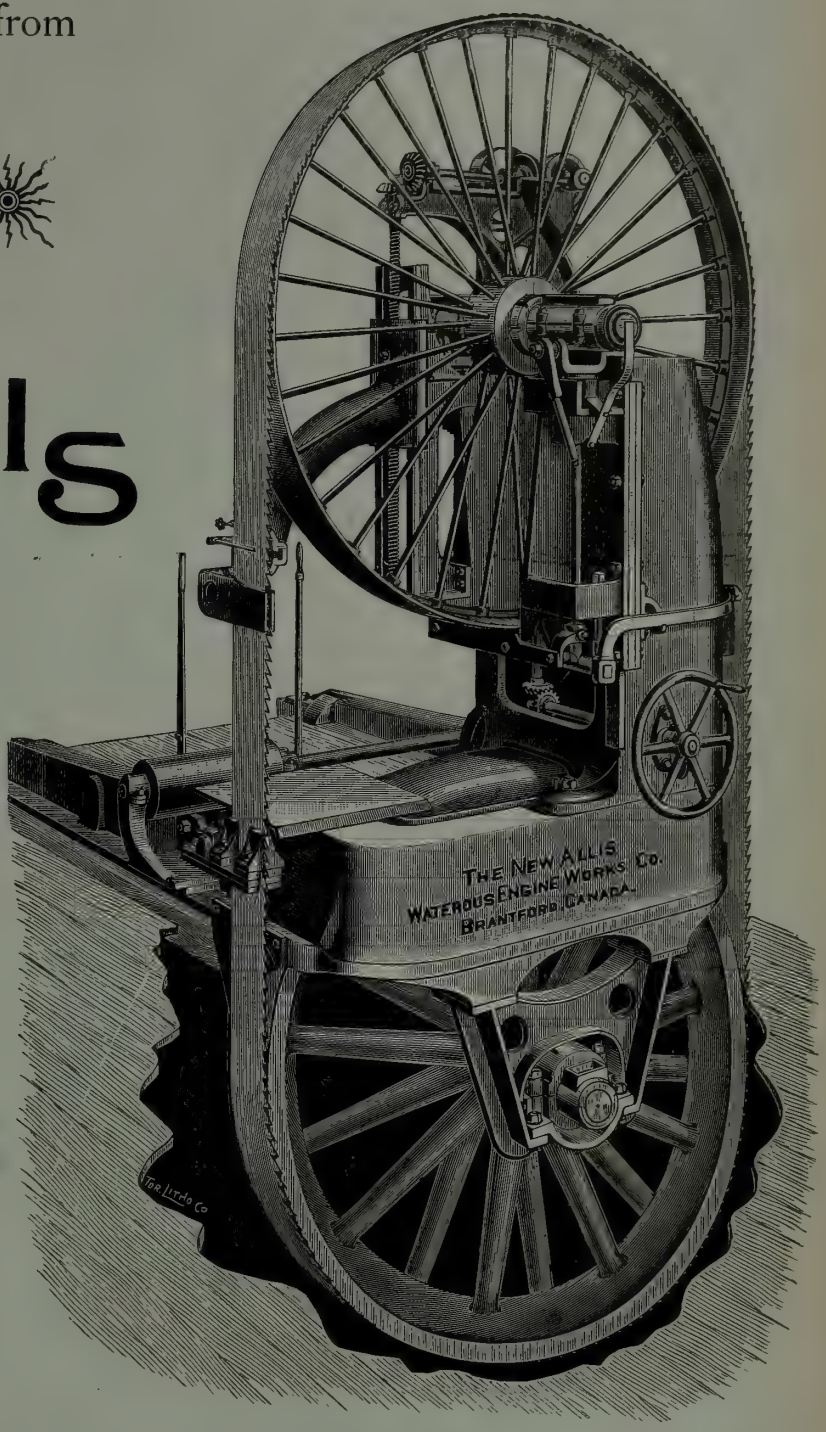

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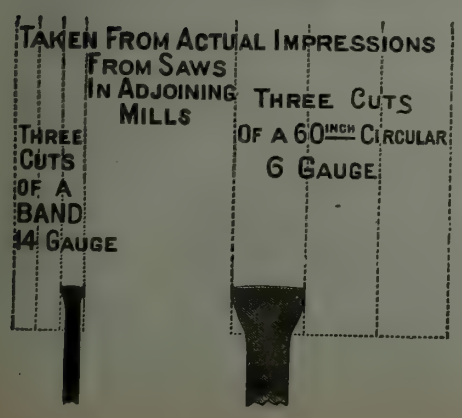

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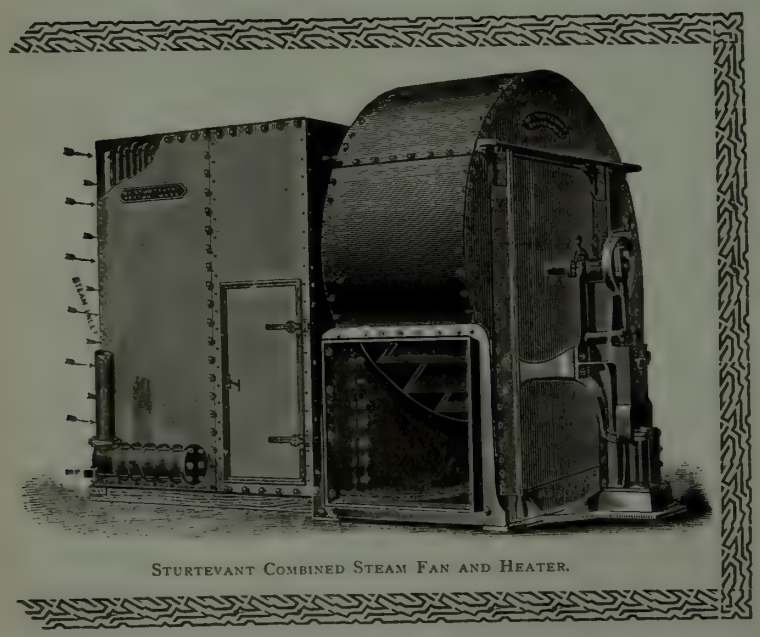

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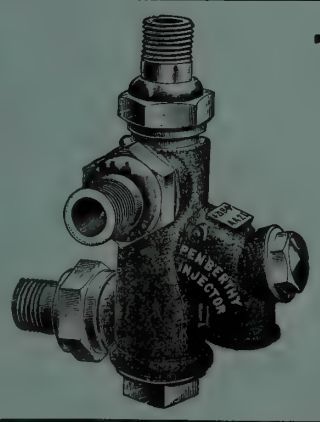

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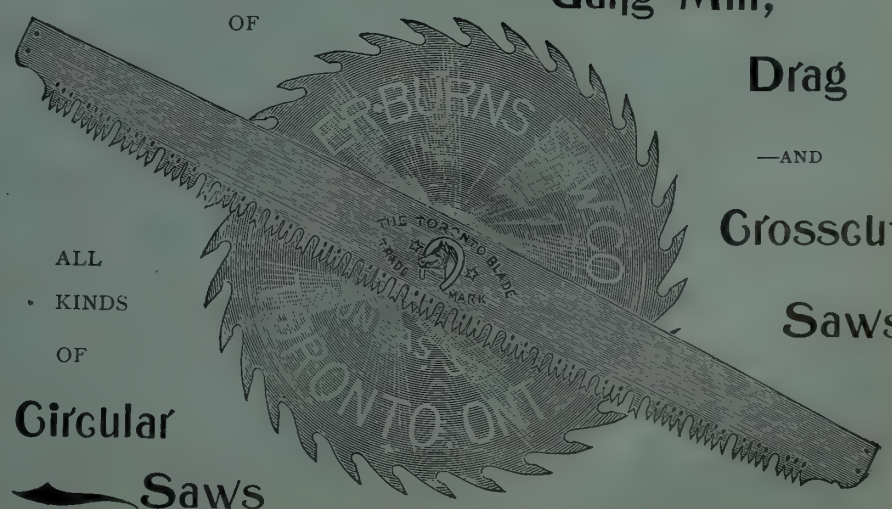

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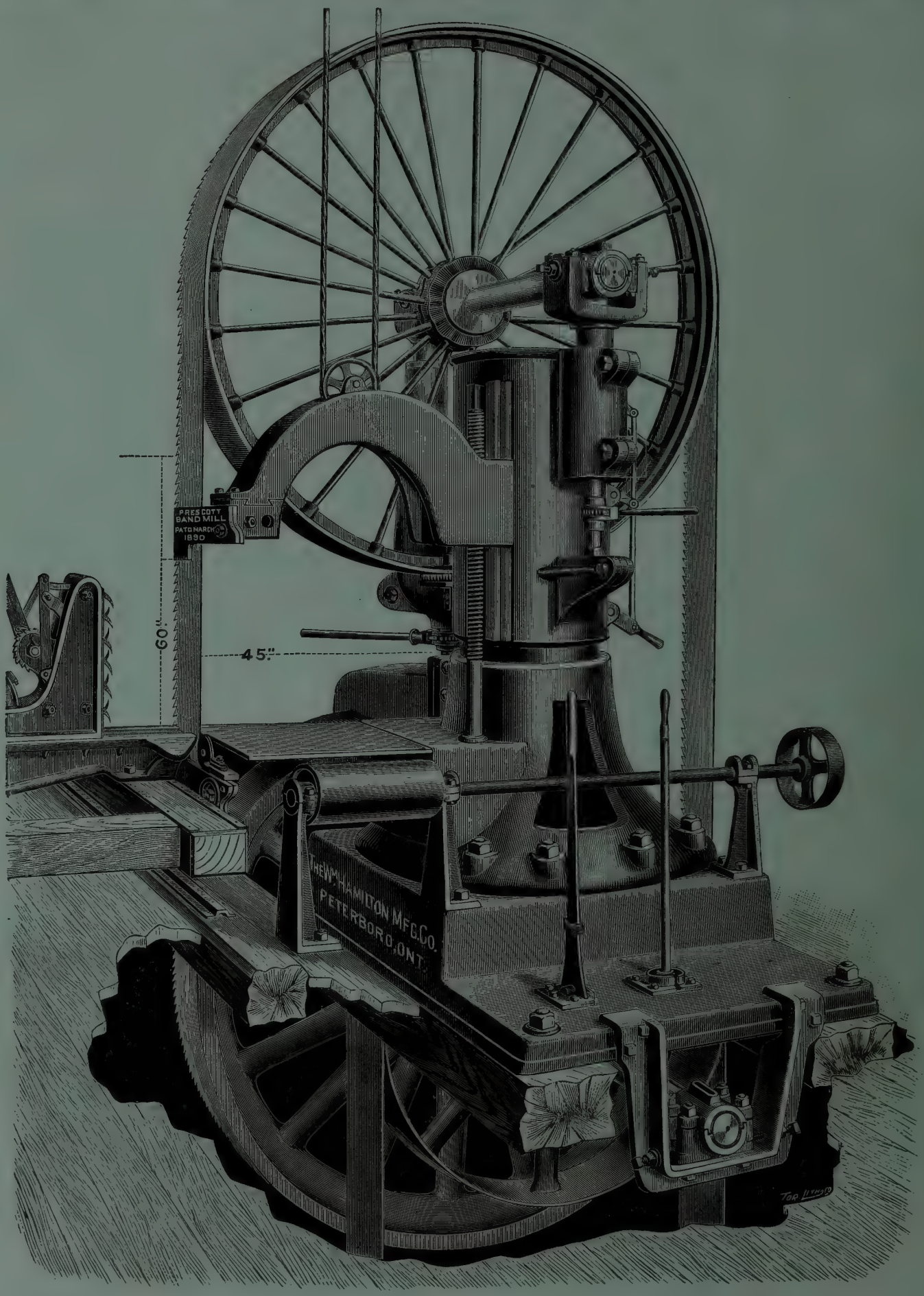

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HON. J. B. SNOWBALL,

SENATOR AND LUMBERMAN OF NEW BRUNSWICK.

"Let us be doing something."

TO tell the story of some men's lives is to sketch the times and place in which they have lived. The life of Sir John A. Macdonald is necessarily a history of Canada for more than 25 years. The biographer who would write of Sir Oliver Mowat would, at the same time, be writing, perhaps, the most complete history of the Province of Ontario. Men of individuality leave their impress on all their surroundings.

If one is to write of the lumber trades of the Maritime Provinces he unconsciously thinks of J. B. Snowball and Alexander Gibson. To pen a sketch of these men he must write, in a large measure, a history of the lumber trades of New Brunswick and Nova Scotia.

Already in these columns a sketch has appeared of Mr. Gibson. In noting some of the incidents in the career of the Hon. J. B. Snowball, of Chatham, N. B., the sketch is sure to tell much of the extent and character of the lumber business of the provinces down by the sea.

Just as Alexander Gibson's name is intimately associated with the town of Marysville, so is the name of J. B. Snowball identified with the town of Chatham and that section of New Brunswick, familiarly termed Mirimachi, and covering a number of towns and places within the district of the Mirimachi River.

Jabez B. Snowball is a native of Nova Scotia, having been born at Lunenburg, in that province, Sept. 24th, 1837. His family is of German origin, but for several generations were residents in Yorkshire, Eng. Mr. Snowball's career has shown a happy commingling of the perseverance and endurance indigenous to the Teutonic races, and that pluck and grit that is characteristic of John Bull. The father of our sketch was the Rev. John S. Snowball.

Mr. Snowball has been actively engaged in the lumber trades in the Maritime Provinces for a long term of years, and is to-day the largest manufacturing shipper in the district in which he resides. It is estimated that the Maritime Provinces possess forest resources to the extent of about 20,000 square miles. Where pine is the leading product of the forests of Ontario, spruce holds the premier position in the Maritime Provinces. Outside of this wood there is a considerable supply of birch, which, now that this wood is coming into increased uses, will prove a valuable asset to that portion of the Dominion. The two main shipping points are St. John and Mirimachi, or Chatham more strictly speaking, the home of Mr. Snowball. The exports of lumber from St. John to Europe and America are given as 200,000,000 feet b. m. annually. An estimate of the shipments, and names of shippers, from the Mirimachi district, mainly spruce deals, etc., for the past two years, are given as follows :—

Shippers.	1893 Feet.	1894 Feet.
J. B. Snowball	22,081,347	24,506,000
D. and J. Ritchie & Co.	10,660,238	11,088,000
F. E. Neale	13 519,604	8,730,000
E. Hutchison	7,109,925	9,318,000
Geo. Burchill & Sons	4,601,000	7,380,000
W. M. McKay	18,084,380	27,447,000
William Richards	6,607,000	5,993,000

The picturesque, aside from the rude, native beauty that is common to every lumber district, is not one of the factors that goes to give fame to the Miramichi. This, at least, would appear to be the experience of the editor of our English contemporary Timber, who a year ago visited the Maritime Provinces and particularly the lumber districts. He had made a pleasant call on Mr. J. B. Snowball, and at his invitation had made an inspection of his mills, together with those of Mr. E. Hutchison and others in the district. Having concluded his business, this is his account of the remaining hours spent in Chatham : "I have no desire to visit Chatham (Miramichi) again. Although the town has a pretty considerable population it is a very primitive place. There is no hotel except one or two boarding houses. The means of getting to and from the place are very inconvenient. I wished to return to St. John, but in order to do so I had to take a train at a kind of station a good mile and a half from the town at 3 o'clock in the morning. I engaged a conveyance to call for me at half-past two and the landlady of the boarding house advised me to go to

HON. J. B. SNOWBALL.

bed and let the cabman come up to my bedroom and awaken me (they do not seem to fasten the doors of their houses here) but I would not risk it, and I sat up. That cabman never came, and after anxiously waiting till the last moment, I seized my bag and ran, in the pitch darkness, over a mile up a rutty, muddy lane. I was not sure I was going in the right direction, and, after several falls in the mud, I arrived at the station, almost breathless and dirty, just as the train was starting. By repeated entreaties I got the driver to wait and entrain me and my baggage. I shall not readily forget Miramichi."

Of Mr. Snowball personally our English friend, as is the case with everyone else, can only say kind things. His interview was of the pleasantest character. "Like everything with which Mr. Snowball is connected," says he, "his mill is a reflex of his undoubted ability and great intelligence. Although the mill has only three gangs with compliment trimmers he can cut here some 30,000,000 feet or 15,000 stds." Besides this mill, which is illustrated on the following page, Mr. Snowball handles the product of three other mills in the district, in which he has a direct interest. Following the custom of lumbermen in this country Mr. Snowball carries on a general store business, the profits from which make even a better showing than that of his lumber business. The Snowball stock is shipped largely to Great Britain, Messrs. Farnworth & Jardine being his representatives there. Mr. Snowball himself is a yearly visitor to Great Britain.

The activities of this well-known Lower Province lumberman are by no means confined to his commercial undertakings, though these are extensive. For, besides his lumber business, he is largely interested in the railways of his province and has been president of the Chatham Gas Co., as well as director of other monetary institutions. He has been mayor of Chatham more than once, and it goes without saying that the town was the gainer by his wide business experience and knowledge of public affairs. He represented Northumberland, N. B., in the House of Commons from 1878 to 1872, when he retired. On May 1st, 1891, he was called to the Senate, and in the Upper Chamber of the House he has been one of the Senators who has done his share to impart a measure of present-day business life to a branch of government that has sometimes been said is fast becoming fossilized in its character. In politics he is a Liberal-Conservative.

CUTTING QUARTER-SAWED OAK.

IN a recent interview a leading Grand Rapids furniture man gave some valuable ideas as to cutting quarter-sawed oak, from his standpoint. He said that the demand just now was better for quartered oak than for any other wood, and that prices for satisfactory qualities and widths would afford a reasonable profit. He remarked : "If I owned a lot of that stock that would exactly meet the ideas of the furniture men in every respect, I would not know what price to put on it, but would hold it pretty high ; but if I had a lot of badly manufactured, dirty, narrow, different length quartered white oak, I would not know what to do with it, for no furniture man would buy it." To sell well it must be well manufactured, clean and bright and well handled. The greater the width the better the price. No one wants it less than six inches or an average below eight. Other things being all right, a ten-inch average makes a lot that sells readily at a top price. It requires a lot not less than twenty-six inches to make a profitable lot. It requires the best of machinery, all the appliances and the most skillful handling, and then there is a large loss of timber.

INDICATOR FOR SHAFT REVOLUTIONS.

AMONG the mechanisms of utility lately described, is a small instrument which shows the number of revolutions of a shaft by means of two hands traversing a dial similar to that of a watch, the longer hand indicating the units and tenths of revolution and the smaller the hundreds. In order to make error in reading impossible, whether the shaft be running in one direction or the other, a simple method is resorted to, which consists in placing the dial plate carrying the numbers under a perforated plate, the numbers on the dial showing through the perforations. There are two sets of numbers on the dial plate, one set reading from right to left and the other from left to right, so that, should the shaft move from right to left, the figures on the dial move automatically so as to come under the perforations, while if the shaft move in the other direction the other set of figures show through the perforations. After reading the number of revolutions, the hands could be quickly brought to zero by opening the case and turning a knob. The spindle of the revolution counter is projected by the watch ring so that the instrument can be carried in the pocket, as in the case of a watch, without injury to the clothing, this portability and the extreme simplicity of the operation of the instrument constituting its special advantages.

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TALKS WITH WOOD-WORKERS.

THE arrangement of the machinery of a mill is a matter of practical import to wood-workers. I have come across some sensible thoughts on this question which will, I believe, be appreciated by my readers.

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It makes no difference how small a mill is if it is not overcrowded with machines. The great trouble generally is that mill men are too greedy to get a large number of machines when they have not room to put them in, so that they are in each other's way. This is not the case with wood-working mills especially, but as we are in the wood-working business we had better not branch out into any other, for fear we shall make a mistake somewhere. There is some excuse for planing machines being crowded, for we can push their work entirely out of the building, and if there is a convenience for getting the stock up to the machines we can get along very well if they are close together. The chances are, however, that in crowded mills the planers quite as often as any, come in for their full share of inconvenience from being too close together. In years gone by mill men had to have large floor space to lay down their work for the matcher, but now when everything is sawed to stock width, we can dispense with some of this room and set machines nearer together without much inconvenience. The common tendency, however, is to crowd machines too close together, and the cost of handling stock is very largely increased in consequence.

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Men too often think that because they have a lot of machines in their mills they can do a great amount of work, never taking into serious consideration the cost of getting the stock to and from the machines. In the matter of moulding machines, it is too often the case that the stock has to be carried to the machine piece by piece and taken away in the same manner. There might be some excuse for this if we had but little to do, but where machines are doing a large amount of stock work, they should be located that loads of stock, either from teams or floor trucks (which are far the most preferable) can be laid down or left, as in the case of using floor trucks, so the feeder can get them easily. In seting machines too close together we have to resort to the plan of carrying up one or two pieces at a time, and this, with machines that are feeding 75 or more feet per minute, is slow and costly work, and smacks not of the rush style that we must adopt to keep up with the times. "Laying down floors" for the matcher is one of the "way back" systems which have given place to something better and quicker; but that does not warrant crowding in machines so that we shall have to run over one to get to another.

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A great many mill men seem to think that they can put a moulding machine anywhere, so that there is room to set it down on the floor and not have it touch anything. They do not stop to think that all the machines that are run should have free space and good light. No one can see to set a machine up well where there is poor and insufficient light. It should have good light, that the operator may see that the work comes out nice as it runs through, and may not be obliged to carry his work to some near or distant window to look at it. Band saws are frequently put in some out of the way place. There is but one way to put in and arrange machines, and the plan should be made at the same time the drawings for the mill are made. The man knows what kind and the amount of work he expects to do, and he can sit down and arrange every piece of machinery before the building is erected. In fact, it should be so done. Plan your building to accommodate your machines and not to crowd them into it. Of course, as is many times the case, a company may buy a building already erected. Then it must take its chances and do the best it can. As a general thing, it is far better to build your own mill and arrange the machinery so that it shall be situated in the most convenient manner that you can devise. The importance of this method cannot be overestimated. The extra cost of each day of handling the stock makes in the aggregate a large expense account, which makes the proprietor wonder why his mill cannot be run as cheaply as his neighbor's. The latter, by conveniently handling his lumber in the mill, makes a percentage of profit where the former loses and eventually go to the wall. Men manufacturing light work can crowd their machines more closely together, if the work is so arranged that it can be passed from one to the other without extra carrying.

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It needs the nicest calculation to arrange the different kinds of machines so that a shop or mill can be run at the least expense, and this reduction of expense is made positively necessary from the fact that lumber workers, like men in every kind of business, have cut prices to the lowest notch. If lumber working mills were benevolent institutions, we might not advocate doing the work as cheaply as possible, but "necessity is the mother of invention," and we must devise some means whereby we shall save a margin of profit on the investment. No other plan sems so natural and easy of accomplishment as arranging the machinery in your mill so that the work can be done economically. No one person can make plans for each mill and shop. Each individual owner must take the subject into serious consideration and make a study of it, as the officers of a railroad do in making out their time-tables so that every train shall meet in the right place.

JAS.

Increasing the diameter of a bearing increases the friction, and increasing its length reduces the pressure per square inch, but does not alter the amount of friction.

J. B. SNOWBALL'S MILLS AT CHATHAM, N. B.

NEW BRUNSWICK CROWN LANDS.

MR. EDWARD JACK writes as follows of the crown lands of New Brunswick:

Within the past few years there has been a great and noticeable improvement in the management of the crown lands of the Province, as compared with former periods. Timber lands are not now being sold. On the contrary they and their products are being jealously guarded, and disposed of in the manner most profitable, and at the same time most beneficial to the Province. The Free Grant Act is being much more wisely administered than in former years, care being now taken to preserve the timber lands intact, as far as it is possible to do so. The system of twenty-five year leases, renewable every year, which the Government has lately adopted, is working remarkably well. Under that system a very great deal more land than formerly is under lease, and the provincial revenues are thereby largely increased. I think the Province must now have as much as 5,500 square miles under lease. (This is, of course, a mere guess.) From these miles the Government is in receipt of an annual rental of $4 per square mile, which will be a source of permanent revenue for a great many years. The holders of these long leases are showing a great deal more care in the protection and preservation of the land and lumber, than they were accustomed to exhibit under the old system of short term licenses. The reason is, of course, apparent to every one. The licensees have now some kind of a substantial interest in the land.

In addition to the improvements just mentioned, there have been more surveys of lumber leases made during the past year, than for many years previous, with the result that wherever these surveys were made upon lands which were not formerly under lease, the lumbermen have come in and applied for licenses. Any expense that the Government has incurred in this connection has been amply repaid and justified by the results. A singular instance of the benefit resulting from the making of such surveys occurred on the Restigouche, where upwards of one hundred square miles were literall discovered—that is to say, errors in previous surveys were disclosed whereby that much additional area of timber lands was made available to the Government for licensing. This new found land was, I think, all applied for and taken up, with the result that $800 of new revenue went into the Government treasury in the shape of bonuses; and there will be, in addition, $400 or more of a constant annual revenue therefrom.

Much more surveying should, however, be carried on at once; and more extended examinations should be made into the situation and character of our fertile public lands. Former Governments totally disregarded the best interests of the country, when they located to settlers spruce and hemlock lands which were never intended for settlement.

TESTS OF CANADIAN TIMBER.

STRENGTH OF DOUGLAS FIR, RED PINE, WHITE PINE AND SPRUCE.

AN encouraging feature of the lumber trades is the consideration lumbermen are giving to forestry proposals, and the ascertaining, by scientific methods, of the enduring qualities of timber. It is not to have been expected, in a new country, such as this, that at the outset men who invested their capital in forest products, would have much thought outside of the commercial return that would come to them from the investments thus made. Immersed in the cares of business, material things have necessarily commanded a large share of attention. In Canada and the United States, however, we have reached a period when lumbermen have come to the conclusion that, rich as are these countries in timber resources, yet there can be an end to these riches. Consequently, more lumbermen to-day than at any other time, are thinking along the line of reforestation. We are free to admit that this interest grows slowly, but it is growing. So it is in the matter of testing the properties of timber grown in the woods. It is worth something to the lumber trade to know by scientific experiments just what is the degree of endurance and practical utility of the leading woods of the country. By knowledge of this kind, fresh markets can be opened up, and our own woods placed to uses that are not common to them to-day. The Forestry Department of Agriculture in the United States is giving considerable attention to this question, and during the present congress an appropriation of $40,000 was made that investigations in this direction might be made. Perhaps our Government has been too busy paying out money for sundry royal commissions to touch anything so material as lumber. But it is pleasing to know that within the educational institutions of the land, there are those who have given careful thought, and, out of their experience, made known to the public the strength of the leading woods of the Dominion.

Before us at the present writing is an exhaustive paper prepared by Mr. Henry T. Bovey, M. Inst. C. E., L. L. D., giving statements of results obtained in various experiments made to ascertain the strength of Canadian Douglas fir, red pine, white pine and spruce. Mr. Bovey is at the head of the technical department of McGill University, Montreal, Que., and the experiments made have extended over a period of two years.

DOUGLAS FIR.

Douglas fir of British Columbia is the first timber dealt with, and some of the experiments made were from beams sent to the Montreal Testing Laboratory by Mr. John Kennedy, chief engineer of the Montreal Harbor Works. It will be remembered by readers of the CANADA LUMBERMAN that within the past two or three years some of the finest Douglas fir timbers grown on the Pacific coast were shipped to Montreal to be used in harbor improvements. During the journey of these woods from Vancouver to Montreal, their immense length and size generally, as well as magnificent appearance, produced comment at many of the stations along the line, when en route. Other timbers of the same kind were forwarded to the Laboratory by the British Columbia Mills Timber and Trading Co., through its manager, Mr. C. M. Beecher. We shall not attempt in the present comments to give with any degree of detail the results recorded by Mr. Bovey, as this would mean much more space than we have at our disposal just now. Briefly summarized, however, the writer of the paper in question states that the following data may be adopted in practice. In the case of specially selected timber, free from knots, with sound, clear and straight grain, and cut out of the log at a distance from the heart :

Average weight in lbs. per cubic foot = 40.

Average co-efficient of elasticity in lbs. per sq. in. = 2,000,000.

Average maximum skin stress in lbs. per sq. in. = 9,000.

Safe working skin stress in lbs. per sq. in. = 3,000.

In the case of first quality timber, such as is ordinarily found in the market :

Average weight in lbs. per cubic ft. = 34.

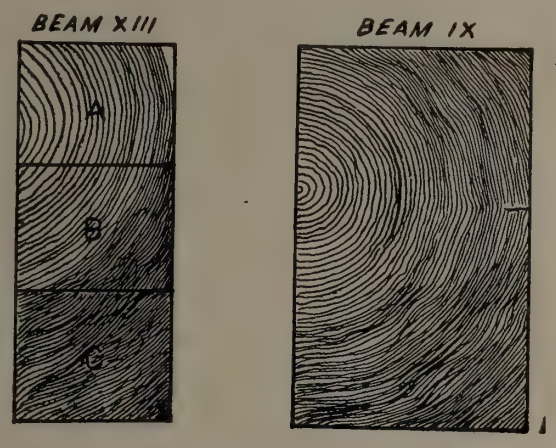
Average co-efficient of elasticity in lbs. per sq. in. = 1,430,000.

Average maximum skin stress in lbs. per sq. in. = 6,000.

Safe working skin stress in lbs. per sq. in. = 2,000.

Certain experiments were made from old Douglas fir, and it is remarked that the results obtained in the experiments with the old stringers show that the strength of the timber had been retained to a very large extent, and that the rotting had not extended to such a depth below the skin as to sensibly affect the efficiency of the sticks, which still possess ample strength for the work they were designed to do. The tensile shearing and compressive experiments upon specimens cut out of different parts of the same log all show that the timber near the heart possesses much less strength and stiffness than timber at a distance from the heart.

The accompanying photograph is given to show the variation of thickness in the growth rings from the heart outward, and a careful study of the results obtained up



to date would seem to indicate that the best classification defining the strength of the timber would be found by dividing the section of a log into three parts by means of two circles, with the heart as the centre, and by designating the central portion as 3rd quality, the portion between the two circles as 2nd quality, and the outermost portion as 1st quality.

RED PINE.

Experiments made with red pine from timbers secured in the neighborhood of the Bonnechere River, Nipissing district, county Renfrew, are summarized as follows: The average weight in lbs. per cubic foot = 34.61 ; average co-efficient of elasticity in lbs. per sq. in. = 1,520,056 ; average maximum skin stress in lbs. per sq. in. = 5,370.

In general, the following data may be adopted in practice : Average weight in lbs. per cubic foot = 34.6 ; average co-efficient of elasticity in lbs. per sq. in. = 1,430,000 ; average maximum skin stress in lbs. per sq. in. = 5,100 ; average safe working skin stress in lbs. per sq. in. = 1,700, 3 being a factor of safety.

WHITE PINE.

The beams used as tests in white pine were cut out of one large piece of square pine made and taken out in the Gatineau Valley, Ottawa county. The timber was brought down via the Gatineau and Ottawa rivers to Montreal, and remained in the water until late in the fall of 1892, when it was piled on the land for winter sawing. Three old white pine stringers were also sent to the Laboratory. These had been in service since 1885, for about eight years. The summary of the results obtained for white pine is as follows : For new timber, the average weight in lbs. per cubic foot = 37.88 ; average co-efficient of elasticity in lbs. per sq. in. = 754,265 ; average maximum skin stress in lbs. per sq. in = 3,388.

The following data are suggested for practice : The average weight in lbs. per cubic foot = 37.8 ; average co-efficient of elasticity in lbs. per sq. in. = 754,000 ; average maximum skin stress in lbs. per sq. in. = 3,300 ; average safe working skin stress in lbs. per sq. in., 3 being a factor of safety, = 1,100.

SPRUCE.

The stick of spruce sent to the Laboratory for experiment was cut out of a tree felled near the Skeena River B. C., about 600 miles north of Victoria. It is remarked as a possible item of interest that the freight for this beam from Claxton to Victoria was $4.; from Victoria to Vancouver, $2 ; from Vancouver to Montreal, $46., and the cartage to the University, $4, making a total cost for freight of $56. It is said that spruce from the Skeena district is of specially fine quality, having a clear straight grain, and possessing a large amount of toughness. The old spruce used for tests came from the Sherbrooke district, and had been used in the construction of a bridge near Lennoxville in the winter of 1886-87, and had been in service until the summer of 1894, or for a period of about 8 years. The experiments with spruce have not been as complete as Mr. Bovey would have liked, but he says the old spruce stringers were found to possess ample strength and stiffness for the work they were designed to do. The experiment gave : 29.15 lbs. as the average weight per cubic foot ; 1,189,800 lbs. as the average co-efficient of elasticity ; 3,875 lbs. as the average maximum skin stress per sq. in.

COMPRESSIVE STRENGTH.

The experiments to determine the compressive strength of the various timbers have been chiefly made with columns cut out of the sticks already tested transversely. These columns were in the first place carefully examined, to see that they had suffered no injury. The following inferences may be drawn :

(1). The compressive strength of Douglas fir and of other soft timbers is much less near the heart than at a distance from the heart. The compressed strength of the timber increased with the density of the annular rings.

(2). When knots are present in a timber column, the column will almost invariably fail at a knot, or in consequence of the proximity of a knot.

(3). Any imperfection, as, for example, a small hole made by an ordinary cant-hook, tends to induce an incipient bending or crippling.

(4.) When the failures of average specimens commence at an initial bending the compressive strength of columns of about 10 to 25 diameters in length agree very well and the results obtained by Gordon's formula, the co-efficient of direct compressive strength per sq. in. being 6,000 lbs. for Douglas fir and 5,000 lbs. for white pine.

(5.) The greatest care should be observed in avoiding obliqueness of grain in columns, as the effective bearing area, and therefore also the strength, are considerably diminished.

(6.) If the end bearings are not perfectly flat and parallel, the columns will in all probability fall by bending concave to the longest side.

(7.) The average strength per sq. in., indifferent of the ratio of length to diameter is : 5,974 lbs. for new Douglas fir ; 6,265 lbs. for old Douglas fir ; 4,067 lbs. for new red pine ; 3,843 lbs. for new white pine ; 2,772 lbs. for old white pine ; 3,617 lbs. for new spruce, (B. C.) ; 5,136 lbs. for old spruce. It should be pointed out that none of the old Douglas fir columns exceeded 4.4 diameters in length, while the great majority of the new Douglas fir columns were from 4 to 25 diameter in length. This explains the reason of the greater average compressive strength of the old Douglas fir, and similar remarks apply to the new and old spruce.

Interesting experiments were also made directed to the comparison of the tensile strength and stiffness of portions of the same stick, in different positions relatively to the heart.

PROFIT IN LITTLE THINGS.

IT is a well known business fact that many large buyers reclassify and reselect car load lots of lumber and find a profit in so doing. But there are many of the smaller mills that would find a large profit in doing the same. The small country mill can discover from his stock some as fine quality of extra quarter-sawed oak as can be turned out by the best and most improved methods of cutting. There is no possible way in which an oak log can be sawed without producing some quartered pieces. If the mill man will carefully select these and pile them by themselves he will in time have on hand a supply of first-class stock of dry quartered oak that will bring him in some extra money without having impaired the grade of the general stock. It is worth trying, at least.

The Savanne Lumber Co., Penetanguishene, Ont., are applying for incorporation with a capital stock of $48,000, for the purpose of building and operating mills for the manufacture of lumber, etc.

THE CANADA LUMBERMAN
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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

AUSTRALIAN HARDWOODS.

EXPORTERS of timber in Australia are making special efforts to secure a market for their woods in Great Britain. At the present time Mr. Gaven Scott, representing one of the largest firms in Sydney, is in England with this purpose in view. He has visited the leading cities of England and Scotland, and also journeyed to Brussels, Antwerp, Hamburg, Paris and other continental cities. A report sent home to his house states that he has met with much encouragement and he expresses the opinion that there is a good prospect of Australian hardwood sleepers taking the place of the timbers now in use. In Manchester large orders have already been given firms in Western Australia for a supply of Jarrah for wood blocking, and Mr. Scott is endeavoring to have some of the New South Wales hardwood blocks laid alongside the Jarrah blocks so that an experiment can be made as to how the different timbers wear. In Liverpool Canadian deals are used quite largely for street paving, and it is not unlikely that they will also meet the competition from Australia. It is stated that 75,000 railway sleepers are renewed annually in England, and it is from this source that Mr. Scott hopes to see a large trade in Australian woods develop. As we have taken occasion in these columns to remark before, there is a wonderous durability about certain Australian woods, rendering them proof against the ravages of various insects, and also of climatic conditions. An illustration of the durability of Australian hardwoods, and particularly of iron bark, is furnished by some of the piles which are being removed in connection with the improvements on the western side of the Circular Quay, Sydney. These piles have been in the ground about 40 years, and many of them are nearly as sound as when they were first put down. The piles consist chiefly of red and grey iron bark; both have lasted well, but the former rather better than the latter. To so slight an extent are some of these piles injured that they will be used for temporary work at other points. A few of the iron bark piles have been superficially attacked by the toredo, but this destroying pest, after burrowing for about one-half an inch, seems to have turned back and abandoned the piles. Specimen slices from these piles are being forwarded to the forestry department to be placed in the forestry museum, and also to be sent to England and other countries to illustrate the durability of New South Wales hardwoods.

WHY DEFRAUDED SOMETIMES.

COMPLAINT keeps reaching us of the sharp practices of lumbermen who want to get ahead of some one in their purchases of lumber. One device or another is employed to do the mill owner or wholesaler out of a part of his shipment, if not the whole of it. We learned the other day of a wholesaler in Toronto who received a cheque from a concern across the border, to whom a carload of lumber had been forwarded, where some $8 or $10 had been coolly deducted from the amount of cheque without any satisfactory explanation being made, whilst the cheque was very cunningly worded "in full of account." The man who will play tricks of this kind needs to be watched, and we hope that the trade will quickly get on to all such.

Right here we take occasion again to say that the different members of the trade could be protected against this kind of fraud if they were only organized so that each one might know who were the dishonest ones. There is, however, another side to the story. Some one has remarked, "There is never a shark without a corresponding sucker." We don't feel sorry for some men getting let in occasionally, for they have deserved nothing better. Their keenness to make another dollar or two has led them to sell lumber at a price sufficiently in advance of the best price going to have told them that either the man who bought at such a figure did not know his business, and consequently, sooner or later, would come short in his payments, or else all he wanted was to get the lumber into his hands and let the dealer whistle for his pay. Everybody is anxious to do business in these days of slow trade, but far better for a man to keep his lumber in his yard, though he might need the money ever so badly, than ship it away and be minus lumber and money.

Care, caution and common sense ought to be exercised in filling any order for lumber when it comes from a stranger. Learn of the man's financial responsibility; further, ascertain something about his business ability, and whether he is a straight or a crooked man. In this way we will find the community minus both shark and sucker, and the trade will be the better for this.

WHITE PINE PROSPECTS.

NOT a few of the more thoughtful lumbermen, whose operations are largely in white pine, have been asking themselves the question, what really is the future of white pine? All recognize the premier position, which in many respects, this wood holds, and yet they know that various elements, foreign to the situation in the past, are showing themselves of late. The Timberman has a carefully-written article along these lines, starting out with the assumption that it looks as though ordinary white pine timber had been pushed to too high a price. The reflections of our contemporary are as follows:—

"The great advance in white pine prices came after the census of 1880 was made public, with the misleading statistics incorporated therein concerning the amount of standing pine timber in the Northwest. The effect of these erroneous figures was modified by the disclosure of their real worthlessness, but an impetus was given to the advance in the value of pine timber which could not be entirely checked; and prices have gone up from that time to this, not even the depression of the last two years having had much effect on them.

"In this boom—for such it was to a large extent—too little attention was paid to the real worth of the timber. White pine was white pine, and many purchases were made with little regard to the amount of Norway which would be found in the tract or the amount of piece stuff timber in the white pine itself. It hardly occurred to the white pine lumbermen of twelve or fourteen years ago that that wood could have any competitor for any purpose whatsoever, and they felt as confident of the supremacy of white pine piece stuff as they did of uppers. But times have changed. White pine uppers are in as good demand as ever, as shown by the prices maintained, regardless of the value of other portions of the price list But the proportion of uppers in the total cut is constantly decreasing, and the lower grades are meeting competition on all sides.

"In piece stuff southern pine occupies a constantly increasing field, and the white pine must come down instead of the yellow pine advancing in price, for the reason that yellow pine, though comparatively new in the northern markets, is in almost unlimited supply, and is being pushed with the advantage of low stumpage value right into the white pine field proper. There's where the rub comes in. We know of northern timber, including Norway as well as white pine, which represents to its holders, including original cost, taxes and interest, from $6 to $7 a thousand, and yet which runs largely to low grades. The piece stuff and other low grade stock cut from this timber has to compete with the better quality cut from the southern timber that represents at the outside $1 a thousand stumpage.

"Freight rates, of course, have their influence, but for equal hauls, the southern mills have the advantage; and in any event, the difference in the cost of the timber will more than make amends for any differences there may be.

"It seems therefore questionable whether the average white pine timber, as it is now found, is worth what it is held at. There is no question as to uppers or as to the value of the better kind of logs, but many of the operators in the lower parts of the white pine field, who are cutting perhaps the second or third time over their land, might as well face this condition now as later."

This view of the situation is not entirely new to Canadian lumbermen, and has been referred to in these columns before. None the less, however, is it deserving of careful thought at this time. The fact that the reference is to United States white pine does not lessen its value to lumbermen in Canada whose interests are closely allied with those of their congeners to the south.

NORTHERN TIMBER DISTRICTS.

THE northern districts of Ontario are commanding more than usual attention at the present time. By these we mean that section of territory in the vicinity of North Nipissing, Eastern Algoma and Rainy River. Persons who have visited these territories lately have taken occasion, through the press, to draw attention to the rich resources of that section of the province. We find that not the least of these resources is the timber. Lumbermen know something of the timber to be found in the Nipissing district, and further north, but we fancy that few comprehend the fullness of the lumber riches of those territories. A pamphlet of nearly 100 pages, prepared under instructions from the Commissioner of Crown Lands, serves to convey a large amount of information of this country.

It is pointed out that Algoma and Nipissing districts and the Temiscamingue settlement are in that belt of the world which has ever been the most famous for the production of grasses, vegetables, fruits and cereals, and—men. A dense forest covers the whole of the land. Pine, of course, is found in large quantities, but the timber resources are in no way confined only to pine. Great quantities of pulp wood are found there, to an extent that it is hardly possible to readily calculate. In hardwoods the territory is very rich, and noting what has been remarked in another column on the uses of hardwood for flooring, fencing, and many other purposes not formerly adopted, extra interest is given to this country from the lumberman's point of view.

Black birch is found there, and of a size which astonishes persons familiar with the tree farther south. Specimens of two to three feet in diameter are common. This wood, as lumbermen are learning to know, is proving a very general substitute for cherry. White birch also grows in the same district to a large size, and it is to be remarked that this is not the same species of birch that grows as a small tree over the eastern provinces and New England, but is a large straight-growing tree, furnishing sheets of bark sometimes large enough in a single sheet to make a good-sized canoe.

White cedar is common to the district, and grows to a large size. Let it be remembered that the consumption of cedar runs into large quantities, used for fence

posts, building posts, sidewalks, railway ties, telegraph poles, paving blocks and many other purposes, and is therefore a forest product of real value to lumbermen.

Hemlock is native to these territories, but is reported to be of poor quality. The commonest tree in the north is poplar, and because of its great value for pulp wood it must rank as an important timber resource of the district. Tamarac, which is useful for railway ties and ship timber, as well as joists and rafters, is one of the native trees of these parts. Beech is also found to some extent. White and red oak grow in that part of Canada. Maple, elm, basswood and white ash, all woods that are in increasing value, complete a catalogue that makes this northern district of Ontario a territory that is worth the consideration of lumbermen, and provides another illustration of the wealth to be found quite within the precincts of this one province of Confederation.

The importance of the Rainy River and Lake of the Woods district to lumbermen has recently come into fresh notice through the explorations of certain Chicago capitalists, who are just now endeavoring to effect an arrangement to secure the entire lumber cut of that district. This at present, with the mills located at Rat Portage, Norman and Keewatin, is about 100,000,000 feet a year. These prospective operators believe that this amount can be easily quadrupled if anticipated railway connections can be made with the Western States.

EDITORIAL NOTES.

A DAILY paper attempts to create a sensation by describing the lumber camps of northern Ontario as unfit places for human beings to live in. This kind of nonsense is sometimes accepted by people who know nothing of the subject discussed. Those who have a knowledge of the matter are ready to tell of the wonderful progress made in logging life in the past few years. In primitive days shantymen had many hardships to endure, just as was the case with the pioneer agriculturist. But to-day the gulf between life in the shanty, and life at home is not very great. As a shantyman of 22 years' experience has said: "Visit some of the camps in Muskoka, examine them carefully, and you would admit that compared to some habitations in your clean city, they are models of cleanliness. And the board furnished will compare favorably with many hotels in Toronto."

THE growing demand for hardwoods is one of the noticeable features of the lumber business in these later days. Hardwoods we have had all along, but the lumber dealer has not usually considered that these have cut any large figure in trade history. Opinion is changing. White pine still exists in considerable quantity, but changes are coming over the trade. Better grades of white pine are becoming scarce—to a larger extent, perhaps, than some realize. This is a condition of the trade that is general to the white pine districts, not only of Canada, but of the United States. The annual product of white pine, a contemporary has remarked, is not lessened, except temporarily, but the proportion of the better grades is rapidly growing smaller. An outcome of these changes is already indicated in the call there is for hardwoods to be used, where before they were not known, and also is indicated in increased activity this season in the cutting of hardwoods in Michigan, Minnesota and even Ontario, the great white pine districts of the country.

A REPORT of the annual meeting of the Western Retail Lumbermen's Association of Manitoba and the Northwest, which we publish elsewhere in this issue, furnishes another object lesson of the value of lumbermen binding themselves together in a trade organization. This association has now been in existence for several years, and each year's experience makes more manifest the value of the lumbermen of these territories being organized in this manner We have now in the Maritime Provinces and the Northwest two distinct lumbermen's organizations. It seems timely to suggest that Ontario might fall into line somewhat shortly. All over the United States during the past month lumbermen have been meeting in their annual gatherings, and a careful perusal of the reports of these meetings emphasize the same lesson that is noted here, and which we have been hammering at from time to time for a number of years. How long, yes how long, shall we continue to wait for a further development in this direction? From the business and social side these lumbermen associations are doing an excellent work.

THERE is more in being a lumberman than simply buying and selling timber products. These are important departments of every business, and the condition of the balance sheet will rest to no small extent on the skill and care shown in both these transactions. But money is made in the lumber business in other ways as well. We have been pleased to note the interest shown in the various articles of a practical character that appear in these columns at different times. It will not be out of place to say here that the CANADA LUMBERMAN has been anxious to make its monthly edition strong in this one particular, and we have reason to believe that readers appreciate and value the journal on this account. An article along these lines, that has commanded the attention of readers is that on stacking lumber published in the February issue. We are glad to supplement this by a contribution this month from one of our readers, in which are made some sensible suggestions, the experience of one who has made good use of wide opportunities to observe just how mill men throw away good money sometimes. Because all the surroundings of a saw mill may not be as complete and in as tasty form as those to be found in the counting houses of large city concerns, this is no reason why decency and order, system and care, should not be exercised in these places. What this correspondent says of carelessness in the lumber yard can be supplemented by remarks of carelessness in the office. It is the little leaks that ruin the biggest business, and these little leaks come from slovenliness in method more perhaps than in any other way.

RED CEDAR SHINGLES.

A NOT unfrequent subject of comment with the trade is the British Columbia red cedar shingles. The matter comes before me in one shape or another constantly as I meet with lumbermen. Two months ago the views were published in these pages of an Ontario lumberman, who held with tenacity to the opinion that red cedar shingles, because kiln dried, would prove disappointing in Ontario. Mr. J. G. Scott, of the Pacific Coast Lumber Co., New Westminster, B. C., replied to these criticisms in last month's LUMBERMAN. I have had the privilege within the past week to meet Mr. Scott, who is on a visit to Ontario just now. He has unbounded faith in the red cedar shingle of the Pacific Coast and is ready to demonstrate that the nature of the wood is such that it will prove itself impervious to Ontario rains or sunshine. The wood is possessed of most endurable characteristics, illustrated in object lessons that no one can question. He was frank in saying that it is possible that by careless kiln drying these shingles may be injured, but when a proper kiln is used and the necessary care is taken, the kiln dried shingle will stand all that is claimed for it from either wind or weather. I noticed in the last number of the Puget Sound Lumberman, that the shingles of that region have been criticized because of defects in manufacture. But in no case can the shingle itself, when carefully manufactured, be fairly made chargeable with the imperfections that are sometimes placed on the slate against it. This is the claim of Mr. Scott and other manufacturers of the Coast, supported by a pretty thorough knowledge of the subject.

ELI.

THE CANADA LUMBERMAN'S NEW YEAR SUBSCRIBERS.

AS a tangible evidence of the growing appreciation of the CANADA LUMBERMAN by persons engaged in the lumbering and wood-working industries, we append the names and addresses of new subscribers received since the opening of the present year :—

Barrow Bay Lumber Co., Barrow Bay, Ont.
Louis Lahay, Kearney, Ont.
Bowen Smith, Cocaigne.
Richard Lockhardt, Riversdale, Ont.
H. Calcutt, Peterboro', Ont.
Bain Bros. Mnfg. Co. Brantford, Ont.
Dominion Art Woodwork Mnfg. Co., Toronto Junction.
Canadian Bank of Commerce, Collingwood, Ont.
Cook & Goetz, Dashwood, Ont.
John M. Beyers, Germania, Ont.
Blind River Lumber Co., Blind River, Ont.
N. Wenger & Bro., Ayton, Ont.
Jos. Williams, Goderich.
J. Taylor, Chatsworth, Ont.
Neill & Simpson, Lindsay.
S. Schryer, Ridgetown, Ont.
McCall & Mason, St. Williams, Ont.
John Anderson, Toronto.
James Walsh, Toronto.
W. H. Stubbs, Toronto.
Todhunter, Mitchell & Co., Toronto.
J. J. Gartshore, Toronto.
Wm. Lees, Fall Brook, Ont.
Mrs. K. L. Lowndes, Midland, Ont.
Jacob Lawrence & Sons, Watford, Ont.
Sauble Falls Lumber Co., Sauble Falls, Ont.
W. H. Johnston, Pefferlaw, Ont.
M. F. Beech & Co., Winchester, Ont.
W. J. Cummings. Spencerville, Ont.
The S. Hadley Lumber Co., Chatham, Ont.
Isaac Rutherford, Dobbington, Ont.
Bidwell Way, Hamilton, Ont.
J. D. McEachren, Galt, Ont.
D. O'Connor, Jr., Ottawa, Ont.
Robert Allan, Mississippi Station, Ont.
R. A. Stark, Owen Sound, Ont.
J. S. Pinch, Owen Sound, Ont.
V. E. Traversey & Co., Montreal, Que.
John Harrison, Owen Sound, Ont.
John Nicol, Nicolston, Ont.
Samuel Hotel, Clifford, Ont.
Daniel Forsythe, Claremont, Ont.
John Cooper & Son, Bloomfield, Ont.
M. Gillespie & Co., Alvinston, Ont.
Davies & Dean, Richard's Landing, Ont.
Jas. McCartney, South River, Ont.
J. R. Vanfleet, Brantford, Ont.
D. P. Sicklesteel, McGregor, Ont.
J. R. Richardson, Walker's, Ont.
Knight Bros., Burk's Falls, Ont.
Weaver & Lewis, Hope Bay, Ont.
Thomas Ebbage, Acton, Ont.
J. T. Kerr, Iona Station, Ont.
Neibergall Stone & Lumber Co., Staples, Ont.
Geo. Gordon, Sturgeon Falls, Ont.
J. D. Stewart, Matane, Que.
Estate of Ross Bros, Buckingham, Que.
Emile Dubé, Rivière Du Loup Station, Que.
W. E. Edwards & Co., Six Portages, Ont.
V. Gladiv, St. Francois du Lac, Que.
C. W. Taylor, Cookshire, Que.
C. H. Parker, Scotstown, Que.
J. D. Sowerby, Oak Bay Mills, Que.
Alex. Scott, Buckingham, Que.
Robertson & McCallum, Barachois de Mal Bay, Que.
E. H. Lemay, Montreal.
Dominion Leatherboard Co., Montreal, Que.
Cassidy, Bonner & Co., Montreal, Que.
W. H. Murray, St. John, N. B.
Jarvis Wilson, St. John, N. B.
W. H. Duffy, Hillsboro', N. B.
Thos. Power, Newcastle, N. B.
A. & D. Loggie, Church Point, N. B.
Finley & McDonald, Blackville, N. B.
Hugh McLean, Brigg's Corners, N. B.
Jos. A. Likely, St. John, N. B.
A. E. Alexander, Campbellton, N. B.
Andre Cushing & Co., St. John, N. B.
A. & W. Ogden, Sackville, N. B.
Michael Welsh, Glassville, N. B.
Clarke Bros., Bear River, N. S.
Wm. Chisholm, Halifax.
John Stanford, Chester, Ont.
N. J. Raymond, Miteghan Station, N. S.
Alfred Dickie, Lower Stewiache, N. S.
John Kerr, Franklin, Man.
Himes, Penfield & Co., Buffalo, N. Y.
Frame & Verge, 11 Centre St., Boston, Mass.
Davis & Holmes Co., Marineth, Wis.
Millard Lumber Co., New York, N. Y.
Holcomb & Caskey, New York, N. Y.
Timothy Cromwell, Boston.
New York & Canada Lumber Co., New York, N. Y.
C. B. Nichols, Albany, N. Y.
Ollie & McKeen, North Tonawanda, N. Y.
Moses Prescott, Eastport, Me.
Smith, Craig & Co., Albany, N. Y.
Taylor & Felin, Philadelphia, Pa.
Geo. C. Power, Chicago, Ill.
Second Vice-President, Illinois Central R. R., Chicago, Ill.
Penberthy Injector Co., Detroit, Mich.
M. J. Bourke, Ashland, Wis.
Poole & Hotchkiss, Buffalo, N. Y.
David Ross, Whitemouth, Man.

If any reader of this number of the LUMBERMAN is not a subscriber, he is invited to forthwith join the procession of those who know a good thing when they see it, and, like them, show his appreciation in a tangible way. To persons having anything to sell to owners of saw and planing mills, or lumber merchants, the advertisement pages of this journal afford the most direct and economical medium through which to reach these classes in every part of the Dominion.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

A PIECE of good news to lumbermen here is the guarantee of the United States Senate of an issue of $70,000,000 bonds for the building of the Nicaragua Canal. As I have intimated in this correspondence at different times the building of this canal, thereby shortening our export route to Great Britain nearly one half, is a most important undertaking for the lumber trade.

The Brunette Saw Mills Co. are in receipt of a car load of machinery for their mill here.

The firm of George Cassidy & Co., Ltd., Vancouver, capital stock, $200,000, has been incorporated with Edwin B. Morgan, George Cassidy and George J. Wilson as trustees.

A warning to those who are given to stealing logs is found in the case of A. Benoist, who has been sentenced to six months with hard labor for stealing logs from the Brunette Saw Mills Co.

The customs return of British Columbia show the export of the forest of the month of January to be as follows: Victoria $2,502; Vancouver, $20,855; New Westminster $10,164, making a total of $33,521.

At the annual meeting of the shareholders of the Brunette Saw mills Co., the following were elected officers for the current year. President, J. Wilson; sec.-treas., H. L. De Beck; directors, Messrs. J. B. Kennedy, H. Macdonald and J. A. Lewis.

General lumber business is not any too brisk, and yet there are some signs of improvement. Recent advices from Australia show greater activity in trade and a general brightening up on the business horizon. For several years past trade with the Antipodes has been of a most unsatisfactory character, and no one can hope better than ourselves that a change is now likely to take place.

The provincial boards of trade are urging the local government to grant a bonus of $5 to $6 a ton on all wooden ships over 400 tons built in the province. It is stated that the Puget Sound business was mostly done by coasting schooners made on the Sound, and that lumber could be carried cheaper per ton than in foreign iron built boats. It was less costly to build the wooden boats and they hold more per ton. The suggestion is favorably received in shipping circles.

NEW WESTMINSTER, B.C., Feb. 18, 95.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN].

VERY little lumber news is to be picked up just now. As seems to have been the case almost everywhere else, the blizzard has paid us a visit here and some very severe weather has been experinced. Taken altogether the weather this season has been favorable to lumbermen, but this last installment of storm will impede matters somewhat.

A boom is being given to lumber in the section of the province through which runs the new Bangor & Aroostock railway.

James Hamilton proposes to erect a new saw mill on Strait shore. It will be one of the largest mills on the river, and will be in operation about the 1st of June.

An unfortunate accident occurred at McMullin & Winn's saw mill, Truro, N. S., Feb. 13th, when an employee, Edward Brenton, was thrown across a circular saw and received injuries from which he died in half an hour.

The local government look forward to increased receipts from stumpage on crown lands this season, because of expected increased operations in the woods. This view was expressed by Provincial Secretary Mitchell in his speech in the legislature a week ago. Last year the receipts from stumpage were $65,401, and from renewals, $29,400; in 1893 the amount was $105,000 from stumpage and $18,000 from renewals.

The failure of Scammell Bros., of New York, has some interest here. The firm had a branch office in St. John, and owned a large fleet of wooden vessels. Noting the financial troubles of this concern and also the failure recently of W. J. Davidson, a large shipper, together with other circumstances, the evidence comes home to us that the outlook for shippers in the province is anything but bright.

Mr. E. B. Knight, of Knight Bros., Popcum, reports a good outlook for trade in lumber this year. The demand of his firm already is much ahead of a year ago, and the orders on hand now will require 60 days to fill. A number of buildings are going up in Chilliwack and Agassiz and four large bridges are being constructed in Chilliwack, the lumber for which is being supplied by Knight Bros.

Word has been received that the steamer Trinidad has just arrived at New York, bringing with her the rescued crew of the Schooner Doine, which left St. John with a load of lumber Jan. 10th. She encountered heavy gales, and while at anchor off Cape Cod on the night of Feb. 6th both anchor chains parted and they were blown off shore. The vessel was at the mercy of the winds until the Trinidad fell in with her.

ST. JOHN, N. B., Feb. 20., 95.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

A SURVEY of the lumber business at any of the larger lumber points of the state do not show any great amount of activity. It is believed that business will open out fairly well in the spring, but what with unsettled monetary conditions and remarkably severe winter weather and storms, so far as the present is concerned business is pretty much at a standstill.

The Alpena Spool Works manufactured and shipped last year 21,000,000 spools and 4,000,000 pail handles.

It is thought that a larger quantity of logs will be towed from Canada this year than was the case last season.

Indications point to increased activity in railroad building. As a result at Manistee, for example, we hear of mills that have all they can handle in the way of car sill bills.

Hon. George H. Williams, one of the oldest lumbermen of the Saginaw district, died on Feb. 12th. He was the oldest son of Gardiner D. Williams, who erected the first saw mill on the Saginaw river.

The Diamond Match Co., of Bay City, will likely get out 100,000,000 feet this year. Considerable of their limits suffered through the fires of the past summer, and this fact is forcing them to make a larger cut probably than usual.

Henry Moiles who has been operating a mill at Remers, Mecusta county, is putting in 1,500,000 feet of logs. Moiles, it will be remembered, has been an operator to considerable extent in the Georgian Bay district. This season the mill that he had operated at St. John Island will be under the control of Henry Colclough, and will make a considerable cut.

William Peter, of Bay City, who will operate a saw mill in Canada the coming season, will, it is believed, cut most of his logs there and ship his lumber direct to Toledo. Mr. Peter has had a good deal of trouble in the past with dock hands and he will repay them this time by taking away business that perhaps otherwise would have been done in Bay City.

The Tittabawassee Boom Co. are gradually, and very certainly, dropping away from their old time supremacy as lumber forwarders. A year ago the company sold out its interests to a new concern, and now this concern has gone out of existence, selling its plant to Edwin Andrew, who will attend to rafting all the logs which come through that stream next season. The company has rafted more logs than any company which ever had an existence on earth, but its days of usefulness are about ended.

SAGINAW, MICH., Feb. 23, 1895.

THE FORESTS OF SIBERIA.

FROM an important work on the forests of Russia, recently translated into English, the following interesting facts are reproduced.

The composition of the Siberian Forest is interesting, as bearing on the future timber supply of the world, and as showing for certain classes of timber, like oak, ash and the best building material, Central Asia, if it is ever to become an important seat of population, will have to depend upon the islands of Saghalin and Yezo, and perhaps, too, upon British Columbia and Western Washington and Oregon.

The vast forest resources of Siberia are unequally distributed over its enormous territory. The great forests are situated in the north, while the south is nearly treeless. The whole region may be divided into three zones, each distinguished by characteristic features and situated in a direction from east to west.

The zone of what is here called "northern tall-stemmed woodlands," stretches uninterruptedly from the Ural Mountains to the eastern shores of Kamchatka; on the north it borders on the trundas, the limit of the growth of the larger vegetation, and on the south it extends to the region suitable for agriculture. It is interrupted by large masses of impassable bogs, and is composed of pines, larches and firs. The deciduous trees are few and insignificant, although willows and aspens border the swamps and birches occur in places. This northern forest occupies all that part of Siberia where agriculture is impossible from the deficient quantity of heat during the months of vegetable activity.

The fixed population is insignificant, and the raising of grain sporadic in small spots on its southern border. There are localities, we are told, in this great forest belt, "where for tens and hundreds of versts in every direction stand clean plantations of pine, which, with their interlaced summits, hide the sky. The absolutely naked trunks, rising perfectly straight to an enormous height, and so monotonous that a man who once chances into such a part of the Siberian tiaga, or even a wild beast, cannot find his way out again.

Access to such places is difficult and the timber contained in them is so far without value, but with the growth of the population, the improvement of roads and the destruction of the forests in the inhabited parts, means will be found to make use of the now remote forest resources.

The scourge of the forests of this zone at the present time is only the forest fires, not infrequently devastating hundreds of versts. The burned timber is, however, rapidly replaced by young underwood growing up under the influence of natural selection.

The zone of birch forest covers the whole of the low-lying or so-called steppe portion of Siberia. This zone is occupied by a settled population, and practically coincides with the cultivated or agricultural part of Siberia. The principal and only valuable tree in this region is the birch, with a slight admixture of aspens and willows along the banks of rivers. Coniferous trees are entirely absent. The birch thrives on a chernozion soil, and therefore this zone is the most populated and particularly characteristic of Western Siberia, between the middle course of the Tobol and the upper waters of the Obi. This region embraces the so-called steppes of Ishimsk, Barabinsk and Kurudzhinsk.

Although it is usual to understand by the word steppe an absolutely treeless space, in Siberia, with the exception of the whole Kirghiz steppe region, which produces over large areas shrubs used as fuel in the mining works, all the remaining plains are covered more or less thickly with birch patches or spinnies, giving the locality a very peculiar appearance. These birch copses, mingling, when viewed at a distance, produce the effect of an unbroken forest. Traversing hundreds and thousands of versts by the Western Siberian tract, the traveller sees everywhere on the horizon as it were, uninterrupted forests. The distribution of birch patches over the steppe surface may for the most part be called ideal, constituting precisely that combination of wood, arable land and pasture which is everywhere and at all times desirable in the interests of agriculture. Thanks alone to this happy disposition of the forests in this part of Siberia, notwithstanding the not wholly favorable atmospheric conditions and the mediocre soil, crops and grass thrive well.

The forests of the south are confined to the mountain slopes of the ranges which extend in an almost uninterrupted chain, under various names, from one end of Siberia to the other. In this forest coniferes prevail; they yield timber of excellent quality, though often difficult to obtain, being remote from centers of habitation and usually confined to steep inaccessible slopes. These mountain forests, guarding as they do the sources of swift flowing streams, are extremely important in the economies of the country.

During the last thirty years the Government of Russia has been paying some attention to the care of the forests of western Siberia. In 1863 in the Governments of Tomsk and Tobolsk, temporary regulations were introduced establishing a tax per stump for the use of wood. Preservation of the forest was imposed upon the rural population, who, in return were allowed to make a free use for their own needs, but not for sale.

In 1869 a law was promulgated granting to a corporation the unlimited right of making use of Siberian timber for industrial purposes. Since 1884 the forests of Western Siberia have been placed upon the same footing as that by which the crown forests of European Russia are managed, that is, by a paid forest guard.

In Eastern Siberia the inhabitants are still allowed free use of the forests for their needs, and there is as yet no forest control. In the Amur country, where the forests are believed to be extraordinarily varied and valuable, steps have recently been taken toward ascertaining the extent of the crown forests and for bringing them under State control.

THE NEWS.

—Brush & McLean have purchased property at Colchester South, Ont., and will erect a saw mill.

—The Gillies Bros. Co. have a gang of millwrights at work thoroughly refitting their mills at Braeside.

—The Nichergall Stave & Lumber Co., of Staples, Ont., has been incorporated, with a capital stock of $45,000.

—The Richmond Industrial Co., Richmond, Que., are applying for incorporation, with a capital stock of $100,000, to manufacture woodenware, etc.

—Jos. Jacob and J. B. Tremblay have formed a partnership in Montreal as sash and door manufacturers. The style will be J. B. Tremblay & Cie.

—The saw mill of F. A. James at Hobart, Ont., has recently been running day and night. Two self-acting shingle machines are to be added to the mill.

—Geo. H. Whitehead and F. D. Whitehead have been registered proprietors of the lumber firm of G.H. & F. D. Whitehead, Waterloo, Que.

—An extension is being built to J. R. Booth's mill at the Chaudiere Falls which will make room for a couple more large saws and materially increase the output next season.

—Currie & Craig, of Flower Station, recently cut a tree for the Rathbun Company, which made six logs, the measurement of which were 3,297 feet. In the butt log there were 840 feet.

—J. R. Booth, of Ottawa, proposes cutting his lath material longer than the four feet, and is putting in a machine to trim off both ends of the lath after it has been bunched up to exactly the right length.

—The A. R. Williams Machinery Co., of Toronto, are applying for incorporation, with a capital stock of $300,000, to manufacture and deal in engines, boilers, motors, and all kinds of machinery and supplies.

—Gilmour & Hewson, of Hull, Que., propose enlarging their present boiler house and adding two new flue boilers. They are also putting up an additional smoke-stack to facilitate burning refuse and saw-dust.

—The stave mill of H. C. Rees, at South Woodslee, Ont., which was burned a fortnight ago, is to be rebuilt at once, and will be fitted with the latest improved machinery. The boilers were only slightly injured by the fire, but the engines will have to be rebuilt.

—Thos. Conlan, the well-known Thorold lumberman, recently returned from his timber limits on the north shore of Manitoulin Island. He states that this season's snowfall is the smallest for the past six or seven years, although there is sufficient depth for teaming through the woods.

—The Liverpool Timber News, of Jan. 26th, says: Mr. Isaac H. Mathers, of Halifax, and Mr. George McKean, of St. John, N. B., are now in England visiting timber importers. They were both shippers, previously, to Messrs. James Smith & Co., Liverpool, who acted as their agents.

—The Fredericton, N. B., Boom Co. will, it is said, ask power from the provincial legislature to boom from the foot of Ormocto Island to the eastern shore or the St. John river, and will transfer their operations to that point. The new works will necessitate an expenditure of about $70,000.

—Robert Gault, superintendent of the Rathbun Company's operations in the Algoma district, and Mr. S. C. D. Baker, his secretary, have established their headquarters at the Manitou House, Manitowaning, Manitoulin Island. They have already purchased a vast quantity of railway ties for the Company.

—Argument was recently heard by Mr. Justice Street in a suit over the estate of the late Robert Charles Smith, sr., lumberman, of Port Hope, upon a question as to whether R. C. Smith, jr., Alice Underwood and Charlotte Macbeth, children of the deceased, rank on the estate to the exclusion of five children of a deceased daughter. The estate is valued at $250,000.

—C. Beck, of Penetanguishene, Ont., has made arrangements with the Waterous Co., of Brantford, for the supplying of a complete band saw mill, to be erected near Savanne, on the C. P. R., where he, in connection with the Hogan Bros. of Wyevale, and Dr. Spohn, under the name of the Savanne Lumber Co,, contemplates extensive lumbering operations. He has also purchased an additional band mill for the New Keene mill and also intends putting a new gang in the Penetang mill.

—Wm. Evans, of Deseronto, has received the official appointment as inspector of hulls for the Toronto district, and has commenced his duties. Mr. Evans was born in Kingston in 1849, and first began work as assistant to the clerk of the Edward Berry Shipbuilding Company at Portsmouth, and after a short time commenced his apprenticeship under Mr. Wm. Yeomans, shipbuilder, working at the building of all the ocean ships constructed by him. There were 32 applicants for the position to which he has been appointed.

—The Ontario and Western Lumber Company, which controls and operates a big lumbering industry on the Lake of the Woods, with mills at Rat Portage, Keewatin and Norman, has decided to branch out in a new line of manufacture. The company is putting in machinery to equip a first-class box factory on a large scale, with the object of shipping boxes and packing cases. The factory will have all modern machinery, including stamping and printing presses for taking impressions on wood. Heretofore large quantities of box material have been brought in from the East or the United States to supply Winnipeg factories. This will now be unnecessary, as a supply will hereafter be obtainable close at hand, from a home industry.

CASUALITIES.

—While working for the St. Anthony Lumber Co., of Long Lake, John Foley, of Stittsville, Ont., was killed by the falling of a tree.

—Richard Pier, an employee of Palmer's heading mill, at Alvinston, Ont., had his arm caught betweens cogwells recently and badly injured.

—William Kerney, logger, was killed near Vancouver, B. C., recently. A tree fell on him inflicting terrible injuries, from which he died.

—Samuel Fripp, of Wellington, Ont., was killed recently while cutting down a tree by the falling of a dead branch. He was struck on the head and died two hours afterwards.

—An employee in the planing mill of Messrs. Moffat & Co., Carleton Place, named Peter Miller, got entangled in the machinery and had his leg broken and his ankle badly crushed.

—Moise Dubay died at Sudbury, Ont., on the 5th ultimo, from injuries received at the hands of certain lumbermen at Gaudet's Camp, near Worthington. He was struck with heavy sticks of wood.

REMOVAL OF BOILER SCALES.

THE great bulk of the solid matter deposited from the feed water, remarks the Locomotive, may be removed by frequent and judicious blowing. It cannot all be removed in this manner, however, for where the plates are hot more or less of it is sure to bake on, forming the hard, stony layer known as "scale."

The commonest components of scale are carbonate of lime (limestone) and sulphate of lime (gypsum). Carbonate of lime seldom forms a stony scale. It may collect in large masses and do serious injury to the boiler, but the deposits which it forms are usually lighter and more porous than the corresponding deposits of the sulphate of lime.

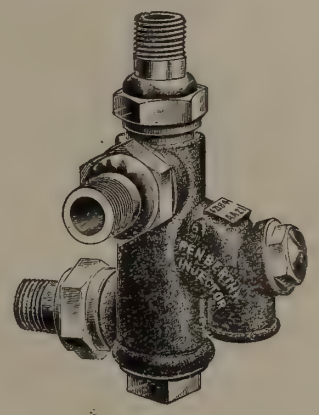
Most substances are more soluble in hot water than in cold; but carbonate of lime is a notable exception to this rule, for, although it is somewhat soluble in cold water, in boiling water it is almost absolutely insoluble. It follows from this fact that when feed water is pumped into a boiler, the carbonate of lime it contains is precipitated in the form of small particles as soon as the temperature of the water reaches the neighborhood of 212 degrees. These particles are whirled about for a considerable time in the general circulation, and if the circulation is good they do not usually settle until the draft of the steam is stopped for some reason—as for instance, in shutting down for the night, or in banking the fires for the noon hour.

The best time to remove this sediment by blowing is, therefore, just before starting up at one o'clock, or after the boiler has stood idle for an hour or so at night, or just before beginning work in the morning; for at these times the carbonate deposit has settled into a kind of mud at the bottom of the boiler.

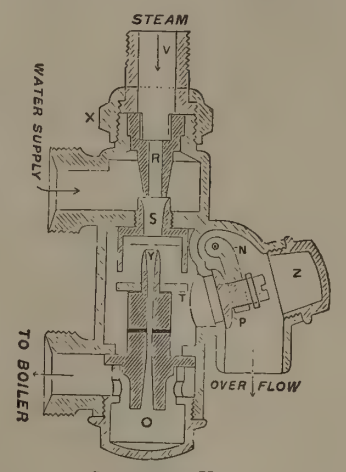
Sulphate of lime differs from the carbonate in being more soluble in hot water than in cold; and it is, therefore, not deposited in the same way. The sulphate deposit is formed at those points where the evaporation (and consequence concentration of the solution) is most rapid, that is, in contact with the shell, the tubes and the back head. Being deposited practically in contact with the iron, it forms a hard adherent coating, which often resembles natural stone so closely that nobody but a skilled mineralogist could tell the difference between them. The best way to treat water containing sulphate of lime is to convert the sulphate into carbonate, and remove the carbonate thus formed by means of the blow-off, as already described. This can be done without injury to the boiler by the use of soda ash, which is a crude carbonate of soda. The chemical action that takes place may be briefly described thus: Carbonate of soda and sulphate of lime act upon each other so as to produce sulphate of soda and carbonate of lime. The sulphate of soda thus produced is what is known as Glauber's salts, and is very soluble in water, and passes away very readily through the blow-off.

THE PENBERTHY INJECTOR.

WE illustrate herewtih an injector which has been before the steam using public of the United States and Canada for several years, but which has not previous to this time been brought especially to the attention of the lumbering trade in this section.



The "Penberthy" automatic injector is marked by simplicity of construction, it having only three jets as will be seen by referring to the sectional cut herewith. The entire wearing parts are easily accessible, the delivery jet which most frequently needs cleaning in every injector being removed by simply unscrewing the plug at the bottom of the machine, and the jet which rests in



SECTIONAL VIEW.

this plug will follow it out. This injector is claimed to have a wider range of operation than any other automatic injector manufactured, starting on low steam at from 22 to 25lbs. pressure, and working from that point to 145 to 150lbs steam pressure, being automatic and restarting at any and all pressures between the points named. When taking water from a lift, it is operated by opening valve in steam pipe and then opening valve in suction pipe with which the water supply can be regulated to the proper amount required for the steam pressure carried, after which it is only necessary to close and open the steam valve to stop and start the machine, and if from any cause, such as a sudden jar of the pipe, the feed to the injector is broken, it will at once restart automatically without attention from the engineer.

This injector has been adopted by many of the large builders of engines and boilers throughout United States and Canada, and is guaranteed by the manufacturers to be superior to all other makes. They have recently issued a catalogue of these popular machines, which they will send to any mill owner or engineer who will write them and mention this paper. The injector is manufactured by the Penberthy Injector Co. of Detroit, Mich., their Canada trade being supplied from a branch factory, located at Windsor, Ont. In writing for catalogue or information address the office at Detroit.

WESTERN RETAIL LUMBERMEN'S ASSOCIATION.

[Special correspondence CANADA LUMBERMAN.]

THE annual meeting of the Western Retail Lumbermen's Association was held in the MacIntyre Block, Winnipeg, on Wednesday, 13th inst., and in the absence of the President, Mr. J. L. Campbell, Vice-President, occupied the chair, and delivered the following address :

Gentlemen and Fellow Members of the Western Retail Lumbermen's Association :—

It is my esteemed privilege to have the pleasure of welcoming your presence in attendance at this our fourth annual meeting.

I am glad to report to you that the affairs of this Association have received close attention at the hands of your officers, and while there may not have been so many complaints acted upon this year as in the last, there were some very exceptional difficulties to dispose of.

The season's business, as you no doubt are aware, was one of restriction and caution on the part of the dealers, particularly so in the rural districts ; and the wisdom of this has been apparent in the fact that owing to the low prices obtainable by the farmers for their products—especially wheat—the great staple of the country, thereby seriously crippling them in making payments. I am unaware of any failures in business during the year of any member strictly in the lumber trade. This, I think, speaks in high commendation of the action taken.

The Committee appointed at the last annual meeting, re railway freight, lost no time in calling upon the C. P. R'y authorities, memoralizing them for a reduction of the excessive lumber freight tariff, in order that lumber might be sold to the consumer at a less price. In this, we are glad to say that the manufacturers to the east of us followed up the interview had with the railway authorities, persistently urging upon them the necessity and very great importance of making a substantial reduction in their charges, and as you know, after some months' deliberation a reduction was made, and the manufacturers were able to announce to you a material reduction in the cost of lumber from the east. While this reduction may not have been as much as you were looking for, I think it is a matter that I may well congratulate you upon.

I may mention that your Board of Directors had taken into consideration the question of organizing a Mutual Fire Insurance Company in connection with this Association, but having observed the disaster that had overtaken the Merchants' Mutual Company, although considering the scheme with much favor, it was decided to leave the matter in abeyance. I notice that the North Western Lumbermen's Association have had much success with their insurance branch, having done over a million dollars of business in less than a year, and that the sister lumber associations of the States appear to be fast following in the wake of the North Western Lumbermen's Association in organizing lumber insurance companies in connection with the lumber associations.

A bill to amend the Lien Law was kindly taken in charge by our fellow dealer, Mr. Burrows, M.P.P., and after getting the first reading of it, upon canvassing the members of the Legislature, he found that it could not be carried through, and it was thought prudent for him to withdraw it until this session, when it is probable the chances of its becoming law will be much improved, should you still desire it.

It is with sorrow that I have to inform you that our Association has sustained a severe loss in the death of one of its Directors. I refer to the late Peter Atkin, of Morden. Mr. Atkin was a man of great value to the Association, not only for the unsparing interest he bestowed upon it, but for his wisdom as a counseller in deliberating upon the matters coming before our Board. He was also highly esteemed for his personal qualities by all whose privilege it was to become acquainted with him.

As the Secretary will have some statistics to give you and some statements to make, I will no longer take up your time, only to thank you for the high honor you did me in electing me Vice-President for the second time. And I desire to thank my fellow directors for their good attention to the Association's work at all times, and to say to them that it has been a work of pleasure and satisfaction to me to have been associated with them on the Board.

The Chairman called upon the Secretary to read the minutes of the last annual meeting, and upon the same being confirmed, the Secretary proceeded to make his annual statements in the following address :—

SECRETARY'S REPORT.

I too, along with the Vice-President, desire to state that it affords me much pleasure to have the privilege of meeting you here on this occasion.

The Financial Statement to 31st Dec., 1894, a copy of which was mailed to each member early in January, shows a surplus of $1063.34, with outstanding dues amounting to $320.

During the last year I have to report having dropped from the membership list, 19 active and 3 honorary members, for the following reasons : 14 having quit the lumber business, 2 removed by death, 1 having changed his place of business, and 2 for refusal to pay annual dues. The honorary members removed were for the following reasons : One by request to be stricken from the list and refusal to pay dues, one for neglecting to pay dues and one for violation of the by-laws of the Association. We have added to the list 15 new names, 9 active and 6 honorary. Our membership now stands with 130 active and 23 honorary members on the list. We have had two meetings of the Directors and three meetings of the Executive Committee.

During the year four complaints were made and acted upon, and while some further grievances were reported to me, the complainants declining to comply with clause 16 of the By-laws, no investigation was made.

Owing to a change in the tariff of the Dominion Government in the early spring, permitting the importation of American lumber free of duty, we experienced a disturbing effect upon some of our members at points where American lumber was brought in and at frontier points. In order to meet the exigencies of the cases affected thereby, we deemed it prudent to allow open price list thereat, so as to enable the dealers interfered with to hold their trade. This no doubt has been to some extent injurious to the surrounding districts therefrom, and perhaps such dealers should have further consideration in this matter. I have no doubt that upon the revival of the lumber business in the States to what it was up to the last couple of years, and the lowering of the price of Canadian lumber that has already taken place, that the American lumber will not long continue to be a competing factor in the trade, and that the present position of business at such points will not continue for any lengthened time. I ask you to bear with me should I be a little tedious in making some remarks, which may be pertinent to the welfare of the Association at this time.

I have observed, with regret, a restive disposition on the part of some members, for the reason, as has already been stated to me in some instances, that they failed to see that any good was derivable to them from being members of the Association, simply because a direct return was not received in lieu of the annual fee paid ; while some others have said to me that it was no protection to them, mentioning some exceptional circumstances that had arisen, and were interfering with their business, which was plainly beyond and outside of the Association, and which any reasonable person should know that the Association could not deal with.

In regard to such statements, I make answer that I understand the purposes and objects of the Association to be for the mutual benefit of the retail dealers, in directing the wholesale business into the channel of selling exclusively to the established retail dealers in the ordinary business of the trade, and as well to limit the number of dealers in consistency with the amount of business to be done and to maintain fair and reasonable profit on business done. If I consider aright the aims and objects of the Association, I have no hesitation in affirming that it has brought about much that was sought for in its organization, if not to the full extent. Unquestionably there have been many unfaithful members in the Association, and probably there will continue to be some who will evade the by-laws and be irritating. While this is unfortunate, and delinquents may for some time succeed in undermining and doing unfair things, and it may also be very difficult to get the necessary proof in some cases to discipline them, yet on the whole, should the members in the main implicitly observe the rules and by-laws of the Association, I think that it has been shown that many of the delinquents can be brought, in an unmistakable manner, to feel the error of their ways.

I think the Association has had a career of much success, and the retail dealers should be satisfied with its usefulness and stand nobly by it. The Association has been singularly fortunate in receiving true and sympathetic support from the honorary members, thereby adding strength and advantage to it.

Very different is the experience of our sister associations in the States. There they are confronted by many of the manufacturers, wholesalers, middlemen and scalpers, ready to sell to consumers direct on all opportunities ; but in spite of such difficulties, the present is an era in lumber associations there—from Massachusetts in the east to the several southern and western states—and through energy and live interest by the members, they are well maintained. In the same way it behooves you all to enlist your good services and energetic influence on behalf of this Association, so as to keep it up to what it has been and make it capable of extending and advancing your business interests. Some dissatisfaction has been evinced in the requirements of a member changing his yard from one town to another, to pay membership fees and dues. Also I have been asked what constitutes a member, as to the quantity of stock in the yard. I ask your consideration of these matters.

AN ELOQUENT SPEECH.

After the reading of the Secretary's report, the Vice-President spoke eloquently and enthusiastically on Association matters. He said that during the past year the Directors had given very careful attention to the various subjects brought before them. Doubtless some were not always satisfied with the decisions arrived at ; of course every one thought his side of the question the right one ; but it should always be borne in mind that there were two sides to every question, and the board of Directors had always tried to get the fullest information from all sides and give a conscientious decision. If they have erred in any particulars it was because the proper evidence was not forthcoming. He here paid a tribute to the excellent services rendered by the Secretary-Treasurer of the Association, Mr. I. Cockburn. He always found him to be giving the most careful attention to all matters pertaining to the welfare of the Association, and believed that the success so far attained was largely due to his unremitting labors. He proceeded to show that the members of the Association had every reason to be proud of what it had accomplished. In the first place, it was unique among the lumber associations on the continent, inasmuch as no other approached it in the completeness of its character and operations. With scarcely an exception it included every dealer and manufacturer in the territory covered, and the principle recognized, of buying from and selling only to members of the Association, had proved of immense advantage to the members.

By the principle of preventing undue multiplicity of yards at a single point, each dealer was assured of his rightful amount of trade and fair profits. By this elimination of illegitimate modes of business, the standing of every man in the trade was strengthened, so that, while during the first year failures had occurred in almost every form of mercantile life, not a single failure had occurred among active members of the Association, a state of affairs, of course, gratifying to the wholesale dealers. It might be said that this success has been attained at the expense of the public, but such is not the case. In no instance has the price of lumber been advanced, but on the contrary, from the nature of their business, wholesalers have been enabled to reduce their prices. Add to this the reductions consequent upon freight rate concessions, concessions which could not have possibly been obtained without the united force of our Association, and we have a good substantial reduction in price, of which the public have had the advantage. It might further be said that the members of the Association do not intend to put in their pants' pockets, any gains in this way, but will continue to give the pub-

CANADA LUMBERMAN

WEEKLY EDITION

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Weekly Lumberman, published every Wednesday. Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

Lumberman, Monthly. A 20-page journal, discussing fully and impartially subjects pertinent to the lumber and wood-working industries. Contains interviews with prominent members of the trade, and character sketches and portraits of leading lumbermen. Its special articles on technical and mechanical subjects are especially valuable to saw mill and planing mill men and manufacturers of lumber products.

☞ Subscription price for the two editions for one year, $1.00.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type, and no display is allowed beyond the head line. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue.

FOR SALE—20 M FEET CHERRY LUMBER, dry, 1 to 5 inches thick, 1s and 2s.
J. KAUFMAN, Berlin.

SHINGLES OR LUMBER WANTED IN EXchange for 50 H.P. engine, nearly new.
PARK & BORROWMAN, Amherstburg.

FOR SALE OR EXCHANGE ON PINE LUMber: One Waterous Band Saw Mill, nearly new.
Address, CHAS. KREUTZIGER, Heidelberg, Ont.

TO LUMBER MERCHANTS

We are prepared to erect in any good locality a saw mill plant with a capacity of 100 M feet per day, more or less, for any one desirous of having sawing done who will supply the logs for a reasonable time.

We have had a large experience in sawing for the American market, and are prepared to furnish satisfactory recommendations. Address,

S. GILLIES & SON,
Ailsa Craig, Ont.

TIMBER LIMITS FOR SALE

Township of Lumsden

Sealed tenders addressed to the undersigned will be received up to 12 o'clock, noon, of

THE 18TH DAY OF APRIL, 1895,

for the purchase of the license to cut the timber on said Township of Lumsden, containing thirty-six square miles.

This berth has never been cut over; the pine is large and of good quality, and short haul; the Vermillion River runs through it and is a splendid stream to drive. Chelmsford Station, on the Canadian Pacific Railway, is only seven miles distant.

TERMS.—Cash, or the equivalent if time is required for the payment of a portion of the purchase money.

The highest or any tender not necessarily accepted.

For further particulars apply to

THOMAS McCRAKEN,
No. 2 Victoria Street,
Toronto, Canada.

WANTED,

TEN (10) cars of 2 in. 1sts and 2nds Hard Maple, 14 and 16 ft. long, 6 in. and up wide. Above stock to be at least 4 months on sticks. Parties having any of this on sticks should address at once,

BUFFALO HARDWOOD LUMBER CO.,
940 Elk St., Buffalo, N. Y.

BRITISH COLUMBIA RED CEDAR.

IMPORTANT CONFERENCE WITH UNITED STATES BOARD OF GENERAL APPRAISERS.—A COMPLETE CASE FOR REMOVAL OF THE DUTY.

Reference has been made several times by the CANADA LUMBERMAN to the injustice done British Columbia lumber interest by the exacting, under the new Wilson tariff, of a duty of 25 per cent. on red cedar going into the United States. No valid reason has been advanced why this lumber should be so taxed, except that red cedar had been classified as a cabinet wood, along with certain species of cedar of Spanish growth, and which are subject to 25 per cent, duty. To squarely meet this contention, and arrive at a speedy solution of the difficulty, Mr. J. G. Scott, manager of the Pacific Coast Lumber Co., New Westminster, B. C., met with the Board of General Appraisers, in New York, a few days ago, and entered fully into the question. As a result of much research, and after consultation with eminent authorities on the subject, he has established, it would appear, most clearly that the red cedar of the Pacific Coast, is in no sense identical with the cabinet cedars among which it has been classed. The red cedar timber of the Pacific Coast is produced from the tree known as "Thuya gigantea," and is a wood whose uses and qualities are very similar to those of white pine (Pinus strobus). It is not used as a cabinet wood, nor fit to be used as such, it being even a softer wood than white pine. A decision in the matter rests with the New York Board of Appraisers, whose particular work it is to examine into cases of the kind. At this writing their judgment has not been given out. But having had an opportunity to examine with some care evidence submitted by Mr. Scott, and which was supported before the Board by leading members of the lumber trade in New York, an eminent botanist, who appeared as a witness, and a curator of the Jesup collection of woods, it is hardly anticipating too much to say that the intelligence of the New York Board of Appraisers will lead them to but one conclusion—that Mr. Scott's contention is uncontrovertable, and that the embargo of 25 per cent. upon red cedar shingles must need be removed.

Frank S. Scammel, of St. John, N. B., has assumed control of the Scammel and Young shingle mill, at Tacoma, Washington Territory.

CURRENT TRADE CONDITIONS.

ONTARIO.

BUSINESS, like individuals, is effected by mercurial changes. With less severe weather, and traffic on the railroads freer, trade of the week has shown some improvement, though only slight. The general feeling is that lumber is moving more slowly than usual, for the opening of the new year, and yet when one measures this feeling by the entries of the ledger, it is found that altogether there is no special reason for complaint. "It would appear," said a representative of one of the largest Ontario lumber concerns, "that little business was doing. We appear to be warming the chairs in the office and waiting for business, and yet as I examine the sales made from week to week, and the stock sheets showing what supplies are held at the mills, I find that we are getting rid of a good deal of lumber and doing, perhaps, as well as is to be expected for the first two months of the year." There has probably been too much expected for the early days of the new year, born of the terrible dullness of the greater part of 1894. As a matter of fact there is never much business done in January and February, and there is no substantial reason to fear that when March opens out, there will not be an encouraging distribution of lumber at all points. The unthoughtful visitor to the northern districts would be impressed with the large quantities of lumber held in many of the mill yards. Enquiry, however, elicits the information that in most cases, the larger part of this lumber is sold, and only awaits shipment. Prices show no disposition to relax. Better grades occupy a more favorable position than a year ago, and with common prices are firm. Not only southern pine, but lumber from Duluth, is likely to be brought into Ontario to some extent the coming season. We learn of one large firm, with branches in different parts of the province, who have contracted for some supplies. The stock can be brought from Duluth to Toronto by vessel at $2.50, and probably rather better than this. The programme is to unload the lumber here, it being usually bought as mill run, and sort and distribute from Toronto as requirements call for it.

QUEBEC AND NEW BRUNSWICK.

It is not a disappointment to say that the lumber business is quiet in Quebec, because nothing else is expected at this time of the year. Quebec lumber merchants are, in most cases, away in Great Britain contracting for the season's business, the activities of which will be manifest a little later. It cannot, however, be said, so far as trade is indicated by the winter's work, that the outlook is over bright for the spring. The cut in the woods will not prove particularly large, and owing to the heavy stocks and low prices in the Old Country, the trade are not over sanguine of a large business. The quantity of square timber from the Ottawa will also, writes a Quebec correspondent, be greatly curtailed. In New Brunswick, pretty much the same conditions exist, with the exception that there is a good deal of activity in the woods, the season having been favorable to a good cut and this has been taken advantage of by lumbermen. Whilst shipments to the United States for some weeks past have been very light, it is believed that a good deal of new trade will be done with that country when spring fairly opens out.

BRITISH COLUMBIA.

A ray of light is brought to exporters by recent advices from Australia, which states that business there is improving. Trade with the interior is showing little more signs of life, and from conversation the writer had within the week with a large operator on the Pacific Coast there is reason to suppose that lumbermen of British Columbia will, during the coming season, find a considerable outlet for their product in various parts of Ontario, and not a little red cedar from the coast is finding its way to the Maritime Provinces. The important lumber staple of shingles is not improving very much.

UNITED STATES.

Lumbermen had built in a measure on the possibility of a considerable amount of outside work being done this winter. And until a month ago, the weather was favorable to business in that direction. Then, as every one knows, a radical change in atmospheric conditions began to show itself, and as a result everything in that line has come to a standstill, and is likely to remain in that shape for some time. This means, taking the country over, a large shrinkage in the demand for lumber supplies, and how this lost trade will be made up later on is a difficult question to solve. Lost trade, as a rule, is trade lost. The business that is not done this week is seldom made up next week. Prices for all manufactured articles have, owing to the dullness of business and the keenness of competition, been on the down grade for a long time, and with lumber firm in price, manufacturers are seeing the necessity of securing better prices for their products or else, as some of them argue, they had better stop manufacturing. These are problems that are confronting the lumber trade at the outset of the season. Duluth lumbermen are planning for placing a good quantity of lumber in the eastern markets, so soon as navigation

opens; and freights, they do not expect, will open higher than $1.75, and will likely drop to $1.50 a little later. There are enough weak men in the lumber business in Duluth, as is usually the case with any new district, to render a measure of cutting in price almost a certainty. The wise policy for Duluth lumbermen would be to hold to a reasonable price, but all of them have not a long enough purse for that, and sales must be made to secure needed cash. Better grades in white pine are stronger than they have been for many months, and are likely to remain so.

FOREIGN.

The lumber trades of the United Kingdom are now able to speak in somewhat exact terms of the condition of business during the past year. The various brokers have issued their annual circulars and the lumber trades' journals of the past week or two have been publishing their annual statistical information, and telling us just what sort of a year 1894 showed itself to be. Briefly, as one journal has remarked, these reports tell the same tale. The record has been of shrunken profits for the wood trade and a sluggish demand, though as Timber remarks "on the whole it can hardly be said that there has, during the past year, been any contraction of the wood trade generally. The one great disturbing element from which most merchants at every port in the Kingdom have suffered, some seriously, is the great failure in deal prices which took place after very considerable purchases had been made." Heavy failures also occurred towards the close of the year. Glasgow suffered from a prolonged strike, and yet, the lumber trade at that port has not been unsatisfactory. The thought is, doubtless, born of the hope, that there is a better outlook on the whole for trade this year. What will be the outcome in other foreign countries, it is a little difficult to say just yet.

HARDWOODS.

Compared with a week ago, there has been rather more life in hardwoods. Lumbermen have been able to get about with a little greater ease, and those who have orders for mixed stocks are now visiting hardwood districts and seeing in how far they can meet the needs of their customers. A good demand exists for elm, ash and basswood, but the same trouble that was noted in this column last week, continues to meet hardwood men, namely, a call from United States dealers for sizes in lumber that are not usual to the trade here. Wholesalers also meet this obstacle. Orders are for 1st and 2nd, probably, and they are able to purchase only mill run. The result is that frequently they have a remnant of poorer grades on their hands, which have to be disposed of at a sacrifice and this operates against profits on their sales to that extent. There is really no change in prices. These hold about the same as for some weeks past and continue firm. Indications are plain that the furniture industry in the United States is showing a marked improvement and enquiries for many kinds of hardwoods are shaping into fact.

SHINGLES.

A single sentence will give the shingle situation, namely: trade continues just as dull as ever, it making little matter what class of shingles are referred to.

Thos. Belanger is starting in the lumber business in Quebec.

STOCKS AND PRICES.

CANADA.

Mr. Anderson is getting out a large quantity of boxwood along Spruce Lake, N. B.

British Columbia shipped $18.182 worth of shingles into the United States during 1894.

A. Barnet, Renfrew, Ont., will cut about 160,000 cubic feet in waney and 15,000 C feet of square timber this season.

It is estimated that 27,000,000 feet more logs will be put into the Miramichi river this year than last.

Two cargoes of deals, aggregating about 500,000 feet, have cleared St. John, N. B., for the United Kingdom.

Henry Moiles, jr., has sold all lumber on the docks of the Moiles mill, St. John Island, amounting to 6,000,000 feet, to parties in the Eastern States.

Messrs. Booth and Hale have made a purchase of 300,000 feet of board pine from Perry & Co., of Sault Ste Marie, The pine is in northern Michigan and will be taken to Quebec for shipment to the Old Country. It is 21½ inch string and 26 feet in length.

Timber, London, Eng: The action of a prominent Quebec shipper, who has given advanced prices for a well-known stock of Canadian pine deals, and thus compelled other similar firms to follow suit, has caused much discussion and some scepticism as to whether these goods can bear another advance. New Brunswick spruce deals are extremely sluggish, and North of England buyers show no inclination to enter into any large purchases. An unusually large stock is being carried over at slightly declining quotations, and there is no immediate prospect of any improvement. A recent St. John steamer shipment to Liverpool, together with a large sailer now due at port named, have changed hands on the basis of about £5 15s. ex quay, and the bulk of both cargoes will probably go direct into consumption. Another St. John shipment of considerable size is afloat for the Bristol Channel, and is likely to be the last arrival for a few weeks.

Operations in New Brunswick are reported as follows: At Albert, Albert county, C. & I. Prescott will get out about two and a half million feet of spruce, two hundred thousand feet of hardwood, and some five hundred tons of tan bark. This firm is not operating as extensively as last year. At West Brook, Geo. D. Prescott will cut something over two million feet. At Alma, the Alma Lumbering Co., will cut five and a half million. At Point Wolfe, Geo. J. Vaughan will probably cut four million. J Prescott will cut in the vicinity of two million feet at Goose Creek. At Little Salmon River, S. H White & Co., expect to cut about three and a half million. This firm have about five hundred thousand feet on hand from last year. At Big Salmon River, C. M. Bostwick & Co. will probably cut about five millions. John McLeod, M. P. P., at Black River, will cut about a million and a half. At Irish River. W. H. and J. Rourke expect to cut between one and two million feet. There are several other smaller concerns who wil get out anywhere from one hundred thousand to five hundred thousand feet.

UNITED STATES.

Elm logs are selling in Michigan at $8.50, a decline of $1.50 over a year ago.

Hemlock logs are being purchased for $2.25 and $2.50 a thousand at Saginaw, Mich.

The cut of logs on the Kennebec, Me., is estimated at 72,000,000 feet. The cut last season was over 100,000,000 feet.

The Ramsay & Jones mill at Menominee, Mich., is cutting 40,000 feet of basswood lumber a day with one band saw.

The Sutherland-Jones Company, which operates the Evart stave mills at Saginaw, Mich., has purchased 15,000,000 feet of logs.

A New York report says that South American advices of late give promise of a greater number of orders than previously indicated.

Wm. H. White & Co., of Boyne City, Mich., say that prices on hardwoods are looking up. They have a good many enquiries for birch, mostly from the east.

FOREIGN.

A report from Glasgow, Scotland, says the tone of prices for Quebec timber has been improving; last year's import was light and stocks, when made up at the close of the year very moderate, while as regards prospective requirements they are of a substantial kind, our leading wood consuming trades being well employed.

The following are given as the wholesale prices for lumber in Newfoundland by the Trade Review of St. John, Nfld.

Hemlock board, No 1	$16.00 to 17.00
Spruce board, No 1	20.00
Spruce plank, joisting, studding scantling	20.00 to 22.00
1-in P. & T. spruce flooring	24.00
1¼-fn P. & T. spruce flooring	25 00
1½-in P. & T. spruce flooring	25.00
Pine boards (clear)	30.00 to 40.00
Hardwood plank	30.00 to 40.00
Shingles, cedar No 1, per m	4.00
Ditto, pine, No 1	2.00
Ditto, spruce, No 1	1.50
Laths	1.50 to 2.00

THE SITUATION.

REFLECTED THROUGH CORRESPONDENCE OF "WEEKLY LUMBERMAN."

J. & P. Ament, Brussels, Ont.: In building lines business is looking up. We have 12 contracts on hand, and expect a few more in next week, so prospects are a little better in that line.

H. Pedwell, Thornbury, Ont.: A fair trade is doing, more particularly in elm, ash, basswood and rock elm. Sold 8 cars this week at moderate prices. Stocks in elm and basswood are light. There is a fair demand for birch in this district. Prices are firm and mill men prefer holding, rather than selling at cut prices; the inspection is very severe.

J. &. L. B. Knight, Musquash, N. B.: It is too early in this section to expect any large activity in stocks. Deals for English market are in most demand. An improved trade is expected with the United States this year. Manufactured stocks are very low in this district. Logs are in good supply. The tendency of prices, we think, is upwards.

A. Tait, Orillia, Ont.: I notice in your last issue that Washington Territory *A* shingles are quoted at $2.30 in Ontario. Most buyers are not acquainted with the numerous brands used in that country on shingles. Would expect *A* to be a perfect shingle, free from knots and other defects, but they are really only a good second class shingle, being 10" clear butts and better. That is, knots may be anywhere 10" in from the butt.

Alfred Kaufman, Baden, Ont.: Cannot say that stocks are moving actively. Lumber most in demand are pine and hemlock and red cedar shingles. Of recent sales I can report 10-in. hemlock at $11 to $12; 10-in. pine $16. Considerable 10-in. stock and good common are on hand in this district. Lumber prices are firm. Prices in shingles are declining.

T. H. De Cew, Essex, Ont.: The favorable winter weather has heavily stocked the mills with logs. We have put in 2,500,000 feet at a cost of $6 a 1000, of elm, oak, ash, cottonwood, sycamore and soft maple. Have contracted 6,000,000 staves for New York market; contracted considerable of lumber from this year's cut at good prices. Judging from the very large number of enquiries for hardwood lumber the market promises to open out brisk, as soon as the severe cold passes over and the prospects are much brighter than a month ago and all are very hopeful for a return of better times in the near future.

Emile Dubie, Riviere du Loup, Que.: Snow very deep in the woods. Cut will be somewhat smaller than usual. Three shingle mills are being put up along Temiscouata railway. Outside of this, railroad ties are the principal industry along the road. Along the International, King Bros. at Cedar Hall, are cutting 75,000 logs, and Price Bros. & Co., 10,000 logs spruce. The Cedar Shingle Co., at Rimouski, will have timber to keep five mills running all summer. Prices for shingles are better than for some time. Sales made in Boston at $2.90 for exports and $2.50 for clears. Am getting 125,000 along coast of St. Lawrence, Temiscouata and International Railways. Prospects for all kinds of lumber improving.

R. E. Gray, New York: There is practically nothing new in the lumber trade in this market. Everything is very quiet, but as a general thing the retail yards feel very confident that they will have a fair business during the coming spring and summer in which case it seems that we might have quite a little business as they all seem so hopeful. To me it does not look as though we would do any large amount of business until the financial questions before the country are settled on some permanent basis. I think that before long the retail yards will realize that good lumber is scarce. I have been over a good deal of the western country and think there is no good lumber to be had from the mills, and there dosen't seem to be much coarse lumber left either.

DEATH OF MR. ALEXANDER McARTHUR.

The sudden death of Mr. Alexander McArthur, of Toronto, president of the large lumber firm of McArthur Bros. & Co., (Ltd)., at Ashton, North Carolina, on Saturday 22nd, inst., was a great shock to his friends everywhere. Deceased had left for the South about three weeks ago, and no such sad news was anticipated. The firm of which deceased was the head, was one of the largest and best known on the continent. Their business was largely as exporters to the United Kingdom. They have branches in England, Ireland and Scotland, as well as offices in Michigan, Quebec and Toronto. The remains of the deceased were brought to Toronto and interred in Mount Pleasant.

Subscribe for the CANADA LUMBERMAN.

SHIPPING MATTERS.

Forty-one vessels were built on Puget Sound in 1894.

The Barque Carmony is loading lumber at British Columbia ports for England.

Pickles & Mills are loading the Sadie Wilkins, with lumber, at Annapolis, N. S.

Lumber freights from British Columbia or Puget Sound are quoted as follows: Valparaiso for orders, 37s 7d; Sydney, 32s 6d; Melbourne, direct, 42s 6d; Port Pirie, direct 40s; United Kingdom, calling at Cork for orders, 62s; Shanaghai, 50s; Tientsin, 55s, nominal; South Africa, 63s 9d nominal.

LUMBER FREIGHT RATES.

LUMBER freight rates for pine on the Grand Trunk Railway have been made a fixture, until, at least, April 30th, 1895. Of any intended change after that date due notice will be given the lumbermen at a conference to be held in February.

General instructions in shipping by Grand Trunk are embodied in these words in the tariff schedule: On lumber in carloads, minimum weight, 30,000 lbs. per car, unless the marked capacity of the car be less, in which case the marked capacity (but not less than 24,000 lbs.) will be charged, and must not be exceeded. Should it be impracticable to load certain descriptions of light lumber up to 30,000 lbs. to the car, then the actual weight only will be charged for, but not less than 24,000 lbs. The rates on lumber in the tariff will not be higher from an intermediate point on the straight run than from the first named point beyond, to the same destination. For instance, the rates from Tara or Hepworth to Guelph, Brampton, Weston or Toronto, would not be higher than the specific rates named from Wiarton to the same points. The rates from Cargill and Southampton to points east of Listowel and south and west of Stratford will be the same as from Kincardine, but in no case are higher rates to be charged than as per mileage table published on page 9 of tariff.

Rates from leading lumber points on pine and other softwood lumber, shingles, etc., are as follows: From Glencairn, Creemore, Aurora, Barrie and other points in group B to Toronto, 6½c.; Collingwood, Penetang, Coldwater, Waubaushene, Sturgeon Bay, Victoria Harbor, Midland, Fenelon Falls, Longford, Gravenhurst and other points in group C, to Toronto, 6½c.; Bracebridge to Toronto, 7c.; Utterson, Huntsville, Navor, Emsdale, Katrine to Toronto, 7½c.; Burk's Falls, Berriedale and Sundridge, to Toronto, 8c.; South River, Powassen and Callender to Toronto, 9c.; Nipissing Junction and North Bay, 10c. Rate from Goderich, Kincardine and Wiarton to Toronto, 6½c. These rates are per 100 lbs. Rates from Toronto east to Belleville are 7½c. per 100 lbs.; to Deseronto, 9c.; to Brockville and Prescott, 10c.; to Montreal and Ottawa, 11c. The rates on hardwoods average about from 1c. to 2c. per 100 lbs. higher than on softwoods. For rates on railway ties, mahogany, rosewood, walnut, cherry, and other valuable woods, application must be made to the district freight agent.

On the Canadian Pacific the rates on pine and softwoods may be illustrated as follows: Cache Bay, North Bay, Sturgeon Falls and Warren, to Toronto, 10c.; Algoma, Cook's Mills, Massey, Spanish River and Whitefish to Toronto, 13c.; Ottawa to Toronto, 10c From Ottawa, Hull, Aylmer and Duchesne Mills to station on the Lake Erie and Detroit River, Erie and Huron, Toronto, Hamilton and Buffalo, and Michigan Central Railways, the rate is 14½c. per 100 lbs. Regulations apply as to minimum size of carload of 30,000 lbs., and an advanced rate is charged for hardwoods.

Lumber freight rates on the Canadian Atlantic Railway are as follows: Ottawa to Toronto, 10 cents per 100 lbs.; Ottawa to Oswego, $1.90 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Montreal, $1.25 per M ft., (3,000 lbs. and under per M ft.); Arnprior to Montreal, $1.75 per M ft., (3,000 lbs and under per M ft.); Ottawa to Quebec, 10 cents per 100 lbs.; Arnprior to Quebec, 12 cents per 100 lbs.; Ottawa to Buffalo, 12 cents per 100 lbs.; Ottawa to Port Huron and Detroit, 14 cents per 100 lbs. Ottawa to New York, track delivered 15 cents.; lightered 17 cents.; Arnprior to New York, track delivery 17 cents.; lightered 19 cents.; Ottawa to Boston, Portland and common points, local 15 cents; exports 13c. per 100 lbs.; Arnprior to Boston, Portland and common points, local 17 cents; export 15 cents per 100 lbs.; Ottawa to Burlington, 5 cents per 100 lbs.; Ottawa to Albany, 10 cents per 100 lbs.; Arnprior to Albany, 12 cents per 100 lbs.; Ottawa to St. John, N. B. and common points, 20 cents per 100 lbs.; Ottawa to Halifax, N. S. and common points, 22½ cents per 100 lbs. Minimum carload weight for shipment of lumber, lath, shingles, etc., is 30,000 lbs., and rates quoted above are in cents per 100 lbs., except when quoted per M ft. the minimum carload charged is 10 M ft.

MODIFICATION OF HARDWOOD RATES.

THE Grand Trunk Railway and Canadian Pacific have receded in part from their arrangement of a few weeks since when they combined and made the rates on hardwood from certain points to Toronto and Hamilton 8½c. per 100 lbs. John Earls, W.D.F.A., of the Grand Trunk, has written the hardwood men as follows: "After careful consideration we have come to the conclusion that, on and after Jan. 1st, 1895, a modification will be made in the present arrangements for hardwood lumber, to the effect that the rate will be 7½c. per 100 lbs. from our Northern and Northwestern branches to Toronto and Hamilton. This rate, however, will not apply from main line points and the straight run between Toronto, Sarnia and Windsor; also that so far as rates on common lumber to points like Guelph, Galt, London, Woodstock, Ingersoll, etc., from all lumber shipping stations the rate will be the same on hardwood as on pine." On the old principle, we suppose, that half the loaf is better than none, hardwood men have something, possibly, to be thankful for, though there is no good reason why the rates generally on hardwood should not be as low as on pine. It is understood that the C. P. R. rate will be made uniform at 7½c. from same points.

On the fourth page of the WEEKLY LUMBERMAN will be found market prices in detail from leading lumber markets of Canada and United States, carefully revised to hour of going to press.

CEDAR —ORDERS PROMPTLY FILLED FOR telegraph, telephone or electric poles, ties, posts, cedar shingles and cedar light wood; also hemlock dimension lumber—J. E. MURPHY, Hepworth Station.

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....MANUFACTURERS OF....
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London Canadian Chambers, 103 Bay Street, TORONTO.

DONOGH & OLIVER
Wholesale Dealers in Lumber, Lath and Shingles
TORONTO: 204-205 Board of Trade Building. -:- BUFFALO: Dock foot of Hertel Avenue.

JAS. PLAYFAIR & CO.
Manufacturers and Wholesale Dealers
LUMBER • LATH • SHINGLES
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BILL TIMBER a Specialty . . .
MIDLAND, ONT.

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—: HUNTSVILLE, ONT. :—
MANUFACTURERS OF LUMBER LATH AND SHINGLES
HAVE for sale a large quantity of nice Mill Cull Stocks, mixed, 10 and 12 inches wide, at $8 per M. Also a quantity of Mill Cull Sidings at $7. In stock, quantities of 1¼, 1½, and 2 cuts and better. Also 1x6, 8, 10 and 12 inch Stocks. Correspondence solicited.

Ottawa Lumber Co. Ottawa Canada
WHOLESALE LUMBER, LATH, SHINGLES, ETC.
Write for Stock List

WHOLESALE LUMBER
OFFICE: 20 Aberdeen Chambers
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HARDWOOD a Specialty
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Wholesale Dealer in all kinds of
LUMBER, LATH AND SHINGLES
Bills cut to order.
Lumber shipped to all parts by rail or vessel.
Excellent quality of 18 inch Pine Shingles for sale.
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Wanted for the American Market,
Correspondence Solicited
Spruce Lath, Spruce Shingles, Spruce and Pine Clapboards, Birch Flooring, Pine and Spruce Lumber, also Hemlock Bark.

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To Purchase or Sell as quickly as possible
A PARTICULAR LOT OF LUMBER
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An Advertisement in the "Wanted" and "For Sale" Department of the . . . . .
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Will secure for you a Buyer or Seller, as the case may be. Address,
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WE want to buy FOR CASH the following kinds of Lumber : : : : :
1, 1¼, 1½ and 2 inch BLACK ASH
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EMPIRE LUMBER CO. - BUFFALO, N. Y.
Write us, stating what you have for immediate shipment, with full description of stock, etc.

OTTAWA & NEW YORK LUMBER LINE
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CANADIAN POINTS, NEW YORK CITY AND ALL POINTS REACHED BY WATER FROM ALBANY
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ALWAYS IN THE MARKET FOR HIGH GRADE LUMBER.
L. G. MULLER
MAPLE FLOORING, N. C PINE, CYPRESS REDWOOD.
Lumber and Logs for Export
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WHOLESALE DEALERS IN AND MANUFACTURERS OF
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Canadian mill men invited to offer stocks. -:- 54 South Street, NEW YORK.

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Burns, E. R., Saw Co., Toronto, Ont.
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Can. Office and School Furniture Co., Preston, Ont.
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Emery Wheels, Tanite Co., Stroudsburgh, Pa.
Lumber Truck Wheels, Montreal Car Wheel Co.
Magnolia Metal Co., New York.
Machine Knives, Peter Hay, Galt, Ont.
Machinery Oil, Samuel Rogers & Co., Toronto.
Rubber Stamps, Chas. W. Mack, Toronto.
Silver Solder, P. W. Ellis & Co., Toronto.

Business Wisdom.— Yielding is sometimes the best way of succeeding.

The Price Lists that here follow will be revised each week up to the hour of going to press, and in connection with these we would draw attention to the week's trade review under the heading of "Current Trade Conditions" on the first page, immediately followed with matter marked "Stocks and Prices," which presents the lumber situation of the week, together with a record of the week's sales and transactions.

PRICES CURRENT.

TORONTO, ONT.

TORONTO, Feb. 27, 1895.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		2 30
XX shingles 16 inch		1 40
Lath, No. 1		2 00
Lath, No. 2	1 80	1 85

HARDWOODS—PER M. FEET CAR LOTS.

Quality, 1s and 2s unless otherwise specified.

Ash, white, 1 to 2 in	$26 00	$28 00	Elm, soft 1 to 1½	$14 00	$15 00
" " 2½ to 4	30 00	32 00	" " 2	15 00	16 00
" black, 1 " 1½	18 00	20 00	" rock 1 " 1¼	16 00	18 00
" " 2 " 4	20 00	24 00	" " 1½ " 3	20 00	22 00
Birch, 1 " 1½	20 00	22 00	Hickory 1½ " 2	28 00	30 00
" 2 " 4	22 00	25 00	Maple 1 " 1½	16 00	18 00
" sqrs. 4x4 " 8x8	26 00	30 00	" 2 " 4	18 00	20 00
Basswood 1 " 1¼	16 00	18 00	Oak, red, p'n 1 " 1½	28 00	30 00
" 1½ " 2	19 00	19 00	" " 2 " 4	30 00	32 00
" m. r. 1 " 1¼	14 00	16 00	" white " 1 " 1½	28 00	30 00
Butternut 1 " 1½	23 00	25 00	" " " 2 " 4	30 00	35 00
" 2 " 3	25 00	28 00	" quart'd 1 " 2	48 00	52 00
Chestnut 1 " 2	22 00	25 00	Walnut 1 " 3	85 00	100 00
Cherry 1 " 1½	50 00	60 00	Whitewood 1 " 2	32 00	36 00
" 2 " 4	60 00	65 00			

OTTAWA, ONT.

OTTAWA, Feb. 27, 1895.

Pine, good sidings, per M feet, b.m	$30 00	37 00
Pine, good strips, " " "	26 00	31 00
Pine, good shorts, " " "	19 00	25 00
Pine, No. 1 dressing sidings, per M feet, b.m	19 00	24 00
Pine, " " strips, " " "	17 00	20 00
Pine, " " shorts, " " "	15 00	17 00
Pine, 10 s.c. and better stock, " " "	16 00	18 00
Pine, 8 s.c. " " " " "	13 00	15 00
Pine, " sidings " " "	13 00	15 00
Pine, " strips " " "	11 00	13 00
Pine, " shorts " " "	9 00	11 00
Pine, box culls " " "	9 00	12 00
Pine, mill culls " " "	8 00	10 00
Lath, per M	1 40	1 75

QUEBEC, QUE.

QUEBEC, Feb. 27, 1895.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	16 @	22
For fair average quality, according to average, etc., measured off	20	26
For good and good fair average, " " " " "	25	30
For superior " " " " "	32	40
In shipping order " " " " "	36	42
Waney board, 18 to 19 inch " " " " "	36	42
Waney board, 19 to 21 inch " " " " "	38	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	45	51

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	28	32

BIRCH.

16 inch average, according to average and quality	21	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $40 to $43 for 3rd quality.
Bright spruce, according to mill specification, $40 to $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality. F.O B. batteau.

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N. Y., Feb. 27, 1895.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in	$47 00	50 00	Shelving, No. 1, 13 in and up, 1 in	31 00	@33 00
2½ and 3 in	50 00	53 00	Dressing, 1¼ in	25 00	26 00
4 in	54 00	56 00	1¼x10 and 12		26 00
Selects, 1 in.	38 00	39 00	1½ in	24 00	25 00
1¼ to 2 in	40 00	42 00	2 in	26 50	28 00
2½ and 3 in	47 00	50 00	Mold st'ps, 1 to 2 in	33 00	35 00
4 in		52 00	Barn, No. 1, 10 and 12 in	21 00	23 00
Fine common, 1 in	35 00	37 00	6 and 8 in	20 50	22 00
1¼ and 1½ in	37 00	38 00	No. 2, 10 and 12 in.	17 00	18 00
2 in	34 00	35 00	No. 3, 10 and 12 in.	14 00	16 00
3 in.		45 00	6 and 8 in	16 50	18 00
4 in		45 00	6 and 8 in	13 50	15 50
Cut'g up, No. 1, 1 in.	27 00	29 00	Common, 1 in	16 00	18 00
1¼ to 2 in	32 00	33 00	1¼ and 1½ in	18 00	20 00
No. 2, 1 in	16 00	17 00	2 in	19 00	22 00
No. 2, 1¼ to 2 in	22 00	23 00			
No. 3, 1¼ to 2 in	18 00	19 00			

ALBANY, N.Y.

ALBANY, N. Y., Feb. 27, 1895

PINE.

Uppers, 3 in. up	$50	$52	Dressing boards, narrow	$19	$21
2½ in.	50	52	West India shipping boards.	16	17
1 to 2 in.	45	48	Box boards	12	14
4 inch uppers	50	52	10-in. dressing and better	26	30
Selects, 2½ in. up	40	42	10-in. common	14	15
1 to 2 in	36	40	12-in. dressing and better	25	32
Fine common, 2½ in. and up	38	40	Common, 1x11	14	16
1 to 2 in	34	38	No. 1 barn, 1x12		20
Nc. 1 cut, 1 to 2 inch	25	35	1x10	18	21
No. 2	18	25	1x8	16	18
No. 3	17	20	No. 2 barn, 1x12	17	19
No. 1 molding, 1 to 2 in	33	36	1x10	17	19
No. 2 molding, 1 to 2 in	25	28	1x8	17	19
Stained saps		20	Shaky or star clear, 1 to 2 in.	19	21
Bracket plank	30	35	Dressing	16	18
Shelving boards, 12-in. up	28	30	Common	11	13

LATH.

Pine	$2	25	Spruce	$2	00

SHINGLES.

Sawed Pine, ex. XXXX	$4 25	$4 30	Bound butts, 6 x 18	$6 00	$6 15
Clear butts	3 25	3 35	Hemlock	2 15	2 30
Smooth, 6 x 18	5 40	5 50	Spruce	2 20	2 30

BOSTON, MASS.

BOSTON, Feb. 27, 1895.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$12 00	12 15	¾ inch	$ 9 25	9 75
Coarse No. 5	15 00	16 00	11-16 inch	8 50	9 00
Refuse	12 00	13 00	⅝ inch	8 00	8 50
Outs	9 00		Clapboards, sap ext.	48 00	50 00
Boxboards, 1 inch	10 75	11 00	Sap clear	44 00	45 00
⅞ inch	9 75	10 00	Sap, 2nd clear	38 00	40 00
			No. 1	23 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in	$50 00	@51 00	Fine com., 3 and 4 in	43 00	45 00
1¼, 1½ and 2 in.	52 00	53 00	No. 2, 1 in. Fine com.	28 00	30 00
3 and 4 in	59 00	63 00	1¼, 1½ and 2 in	29 00	31 00
Selects, 1 in	43 00	45 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in.	45 00	47 00	No. 2	36 00	37 00
3 and 4 in	55 00	57 00	No. 3	28 00	30 00
Moulding boards, 7 to 11 in. clear	36 00	38 00	Cut ups, 1 to 2 in	24 00	32 00
60 per cent. clear	34 00	36 00	Coffin boards	19 00	20 00
Fine common, 1 in	38 00	40 00	Common all widths	22 00	26 00
1¼, 1½ and 2 in	41 50	42 00	Shipping culls, 1 in	15 00	15 50
			do 1¼ in.	15 50	16 50

SHINGLES.

Spruce	1 30	1 50	Second Clear	1 80	2 10
Cedar, extra	2 75	3 00	Extra No. 1	1 50	1 75
Clear	2 25	2 50			

HEMLOCK.

Boards, rough	9 00	@10 00	No. 2	7 00	@
Planed	11 00	11 50			

LATH.

Spruce			By cargo	1 80	@ 1 90
By car	1 80	@ 2 00			

NEW YORK CITY.

NEW YORK, N. Y., Feb. 27, 1895.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply, rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$28 00	@ 40 00	Building orders	$26 00	@ 35 00
Decking	44 00	50 00			

SPRUCE.

6 to 9 in	14 00	14 50	10 to 12 in	15 50	16 00
6 to 12 in	14 75	15 25	Lath	1 90	2 00
9 to 12 in	15 25	15 50			

SAGINAW, MICH.

SAGINAW, Mich., Feb. 27, 1895.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$45	00	Selects, 1in., 8in. and up wide	$38	00
1¼, 1½ and 2 in.	44	00	1¼, 1½ and 2 in.	38	00
2½ and 3 in.	53	50	2½ and 3 in.	45	00
4 in.	55	00	4 in.	50	00

FINE COMMON.

1 in., 8 in. and up wide	32	00	2½ and 3in., 8in. and up wide	38	00
1¼, 1½ and 2 in	34	00	4 in	45	00

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	25	00	2½ and 3in., 7in. and up wide	35	00
1¼, 1½ and 2 in	30	00	4 in	38	00

STRIPS, A AND B (CLEAR AND SELECTS).

1¼ in., 4, 5 and 7 in. wide	34	00	1 in., 4, 5 and 7 in. wide	32	00
6 in. wide	36	00	6 in. wide	36	00

FINE COMMON OR C.

1¼ in., 4, 5, 6 in. wide	30	00	1 in., 6 in. wide	32	00
1 in., 4, 5 in. wide	28	00			

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24	00	1 in., 4, 5, 6 in. wide	23	00

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in	17	00	1 in., 4, 5 and 7 in.	17	00
1 in., 6 in.	18	00	1 in., 6 in.	18	00

NO. 2 FENCING OR NO. 4 FLOORING.

1 in., 4, 5 and 7 in	14	00	1¼ in., 4 to n	14	00
1 in., 6 in.	15	00	No. 3 fencing, 1 in., 6 in.	13	00

SHELVING.

No. 1, 1 in., 10 in. stocks	25	00	No. 2, 1 in., 7 and 8in. stocks	20	00
1 in., 10 in. and up wide	26	00	1 in., 10 in. stocks	21	00
1 in., 12 in. stocks	29	00	1 in., 12 in. stocks	23	00
1 in., 12 in. and up wide	29	00	1 in., 10 in. and up wide	22	00
1¼ in. 1½ and 2in., 8in. and up wide	29	00	1 in., 13 in. and up wide	24	00

BARN BOARDS OR STOCKS.

No. 1, 12 in.	19	00	No. 2, 9 in.	14	00
10 in.	17	50	8 and 7 in.	14	00
9 in.	17	50	No. 3, 12 in.	12	50
8 and 7 in.	17	00	10 in.	13	00
No. 2, 12 in.	16	00	9 in.	12	50
10 in.	14	00	8 in.	12	50

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$10	00	1 in., 13 in. and up wide	$12	00
1 in., 6 in. wide	11	00	1¼, 1½ and 2 in., 7 in. and up wide	12	00
1 in., 7 in. wide and up	11	00			

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9in. wide	17	00	1 in., 10 in. and up wide	17	00
1 in., 6 in. wide	17	00	1¼, 1½ and 2 in., 8in. and up wide	17	00

COFFIN BOARDS.

No. 1, 1 in., 13in. and up	20	00	No. 1, mill culls	9	00
No. 2	17	00	No. 2, or red horse	7	00

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23	50	No. 2	19	50
No. 1 (nearly clear)	22	50	No. 3	17	00

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16ft.	$11	00	Hemlock, 2x4 to 10, 12 to 16 feet	8	50
18 ft	13	00	2x12	9	00
20 ft	14	00	Add $1 to each additional 2ft. in length.		
22 and 24 ft	15	00			

SHINGLES, 18-IN.

Fancy brands, XXXX	3	25	Standard brands, river made, XXXX	2	90
Clear Butts	2	00	Clear Butts	1	90

WHITE PINE LATH.

No. 1	1	50	No. 2	1	00
			Hemlock	1	00

OSWEGO, N.Y.

OSWEGO, N. Y., Feb. 27, 1895.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$45 00	@46 00
Pickings, " "	36 00	38 00
No. 1, cutting up, " "	31 00	33 00
No. 2, cutting up, " "	24 00	25 00
In strips, 4 to 8 wide, selected for moulding trips, 14 to 16 ft.	30 00	32 00

SIDING

1 in siding, cutting up			1¼ in selected	38 00	@43 00
1icks and uppers	32 00	@39 00	1¼ in dressing	20 00	22 00
1 in dressing	19 00	21 00	1¼ in No. 1 culls	15 00	17 00
1 in No. 1 culls	14 00	15 00	1¼ in No. 2 culls	14 00	15 00
1 in No. 2 culls	13 00	14 00	1 in. No 3 culls	11 00	12 00

1X12 INCH.

12 and 16 feet, mill run	21 00	24 00
12 and 16 feet, No. 1 and 2, barn boards	19 00	20 00
12 and 16 feet, dressing and better	27 00	31 00
12 and 16 feet, No. 2 culls	15 00	16 00

1¼X10 INCHES.

Mill run, mill culls out.	$22	00@25 00	No. 1 culls	17	00 18 00
Dressing and better	27	00 35 00	No. 2 culls	14	00 15 00

1X4 INCHES.

Mill run, mill culls out	17	00 21 00	No. 1 culls	14	00 15 00
Dressing and better	24	00 30 00	No. 2 culls	12	00 13 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20	00 25 00	6, 7 or 8, No. 1 culls	16	00 17 00
6, 7 or 8, drsg and better	25	00 30 00	6, 7 or 8, No. 2 culls	14	00 15 00

SHINGLES.

XXX, 18 in pine	3	60 3 75	XXX, 18 in. cedar	3	40 3 65
Clear butts, pine, 18 in.	2	60 2 75	Clear butt, 18 in. cedar	2	40 2 65
XXX, 16 in. pine	2	90 3 10	XX, 18 in. cedar	1	75 2 00
Stock cedars, 5 or 6 in.	4	50 5 00			

LATH.

No. 1, 1¼	1	85	No. 2, 1¼	1	75
No. 1, 1 in.	1	50			

lic the benefit as heretofore, being themselves satisfied with a fair profit.

This is an age of combinations ; indeed it might be said that combinations are the mainspring of civilization of the latter part of this century, by the aid of which the greatest strides have been made. We find every trade profession and calling controlled by associations—some of them indeed recognized and solidified by acts of Parliament—but of all the associations west of the Great Lakes, there is none more roundly abused than ours, and none more innocent in its effects upon the public. This Association fears not at any time to undergo an investigation into its methods. It is true beyond a doubt that no class of mercantile trade is conducted on so small a scale or margin of profit, and no association guards so well the interests of the public. The speaker was satisfied that, as more became known of the objects of the association, the prejudice against it would disappear. He was pleased to see so good an attendance ; a number of subjects would come up for discussion, and he hoped the results obtained would conduce to the continued benefit of the association.

The election of officers and directors for the ensuing year was gone on with, resulting as follows :—President, J. L. Campbell, Melita ; Vice-President, Alex. Block, Winnipeg. Directors—D. N. McMillan, Morden ; J. M. Taylor, Portage la Prairie ; R. H. O'Hara, Brandon ; J. B. Mather, Glenboro ; T. A. Cuddy, Minnedosa ; J. Dick, Winnipeg.

Mr. Taylor subsequently resigned, and J. M. Nelson, of Carberry, was appointed in his stead.

The balance of the session was taken up in discussing amendments to the by-laws, and some changes authorized to be made. The session throughout was considered most satisfactory.

WINNIPEG, MAN., FEB. 23, 1895.

ELECTRICITY AND ECONOMY.

THE nature of electrical generation and dynamo working is such that only sufficient amount of current required to do the work in is used, so its economy is at once obvious. In factories where the machinery is working intermittingly, and liable to great fluctuation, the economy of driving by electricity is even more marked, as the electric current can be switched on or off with the greatest ease and rapidity, after which crossed belts and fast and loose pulleys appear a heavy and clumsy, not to say unscientific, method of utilizing power.—Manufacturers' Gazette.

PUBLICATIONS.

The annual statistical number of the Mississippi Valley Lumberman is one of the most complete special issues of a lumber journal that has come to our table in some years. Especial care has been exercised in the gathering of statistics of the lumber trades of the particular territory covered by the journal. These tables embrace hardwoods, as well as pine, a new venture with our contemporary, and one that is not common to the gatherer of lumber statistics. Outside of the special trade review features of the number, there are found in its pages several valuable articles on the saw-mill, wood-working machinery, and a history of Minneapolis as a lumber manufacturing point, all appropriately illustrated. Typographically the number is deserving of much praise.

From across the ocean comes to us a special American and Canadian edition of Timber, a massive volume. The editor of this journal took a trip through Canada and the United States a year ago, and the evidences of his industry and observations are seen in this splendidly gotten up number. It contains an excellent history of the trades of these two countries. We congratulate our contemporary on the very thorough and accurate manner in which he has dealt with the Canadian trade of the several provinces. The number is profusely illustrated with portraits and illustrations of prominent lumbermen, saw mills, and lumbering scenes in the several provinces of the Dominion and elsewhere.

IF a belt will not run a machine unless it is as tight as the strings of a bass viol, then it is time the pulleys were changed for broader-faced ones, and a wider belt put in place of the narrow one. A belt of the proper width to perform its work with ease can be run on by hand as easily as it can do the work required of it.

MENTION was made, I noticed, in discussing trade conditions in the WEEKLY LUMBERMAN a week ago, of the difficulty experienced in securing lumber, and especially hardwoods, of the size frequently called for by United States dealers. I was speaking to Mr. George Cormick, of Whitby, a few days ago on this point and he was telling me of an order he had received, which was going to give him some bother to fill, as our mill men were not accustomed to making up lumber of these sizes. The complaint comes, not alone from Mr. Cormick, but I have asked others on the point and a few days ago in the office of J. G. Cane & Co. I had a case cited to me of a similar kind. Lumbermen who undertake to do business for a particular locality must needs meet the requirements of that trade. It occurred to me that mill men would simply have to lay themselves out to cut wood to these particular sizes, for I judge that the cases are not exceptional and that where Mr. Cormick would get orders for certain kinds of wood of a certain size other dealers would be receiving like orders, which would mean that the mill men would find it pay to make up some quantity of wood of this character.

* * * *

Whether or not southern pine is going to cut a figure in the Canadian market that is worth any large amount of consideration, is, perhaps, a debatable question. This, I have to remark, that meeting with lumbermen almost daily, and those engaged in different branches of the business, I find that a good many, at least, are talking about this matter. I do not think that a systematic effort has been made to put any great quantity of southern wood into Ontario, though some movement is being made to find a market for it here. But it would not take long if a decision were arrived at to rush business in that direction. The trade are frequently in receipt of price lists from the south, and these are not thrown into the waste paper basket. They are being studied, some figuring done and comparisons made, and the lists are carefully filed for reference. I find this to be the case. Prices, as nearly as one can compare these with white pine, run somewhat closely parallel. And yet there are certain grades of the foreign article where the price is lower than white pine men would care to sell their stock for, and I should be sorry to see them get prices down that low. In conversation with a group of lumbermen I found one old-timer, who knows the trade for many years back and who still keeps on the road, who does not think that southern pine will make much headway in Ontario. He believed that the action of the lumber section of the Board of Trade, taken shortly after the recent great fire, was going to have a potent influence both in Toronto and throughout the province in deciding lumbermen against handling this wood. Certainly if the Underwriters' Association take the question up and make a distinction in rates between buildings where this resinuous wood is used in construction and others that hold to native woods, a blow will be struck at southern pine. The case occurs to me as one that in a measure is in is in embryo. In the meantime the subject will bear investigation and the CANADA LUMBERMAN will be glad to gather the opinions of the trade on the question.

* * * *

As the months pass by since the placing of lumber on the free list between the United States and Canada, the full import of the measure is commencing to work itself out. Possibly Canadian lumbermen were rather much carried off with the idea that the removal of the duty on lumber was going to work all one way. On the other hand it is quite evident that United States lumbermen were unnecessarily terrified at the disaster they were sure the measure would wreck upon the lumber trades of their country. Free trade is free trade and it can hardly be made the policy of any country without cutting the two ways. Under a protective tariff there is some opportunity of shutting out imports from a foreign country. Under free trade just as sure as the country enjoying that has the freedom that enables its people to push their products into those countries that reciprocate along the same lines, so contrariwise, they have taken down the bars and they may expect that certain products will come into their country from the outside. I am not going to follow this interesting economic phase of the question any further. Perhaps it will set readers thinking. I simply mention it to remark that this is proving the experience more and more of free lumber. British Columbia lumbermen are sending cargoes almost every week into San Francisco. Washington Territory lumbermen are getting their red cedar shingles not only into British Columbia, but their salesmen have been through Toronto and Ontario points within the past few weeks pushing business. Ontario white pine men are sending in manufactured lumber in increased quantities into the United States, because of the removal of the duties. As I have noted elsewhere, reciprocity comes into play here by the southern pine men sending their supplies, not only of rough lumber but of manufactured stocks, into Ontario, and talking lumber matters the other day with Mr. Thomas Meaney, manager of the Toronto branch of Robert Thomson & Co., I learned that this firm will, the coming season, bring in Duluth pine to Toronto, and place it on sale at their various branches. And remember that Robert Thomson & Co. are large mill owners themselves, interested in selling the product of their own mills. Does not this look like a very general mixing up of the lumber products of the two countries ?

* * * *

Some one has said that history is teaching by example. I have no doubt but that all of us would save many expensive experiences if we would but study history a little more, and thereby learn that some of the schemes into which we enter with so much cetainty of success, had at times past been tried by others and proven to be complete failures. I would not like to say that this line of argument could with perfect safety be applied to some observations on the lumber trade that I heard discussed a little while ago when in a lumberman's office in Toronto. I met there several lumbermen who had been long enough in the business to know something of its history and outcomes, and with these a gentlemen who has been quite largely engaged in building and real estate in Toronto. The present condition of business was the all important subject of discussion, and the tendency was to take a pessimistic view of affairs. I wanted to point out to these lumbermen that the evidence seemed to show that we had turned the corner, and dull as 1894 had certainly been, things were going to improve in 1895. Sales would certainly be better, and prices that were stiff to-day were not likely to relax, and perhaps would increase some. Everybody did not agree with this prognostication of mine. Lumber will be lower during 1895, said one of the company, than it is at the present time. I reminded this person that mill men had seldom held lumber at a firmer price. The answer was that this was all very well. It was natural to expect that mill men would talk about stiff prices, and anyone in their position would be likely to do the same thing. "But," joined in another of the party, "those who can go back to the year 1876 saw just this kind of business existing. There was plenty of lumber in the country and you could not move mill men from their prices. What was the result ? I have in my memory at the present time the case of one large concern, with offices in Toronto, who held a large stock of lumber, for which they would not take a cent less than $13 a thousand. No shading from this price could tempt them to part with it. They held on with bulldog tenacity, but the time came when that same lot of lumber was sold for $7 a thousand." I do not think that conditions as they exist to-day find a fair parallel in those of 1876, but on the principle that history teaches by example, and taking my friends view of the case as correct, there is, of course, something in his way of stating it. Our friend, the builder, thought lumber was a good deal like real estate in the city of Toronto. There was no better asset for anyone to hold, if he could hold it long enough.

CORRESPONDENCE

Letters are invited from our readers on matters of practical and timely interest to the lumber trades. To secure insertion all communications must be accompanied with name and address of writer, not necessarily for publication. The publisher will not hold himself responsible for opinions of correspondents.

CARELESS METHODS OF LUMBERING.

To the Editor of the CANADA LUMBERMAN:

SIR,—Some excellent advice is contained in an article published in your February issue under the heading "Stacking Lumber," and I would heartily recommend our hardwood manufacturers to peruse it carefully and then sit down and figure up how much good hard cash they have lost on their last season's stock by failing to give this particular branch of their business proper attention. I have no hesitation in saying that there are few mill men who could not count up many lost dollars, directly attributable to careless piling or stacking.

The prevailing custom of putting up 12, 14, and 16 foot boards and planks in the same pile is bad, and is undoubtedly a source of great loss, for reasons which must be obvious to everyone who knows anything about lumber. I have seen soft and rock elm, piled in this way and 25% to 50% of the 14 and 16 foot length had to be thrown out, as common, on account of warped and twisted ends, which would otherwise have passed as 1st and 2nd. By piling each length separately this trouble would be overcome, and with no small gain to the manufacturer, as it will be seen that he loses by the other method not only the difference between the price of common and 1st and 2nd on what has been thrown out but is also at the expense of repiling it, which is a considerable item on a large stock of lumber.

"A penny saved is a penny gained"—and pennies are a panacea for hard times.

BOARD RULE.

FORESTRY A PRACTICAL QUESTION.

To the Editor of the CANADA LUMBERMAN:

SIR,—It is not an easy matter to awaken in the breast of the average lumberman an interest in the study of forestry. There are some notable exceptions, I am glad to say, as in the case of Hon. J. K. Ward, Mr. William Little and a few others. But the great mass of lumbermen are interested in cutting down the products of the forest, rather than giving any concern to filling up the immense gaps, they are making in this product every year. How seriously the question touches every thoughtful man is indicated by the atttention that is being given to the subject of late in the leading magazines and reviews of the country. In a late number of Blackwood there was published an exhaustive article on this question, and the Century has been running a series of articles on the subject. The time has gone by when the matter can be laughed out of court. This policy has in the past been the usual stock rejoinder of those who would tell us that the country was so rich in forest products that no one need talk nonsense about the denuding of the forests. This was the story in Michigan until within the past few years. Now the most utilitarian of lumbermen are prepared to admit that that once great pine state is practically out of the running as a lumber state to-day; and that many believe what they say, they are making heavy investments in Canada, Wisconsin and Duluth, and from these places stocking their Michigan mills, which they can no longer stock from supplies at their doors.

Where reform, perhaps, should commence is with our own government. The disposition of the crown lands of the country is under their control. The Ontario government deserves much credit for setting aside certain timber lands for a forestry park, and the system of fire rangers adopted has commended itself to all who have studied this question. This, however, is only a method of preservation. What is needed is the adoption of a system of reforestation, so that future generations will be left in possession of some of the rich timber resources that to-day are the pride of the present generation. The local legislature is now in session and I doubt if members could spend their time to better advantage than to consider a measure modelled along the lines which are here suggested.

Dr. Dawson, of Montreal, in a lecture, recently, sounded a note of warning on this matter, which may fitly be quoted here: "Our forests are no doubt in a critical state. We still have more timber than any other country, but for that very reason we need to be careful not to give away too much to those who are not in want of it, or to waste it at home. The time has come for planting and scientific forestry, and attention to these matters might enable us to supply the world for centuries and leave abundance for ourselves. Our little export of twenty-six millions of dollars worth might, with proper management, represent only the annual increase of our forests."

CANADIAN LUMBERMAN.

SPANISH RIVER, ONT., Feb. 20, 1895.

INJURY TO BOILERS BY GREASE.

IT has often been observed that small quantities of grease in combination with deposits lead to boiler accidents. This compound gets deposited on the plates, and the most violent water circulation is sometimes insufficient to remove it. The plates, in consequence, get overheated and accidents result. The introduction of grease inside the boiler should be avoided, especially where the water from the condenser is used for feeding the boiler, by the use of a sufficiently large feed-water filter. The Berlin Boiler Inspection Society had the following case brought under its notice: Two single-flued boilers, 4 feet 8 inches diameter, 23 feet long, flues 18 to 22 inches diameter, pressure 12 atmospheres, were used to generate steam for a 150 horse-power engine with surface condenser. The installation had only been at work since July, 1893. A considerable portion of the flue of the left boiler had collapsed. This could not be attributed to shortness of water. On examination it was found that nearly all over the boiler a fatty brown slime had been deposited, which, being placed on a red-hot iron, burst into flame. The feed-water pump got its water from a large open tank over which a small filter was placed. The condensed water was led to this filter in order to have the grease removed. Unfortunately, the arrangements were so bad that a considerable portion of the grease found its way into the boiler. A similar case was recorded by Mr. Abel at the last meeting of the Markisch Society for Testing and Inspecting Steam Boilers. Four boilers, the feed water of which was heated by the exhaust steam from a Westinghouse engine, after being in use about six weeks, were so damaged that one boiler had to be completely removed; the other three had to receive extensive repairs. An examination showed that the flues were covered with a deposit of fatty slime. An analysis of this showed that about 52 per cent. of it consisted of mineral oils and paraffine, and 27 per cent. of animal fat. It is strongly advised, therefore, that feed water shall always be filtered so as to remove any oils or grease.—Scientific American.

TRADE NOTES.

Messrs. Cassidy, Bonner & Co., of Montreal, have secured the contract order for the 18" double belt for Montreal Steam Laundry and about two thousand feet of other sizes, which has to be nearly all water-proof. They make a speciality of water-proof belting.

Mr. A. G. Sinclair, the late president of the New York Emery Co., has connected himself with the Tanite Co., of Stroudsburg, Pa., and solicits for that company the trade which in former times he controlled as salesman for the Ashland Mills, and later for the New York Emery Co., and the American Emery Mills. As Mr. Sinclair is one of the oldest salesman in the emery trade, and also a practical manufacturer of emery, he knows something as to the intrinsic quality of that article and also as to the needs of the trade. Having learned what Tanite Mills emery is by several years competition with it, he now offers it with confidence, and asks equal confidence from old customers and friends.

The pecular properties of Tanite, which fit it for a base in emery wheel manufacture, have been applied by the Tanite Co., of Stroudsburg, Pa., U. S. A., to the production of solid emery whetstones. The result has been a great practical success, though the prejudice of the trade and the novelty of the article have conspired to make the demand irregular and scattering. That this state of the trade is not due to the quality of the artificial whetstone is evidenced by the fact that in quarters where it has once been introduced the demand is regular. The Tanite whetstone is adapted to the mill pick, the carpenter's and stone cutter's chisel, the bit of the moulding mill and the axe of the woodman.

VIEWS AND INTERVIEWS.

Liquid Fuel.

From investigations made and published by Dr. C. O. Weber, it appears that in the use of liquid fuel Russia is in advance of all other countries, but there only the heavy petroleum residues, astatki, are used—for boilers, railway engines and similar purposes astatki, on combustion, producing 11,000 cal., as against 8,000 cal., obtained from first-class steam coal. In this respect, therefore, 62 pounds of astatki are equal to 100 pounds of coal. By working side by side two boilers of the same type, firing the one with coal and the other with astatki, it is found that one pound of coal evaporates eight pounds of water, and one pound of astatki thirteen pounds of water; and in regard to the important point, the volume of air passing into the furnace and the quantity of water evaporated, it appears that for 1,000 cubic feet of air consumed, coal evaporated 1.5 and astatki 2 pounds of water; consequently, besides a smaller weight of fuel an item of considerable importance in the case of marine boilers, allowing their volume to be materially reduced without lessening their steam producing capacity.

Circular Saws.

Opinion varies as to who was the inventor of the circular saw. Noting certain claims in this particular, Mr. C. A. Dunham writes a cotemporary as follows: "Allow me to say that the circular saw was invented in America in about the year 1770, by a comb maker by the name of Hartshorn, who used a common hand saw to saw out the horn between the teeth, thus forming one of those old-fashion horn combs. Finally, thinking it a rather slow process, he took what used to be called a "Bungtown copper," filed it down thinner, drilled a hole through its center, then squared the whole and cut the teeth in its outer edge, placed it upon a mandrel true and permanent, then put it into his lathe, and with the flat horn laying upon a wooden rest he sawed out his combs. From the copper he shortly cut up his back saw and converted it into circular saws. This man Hartshorn lived and died in Mansfield, Connecticut. I have been well acquainted with his descendants. He also invented the screw and lip auger, also the bit, such as are used in the brace. He was asked why he did not put in his claim for compensation long afterward when we had a patent office. His reply was that if he had done anything that was a benefit to his fellow men they were welcome to it."

The Woods of Maderia.

Maderia possesses some valuable woods. Of native trees the till is the largest and handsomest. It has shining deep green leaves. The wood is brown, marked with dark veins, and susceptible of high polish. It is in demand for furniture, boxes, walking sticks and souveniers generally. Newly cut till has a disagreeable odor, and it can be used only when well seasoned. The vinhatico is a fine tree. The wood is red and much used for furniture. It is often called Maderia mahogany. The aderna grows to the height of sixty feet, and it is used for cast staves. The wood is white. Azevindo and pernado are closely allied trees and are species of holly The wood is white and is used for inlaid work. They attain a height of fifteen to twenty feet. None of the foregoing trees are found elsewhere, except in the Canaries. The pao branco is a handsome tree, attaining a height of fifty feet. It has a hard, white wood, and is in much demand for keels of boats. It grows readily from the seed. It is not found elsewhere, except in the Canaries and Azories. The folhado is a fine tree, attaining a height of sixty feet. In summer it is full of white scented flowers. Its wood is tough and of light weight. It is of great interest to botanists, belonging to a genus of which all the species except this are American.

To test leather belting, says an exchange, cut out a small piece of the belt and place it in vinegar. If the leather has been perfectly tanned and is therefore of good quality, it will remain immersed in vinegar even for several months without any other change than becoming a little darker in color. If it is not well impregnated with tannin the fibers will promptly swell, and after a short time be converted into a gelatinous mass.

THE CAPABLE RESAWYER.

USUALLY, the man of capacity is the man at the head of affairs, when considered from the practical side strictly, says a writer in The Wood Worker. This may not always be evident upon a cursory view. Merit is ofttimes modest and retiring, and, among practical men, as well as among those in other callings, ability is often unassuming.

There is a pleasure and gratification which waits upon the successful mechanic, as he cuts away the rubbish surrounding a difficulty, which is more tuneful to an earnest worker than any self-gratification which the boaster may gather from an elaborate discourse in honor of his own accomplishments. A skilful sawyer, if backed up by energy, is in evidence on every side in any mill where resawing is regularly done. For whatever purpose the lumber may subsequently be used, its fitness is largely determined by the quality of the sawing. Other operatives are, in an appreciable degree, affected by the skill with which the resawyer handles his work. If the lumber is uniform in thickness, the product may be finished up to standard excellence; but if it is irregular, no operator, no matter how expert, can turn out perfect work.

In any line of work there is a certain fitness and accuracy of action upon the part of the mechanic which proclaims ability to the initiated. Its essence is aptness and reasonableness. Its possessor, if a resawyer, has a keen insight into the entire round of active mechanics under his charge and has obtained such mastery over the forces at his command that their action is unerringly directed in the prescribed line.

Failure to accomplish the end in view should be carefully accounted for, and not dismissed as a piece of ill-luck, which it is hoped will not occur again. The source of the difficulty located and understood, will help to insure smooth sailing under the same conditions when they arise again.

At the risk of repeating a familiar tale, some of the methods of the fraternity are worthy of being recounted. An ounce of prevention being worth several pounds of cure, it is wise to take advantage of every precaution.

When a new saw is placed on the arbor, see that it is just a fit, neither tight nor loose, and that the mandrel collars are clean. The nut on the arbor should be an easy fit, so that it will seat itself squarely against the collar when tightened up. A mark on the collars, and the brand or other mark upon the saw, will enable the sawyer to always replace them in the same relative position; though apparently a small thing, it is of importance.

The saw being hung and carefully tested and trued up, by lining the collars with thin paper where required, until it runs true within one hundredth part of an inch, it is jointed off and made perfectly round.

The dressing of the teeth is next on the list, and is a subject to which attention may be sharply directed. Between the extremes, where circular saws have been broken by the ignoramus who started them up without either setting or filing the teeth, and who forthwith returned them to the maker with his condemnation of their quality, to the man possessed of more zeal than judgment, who, strong in the opinion that you cannot have too much of a good thing, sets the teeth more than twice the thickness of the saw plate and cripples the saw before it is used, there is a golden mean which is just right for the purpose, and all sawyers should determine its limits practically. In any case, the least amount of set which can be carried successfully is the best. This is equally true whether the consideration be smoothness of cut, saving of lumber, easing the labor of the saw, or lessening the power consumed in driving the saw.

If a spring set is employed, it should be placed at the point of the tooth only, and not extended down into the plate below the base of the tooth. The latter practice is the ruination of many saws. Swaging is seldom attempted on the teeth of resaws.

The proper filing or sharpening of the teeth is an easier subject to determine when the conditions of use are set, than it is to give a description of what could be considered a model. The lumber to be sawed and its condition have much to do with the dressing of the teeth; the gauge, number of teeth and condition of the saw also have a decided bearing. Last, but by no means least, the machine and its peculiarities must be considered.

Speaking generally, the hook in the teeth may be taken tangent to a circle whose diameter is one-half that of the saw, and the bevel limited to enough to give a clearance to the inner corner of the tooth; this bevel may be divided between the front and back of the tooth. The depth of the tooth is determined by the gauge and number of teeth in the saw. It should be short for thin gauges. The gullets of the teeth should invariably be kept round by using a rat-tail file.

When the saw is in perfect running order, the machine comes in for attention. Thorough inspection of all its working parts is required, and any deviation from exact action carefully corrected. The feed-rolls, as usually constructed, wear more rapidly in the lower than in the upper journals, and do not have a uniform bearing upon the lumber; this point should be sharply looked after, as the correct lining up of the feed-rolls and their perfect action is an essential feature. The action of the reverse and stop motion of the feed-rolls is an important item. It needs to be positive and free from lost motion, as an instant's delay in reversing at a critical moment may work great damage.

In the majority of circular resawing machines the feed is not capable of variation, when set, except by changing a pulley or shifting a belt. A variable feed, controlled by a conveniently placed lever, is a positive advantage which is appreciated by all sawyers who have a thin saw to handle. When entering a hard shear knot or a shaky place in the lumber, a variable feed is a necessity. When not on the machine a makeshift is employed by using the stop motion, and, by alternately throwing the feed-rolls into and out of gear, jigging the board along a little at a time. This loses time and only meets the requirements in an imperfect manner. In other instances where the feed could be judiciously increased, it cannot be done, involving a further curtailment in the quantity of work. A disc friction feed meets the requirements in this direction, and may be found on some of the later-built machines. The guide pins are properly set just to clear the saw near the base of the teeth.

The spreaders are the subject of some debate amongst sawyers of experience. This arises principally because they cannot be conveniently adapted to the varying conditions which are presented in the different varieties and conditions of lumber brought to the saw. On some machines the side spreaders are adjustable toward and from the saw in a slight degree. If too large or too small, they must be taken off and replaced by others. A wider range of adjustment under control while the machine is in operation could be made very effective in some cases.

When resawing dry pine surfaced on two sides, six and eight-inch boards are sometimes fed into the machine one over the other; this doubling up saves considerable time.

There is danger of breaking the saw if short stuff is resawed, which leaves the rolls before the forward end passes the rear of the saw so that the taker-away can grasp the end of the board. As the board leaves the rolls it is liable to swing, throwing it across the front of the saw. A trough formed by setting up a board on each side of the saw, to hold the lumber in line, is sometimes employed.

For handling short blocks, six to twenty inches in length, two boards with a cleat along the bottom and at the back edge of each will do the trick. The short pieces are set between and all passed through the rolls at once, thus, in some instances, saving stock which would otherwise go into the kindling pile.

Skill in resawing is secured by practice and close attention; it requires good judgment and activity, a quick eye and a steady hand. A thorough knowledge of the machine, saw and lumber is essential. It requires a trained ear. It involves a knowledge of cause and effect and their relative value under varying conditions. It is best attained and retained by a sober man. Present attainments should only prepare the way for further improvement. It is within the reach of mill owners and sawyers to secure a handsome advance in the art of resawing.

Thinner-gauge saws may be used. More lumber can be sawed per hour. Smoother sawing can be done. To accomplish these desirable results, attention should be directed to the following, among other points: By stimulating the improvement of resawing machines and only using those which are substantially built; by setting them up on heavy, independent foundations; by speeding up the saw; by gradually increasing the feed; by improving the dressing of the saw teeth; by using a steady, constant power, and, not least in value, is a well-proportioned and properly-made saw.

There are four elements in determining the proportions of a resaw practically: First, the skill and judgment of the saw manufacturer; next, the experience and ability of the sawyer; third, the style and perfection of the machine, including its setting up; fourth, the kind and condition of lumber which is to be sawed.

It is a reasonable conclusion, in view of the fact that the element of skill is taken into account in estimating the ability of the sawyer, that if he is a man of capacity he is in the line of advancement. Hence he is one who views with a lively interest anything which enters practically into his round of duties. There is profit in improvement, both for the mill owner and the sawyer. If the latter is able to rank with the most proficient in his line, he may expect to earn the highest wages prevailing in his department of labor. If he can excel and improve the quality and economy of the work, he may hope to better his condition.

Expert filing has accomplished some wonderful results, and it is probable that resawing will be developed to so high a standard that the lumber will invade the domain of dressed lumber for some purposes.

TIMBER MEASURING.

IN the Contract Journal an interesting discussion has been carried on concerning methods of measuring timber, from which we print the following. One writer says: "In this age of ready reckoners and calculating tables we are too prone to take for granted the correctness of a calculation without troubling ourselves to verify its accuracy. It is true the recognized engineering tables of the present are marvels of ingenuity, and evince long and patient study to arrive at correct conclusions. I would, however, with all due deference to our engineering experts, respectfully ask how they reconcile the system of measuring round timber by the quarter-girt process with their theory of arriving at the square of the diameter of a circle? We are told that the square of the diameter of a circle × ·7854 will give us the area, and that the diameter × 3·1416 = the circumference. Now, suppose we take a log of timber 40 ft. long with an even diameter of 2 ft. To find the area, we multiply the square of the diameter—viz., 4 ft. × ·7854—which gives us an area of 3·1416 ft. This multiplied by the length (40 ft.) = 125·664 cube feet. Next, take the same log and find the circumference; thus 2 ft. × 3·1416 = 6·2832, then divide by 4 to get the side of the square, according to the quarter-girt system; this will leave 1·5708. Convert into cubic feet: 40 ft. × 1·5708 × 1·5708 = 98·6965056, being a difference of nearly 27 cubic feet in favour of the buyer, or over a quarter of the timber with which he is debited. The only conclusion at which I can arrive is that in checking the quarter-girt system, if it was checked, the diameter, and not the square of the diameter, was multiplied by ·7854 and the product accepted as the side of a square."

A. Mr. Gray writes: "I think no one will contend that the method of measuring by squaring the quarter girth and mulitplying by the length gives the exact cubical contents of a log of round timber. Supposing, for the sake of comparison, it were required to obtain the sectional area of a perfectly cylindrical stick of timber.

(1) By the most accurate method—

$$\text{Area} = \text{dia.}^2 \times 0{\cdot}7854.$$

(2) By the quarter-girth process reduced to the same form as (1)—

$$\text{Area} = \text{dia.}^2 \times 0{\cdot}61685 \text{ (or } 0{\cdot}7854^2).$$

The last will be found to be about a mean between the actual area of the circle and that of an inscribed square, which is

$$\text{Area} = \text{dia.}^2 \times 0{\cdot}5 \text{ (or } 0{\cdot}707107^2).$$

In fact, the method, as I take it, is to allow the buyer for the waste in slabbing and reducing to the square, and for irregularities in the shape of the logs."

MORE ABOUT LEAKS.

THERE is another thing in connection with sawing lumber for the different uses. How many men we see, says a writer in Wood Worker, that take an order, go to a pile of lumber, and take as much as they require, just as it comes, where, by laying aside a few boards, they could have taken boards that would either make one piece of the size wanted, or two, and leave practically nothing for waste? This is apt to be the case in small orders as well as in large ones where the stock is sent in.

I recall to mind a case in particular where an order was given for a certain amount of stock, to be worked five inches wide. The lumber was sent in just as it run, and after the proper number of lineal feet was cut there was over 200 feet (board measure) of strips left, all the way from three to five inches wide, to be thrown into the waste strips, and the full amount of lumber charged up to the job. Not a great while before or after this job, a sawyer was given an order for the same amount, and went after the stock himself. He chose such lumber as would work to advantage, and after getting out the order had a few small strips from one-half-inch to one and one-half inches wide, making less than 250 feet of stock less than it took for the other order, and perhaps took ten minutes longer to get the stock, as he probably handled a little lumber that had to be put back on the pile after he had taken what he wanted.

So I would say to men who do the sawing, work your stock so as to get all there is in it, and save making waste strips, for although they may be used for molding, there will be plenty of them anyway. And I would say to foremen and superintendents, watch your men in this particular and teach them to work to advantage. Then when you have a man that works for the interest of the concern, use him well, pay him well and he will be apt to stand by you.

Right here let me say that every concern doing any great amount of work in house trim, furniture or sash, door and blind work, should have one good man who thoroughly understands the business, to pick out stock for the different jobs, so that the material can be placed right at the saw and the sawyer thus be able to keep his machine going nearly all the time; instead of, as I have seen in some shops, having two or three sawyers, and at least one of them with his helper is out in the yard hunting up stock, and as he doesn't always know just where to look for certain kinds of stock, it takes him one-half longer than it would a man who attended to that part of the work and nothing else.

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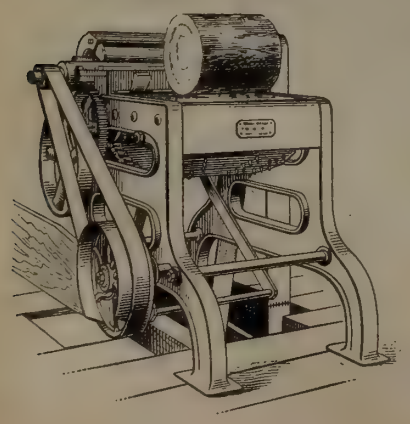

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Yours truly, McRAE & CO.

BRANTFORD, March 16th, 1894.

J. D. McEACHREN, ESQ., Galt.

DEAR SIR,—In reply to your favor of the 15th inst., we might state that the Hot Blast Heating System erected by you for our new factory, and driven by an independent engine, is giving us the best of satisfaction. We prefer it to any direct system, either radiators or piping, and has proved very economical. We have had no trouble in keeping the temperature at 70° at zero weather, with only 2 lbs. pressure on the heater. The heat is evenly distributed in the different flats and is under perfect control, and can be raised to the above mentioned temperature in about 20 minutes, the amount of space heated being 135,000 cubic feet.

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Yours truly, WM. PATTERSON & SON.

J. D. McEACHREN GALT, ONT.

AMERICAN OAK LUMBER.

TIMBER, of London, Eng., discourses as follows on American oak lumber. The criticism is rather unfavorable to Canada, but will not be without its value on this account. Says our contemporary :

A conspicuous development and important feature of the last quarter of the nineteenth century is to be observed in the increased importations of United States oak in contradistinction to, and competition with, that of purely Canadian wood. To those able to carry their minds back some twenty or thirty years, the metamorphosis will not only be apparent, but almost complete. During the sixties and seventies it was no uncommon sight, in the busy months of July, August, and September, to find fifteen or twenty Quebec sailers all discharging parcels of the primest Canadian white oak logs, the bulk of which were as promptly secured by the leading rolling-stock makers ex quay. At this period it was also a regular occurrence for the principal consumers to place orders with individual importing firms to the extent of 100 to 150,000 cubic feet. The timber quays and wharves of several of the larger British ports were often covered with the best and freshest products of the far-famed Canadian forests, which then knew not, nor feared, rivalry in any shape or form. Notwithstanding this state still obtains in a reduced form, there can be but little doubt that the old-time supremacy of the Canadian log trade has gone, and will never return. Why the exigencies of progress have compelled a departure so radical, is an ethical point upon which time and space forbid us to dwell. What actually remains of a former huge consumption in the direction named, is confined to the relatively small demands of a few railway companies, who still believe it to be to their greater advantage to continue the system of themselves cutting up Canadian logs as required. This applies more strictly to those companies who not only repair, but build, the whole of their new plant, and who have learnt by long experience that length of life, rather than cheapness of material, is the real factor in the cost of permanent rolling stock. That Canadian wood still offers the better intrinsic value, with respect either to durability or expense, for railway coach and wagon purposes in particular, cannot be gainsaid. Moreover, it will be found impossible for other smaller requisites to exchange its reliability and tensile strength for that of a modern competitor, whose defects as well as merits we do not propose to overlook. What, then, have been the causes of the quiet, but nevertheless far-reaching revolution referred to? Cheapness, adaptability and economical machinery probably best characterize a reversal unique in the annals of commercial enterprise. A glance at the evolution of American forestry in general will show that the Canadian lumberman, together with his *via media*, the Quebec shipper, has virtually done nothing progressive during the larger portion of one hundred years, beyond cutting down the most suitable woods in the Dominion, hewing them into square or waney logs and rafting them for export to this country minus the cull pieces.

While it is true that most of the American pioneers in the oak plank industry, notably Messrs. A. K. Brown, J. Donaldson, and Edward Alcot, have practically become extinct operators, an army of small men have rushed into the fray, some, it is to be feared, not wisely, but too well. So keen have the latest school of exporters become, that for months past they have given the English buyer the most hopeless hostages to fortune in their anxiety to realize their consignments on any terms. As previously pointed out in our columns, this has eventuated in serious depreciation and confusion, so much so that, unless a strong reformatory effort be quickly made by a majority of responsible shippers, irreparable injury must ensue. Is it not patent to all that as the edge of civilization becomes sharper, exactness and thoroughness are of necessity the great essentials to permanent success? If so, has not the time come when the technical details of foreign markets deserve enhanced attention? It is plain to the English trade that of the numerous varieties of United States oak, at least one half are unsuitable for conversion, and can never therefore be remunerative to shippers. Many recent parcels have consisted of poor, soft, red or brown wood, cut from low lying or swampy districts, and next to useless for substantial purposes. Of the endless other consignments, even of those sawed from the tougher and better grown white oak, there has been an utter lack of proper cutting and grading. This applies not merely to wagon scantling but to coffin planks, in which a big demand has sprung up, and where the need of careful quality and precise make is absolute.

The total import of United States oak into Great Britain is not much below 3,000,000 cubic feet, annually, and as its further increase undoubtedly lies in the path of sawed planks and boards, is it not opportune for American lumbermen generally to get close into touch with the stricter requirements of English buyers.

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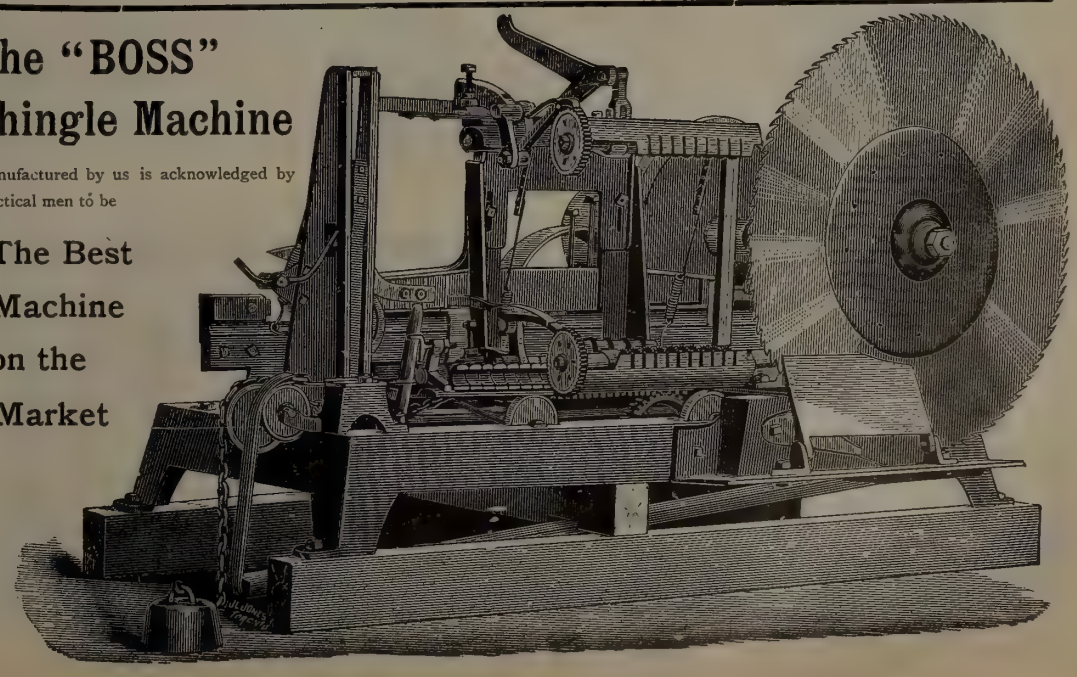

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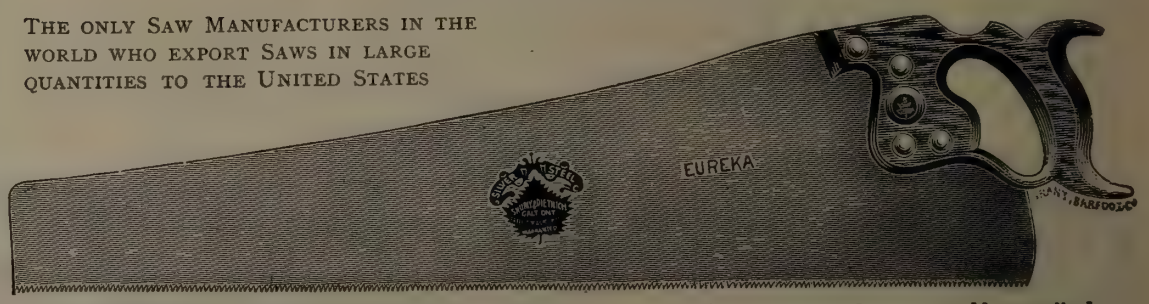

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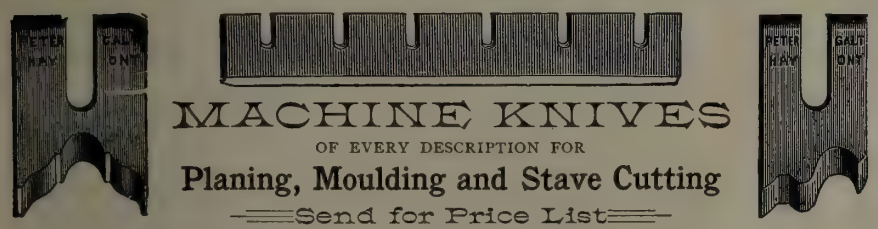

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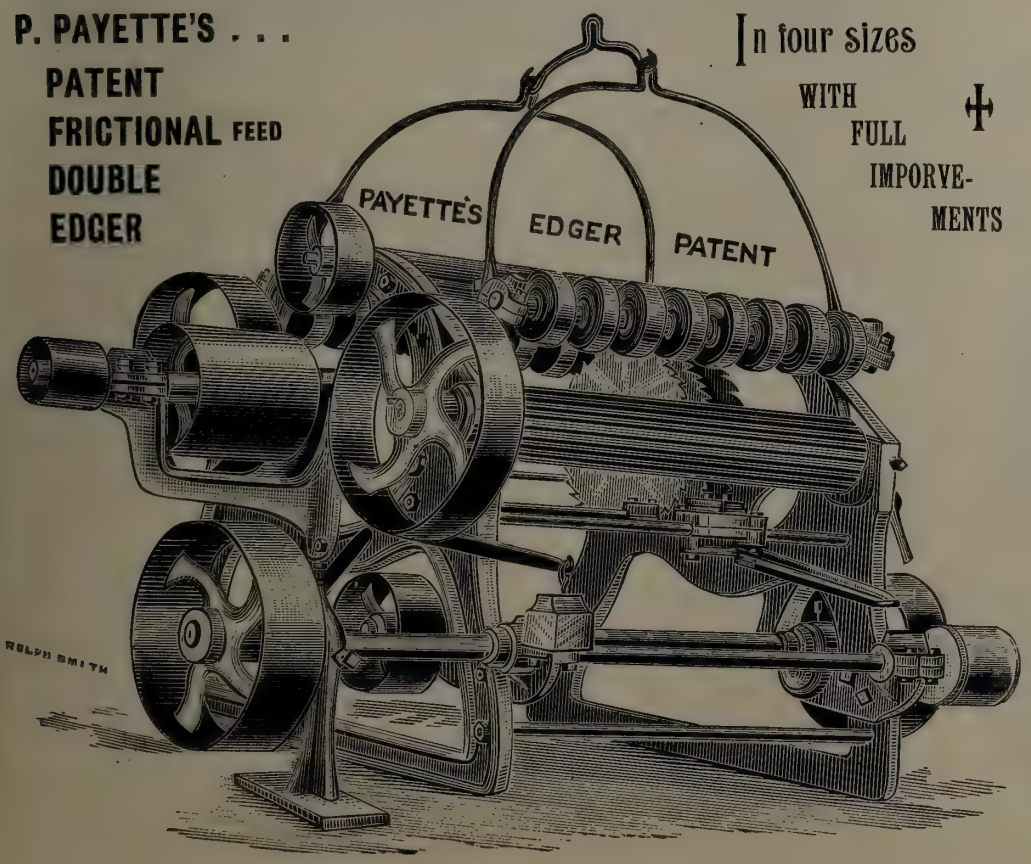

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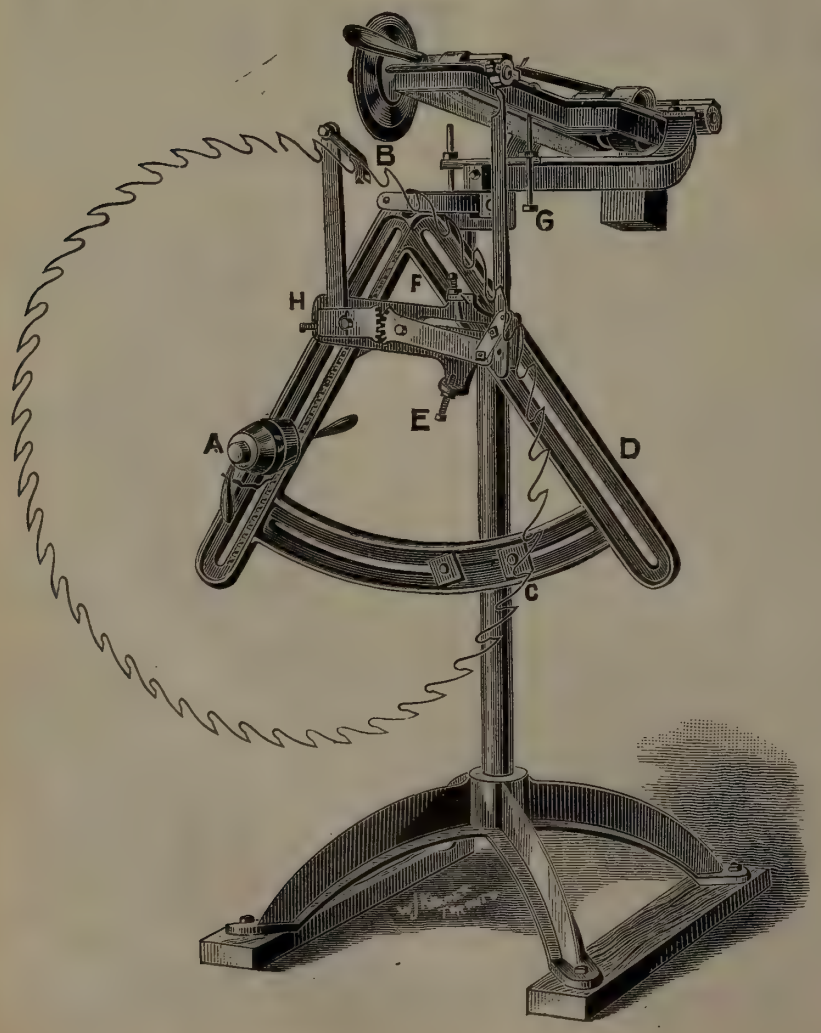
P. S.—The opening of the Ottawa, Arnprior and Parry Sound Railway, Ottawa to the Georgian Bay, offers to the manufacturer and purchaser a new district not heretofore reached by any other line.

The XXX Saw Gummer and Sharpener



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FOR VARIETY, CAPACITY OR QUALITY OF WORK

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SIMPLICITY, DURABILITY, CHEAPNESS

Will take saws from 6 inches to 6 feet diameter; sets the saw forward one tooth at a time automatically; sharpens any saw (rip or crosscut) perfectly, giving the teeth any desired pitch or bevel, and making all the teeth exactly alike. Will sharpen 20 teeth in an ordinary saw mill in one minute, or 100 teeth in a shingle saw in four or five minutes. The cut shows outline of mill saw 54-inch diameter.

GILMOUR & CO.
Lumber Manufacturers and Dealers

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Dear Sir,—Your Patent Saw Sharpener is giving us good satisfaction. We average about 100,000 shingles per day, and sharpen the saws for both automatic and hand-feed machines with your Sharpener. As it keeps the teeth all perfectly uniform it must be easier on the machine and sawyer too. It causes also a great saving in files. We now use only about one ten-inch file per week. Before putting in your machine we used about six per week. As regards your Improved "XXX" Shingle Packer—it works first-rate and is the only machine we could get that would press tight enough. We consider it the best we ever had.

Yours truly,
GILMOUR & CO.

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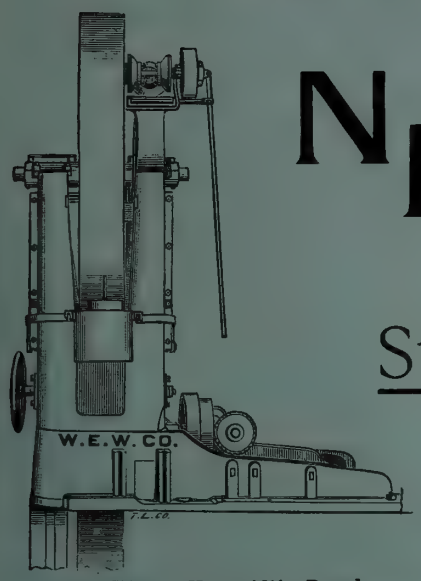
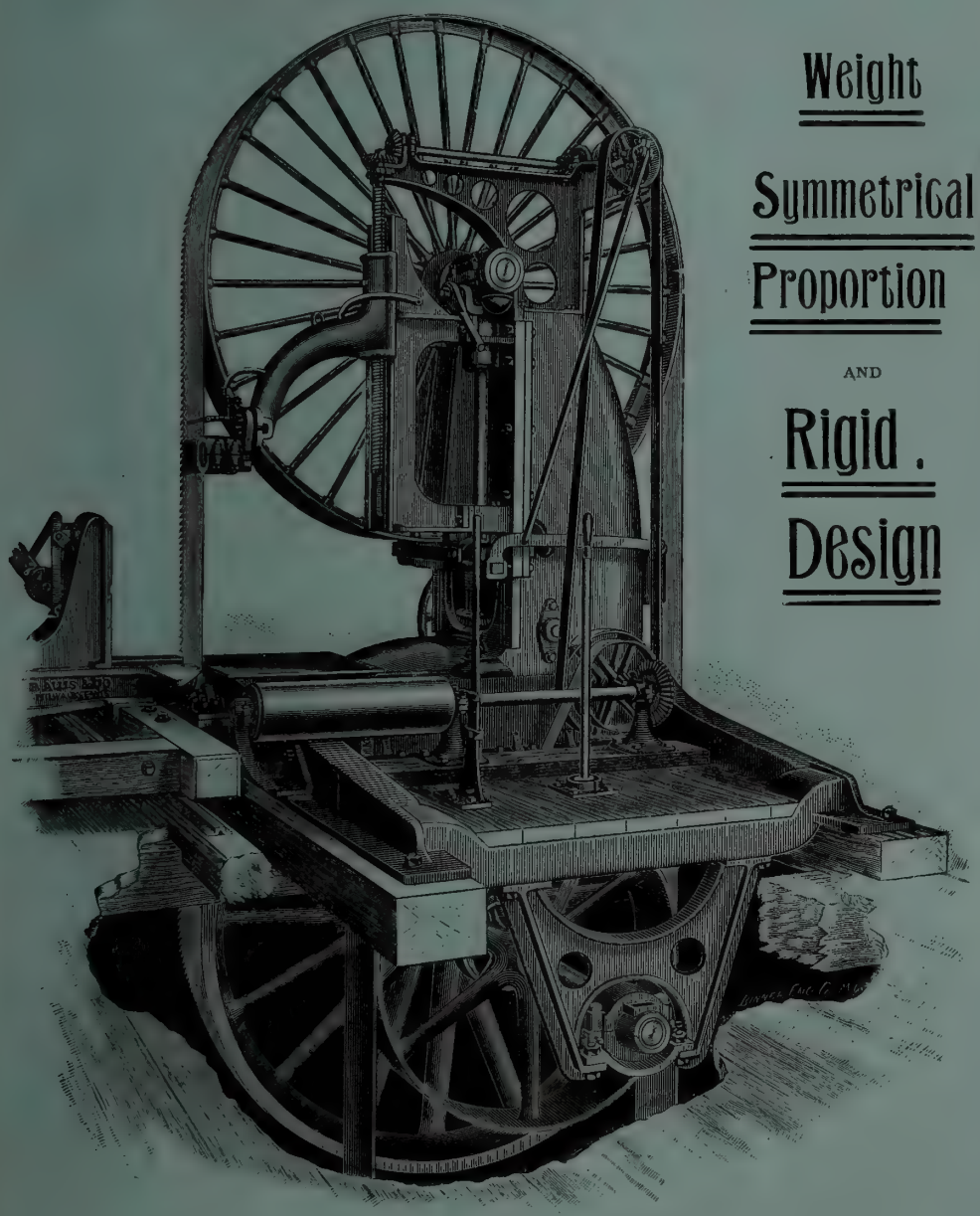
View—it's all the same—from
...every point the...

NEW ALLIS

Stands . .
Unrivalled
. . FOR . .

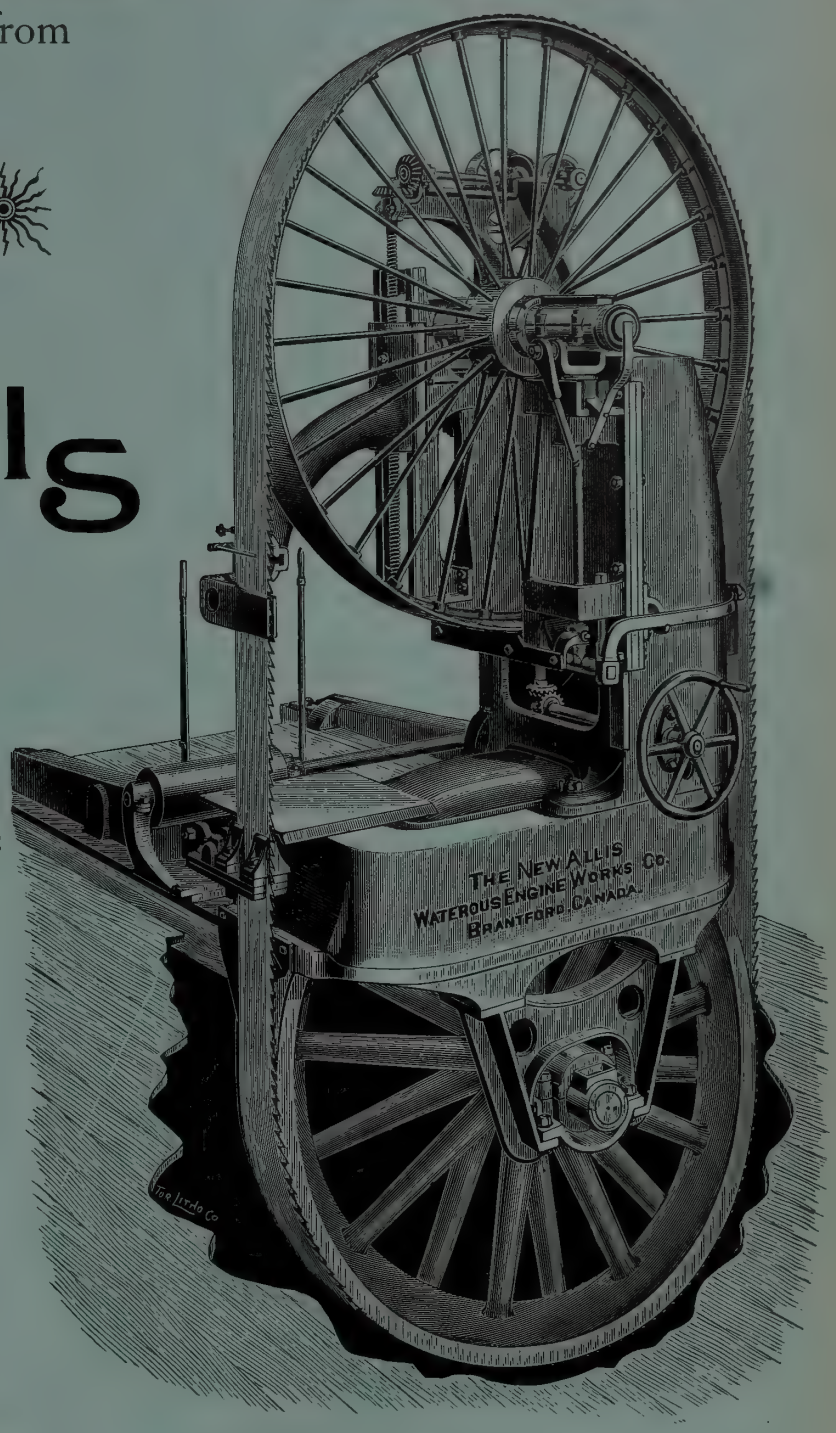


Rear View—New Allis Band.



Back View—New Allis Band.

Weight
Symmetrical
Proportion
AND
Rigid.
Design



Front View—New Allis Band.

Only Band with upper wheel in center of shaft and column.

Only Band with both wheels hung inside of frame.

Patent safety lower wheel removes all casting strain on wheel.

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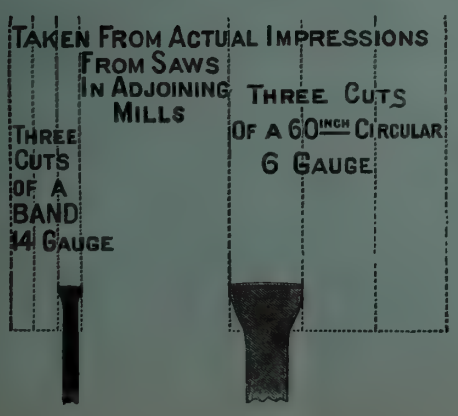

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WOOD-WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

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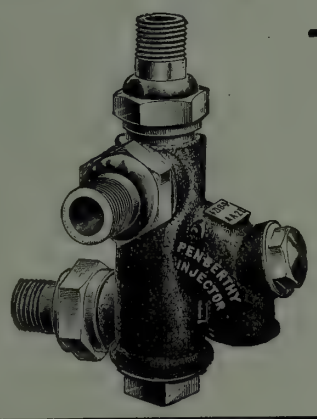

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Should be in every Lumber Mill

PENBERTHY JET PUMPS.. WATER GAGES OIL CUPS.. ARE THE BEST

85,000 Engineers have used it, and declare it unequalled as a Boiler Feeder.

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DUNDAS - ONTARIO.

Any one desiring a good Second-Hand Tool, should write us for prices. Have several we will dispose of at a bargain.

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MANUFACTURERS OF

LEATHER BELTING AND LACE LEATHER

Danville, Que.

What do you do when the Band Saws Break?

Why, Solder them, of course

We supply a tough quality of silver solder rolled thin for this work. Price, $1.00 per oz. Troy.

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Manufacturing Jewelers

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SHINGLE SAWS A SPECIALTY

..AND..

THE "BURNS" CROSS-CUT SAW HANDLE

The Strongest, Most Durable and Easily Adjusted Handle ever invented.

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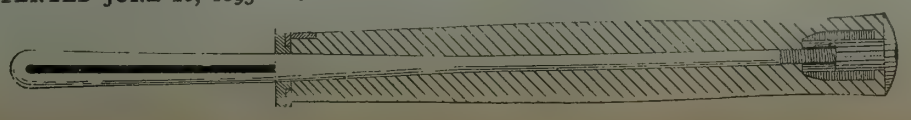
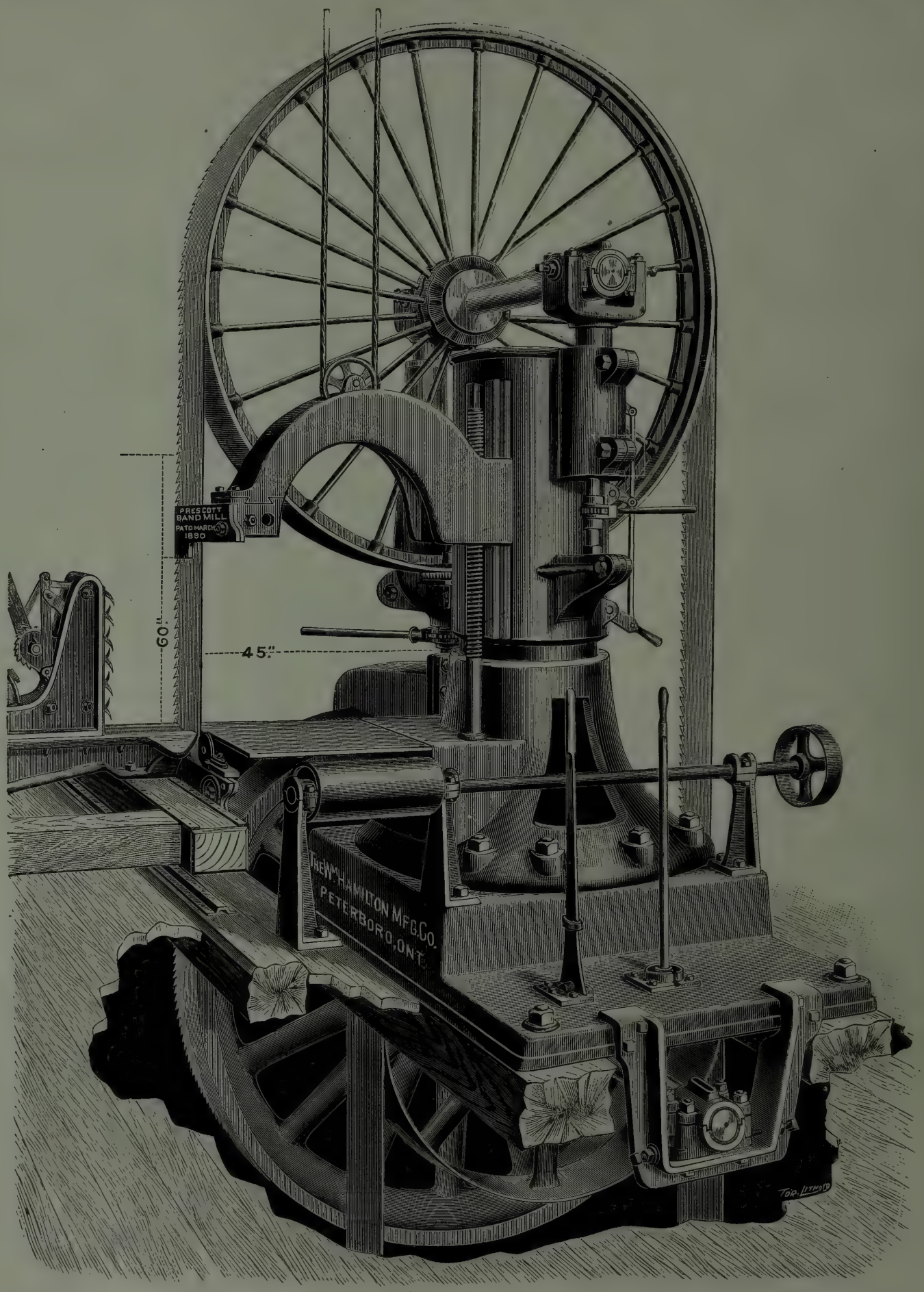


SAWS

THE NEW PRESCOTT

Band Saw Mill



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THE CANADA LUMBERMAN

VOLUME XVI. NUMBER 4. | TORONTO, ONT., APRIL, 1895 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

CHARACTER SKETCH.

ALEXANDER McARTHUR.

"He put his conscience into every stone that he laid."—Hugh Miller.

WHAT the celebrated Scottish stone-mason and man of much learning—Hugh Miller—said of a certain individual in his own line of trade could well have been said of the late Alexander McArthur, president of the McArthur Bros. Co., Ltd. The deceased had reached a high degree of success in the business he followed, and he owed this largely to the fact that into everything he undertook he put conscience. Quiet and unassuming to all outward appearance, Mr. McArthur was at the same time a tireless worker, a man of indomitable will and wonderful energy. The great business he built up owes its pre-eminent position of to-day to the fact that these elements played a foremost part in his career.

Alexander McArthur was born at Williamstown, in the county of Glengarry, on 11th of April, 1839, and was, therefore, in his 54th year when death so suddenly overtook him a few weeks ago. He came of a typical Scotch-Canadian family. Glengarry, though separated far by distance from the native hills of Scotland, yet, so thoroughly reflects Scottish sentiment and character, that the man who is born there and lives there for any length of time is quickly impregnated with the characteristics common to the Scottish race. The Scottish quality of endurance, and working out a fixed plan determinedly, was a strong element in the character of Mr. McArthur.

When about 24 years of age Mr. McArthur removed from his eastern home to Toronto, and continuously during these 30 years he remained one of the most respected residents of the city of his adoption. Lumbering was his business, and he gave to it his best thought and energy. He showed himself possessed of large business foresight, and he had not been engaged many years in the lumber trades before he realized that, if not then, at least, not far distant in the future, timber would be an asset that would bring a large return to any man who owned it. The McArthur Bros. Co. have always been owners of extensive timber limits and out of these they have made a great deal of money. For many years they have given particular attention to the British trade in lumber, and their principle operations to-day are in the United Kingdom. At Gracechurch st., London, Eng., they have had a permanent office for some years under capable management. They are also large operators in other parts of the United Kingdom. Among Michigan lumbermen the firm of McArthur Bros. has for years been well known, and Mr. Peter McArthur, a member of the company, has for 20 years been a resident of that State, at present making his home in Detroit.

In a business sense Mr. McArthur always recognized the value of a good name. He was careful to carry this himself in person. He was equally exacting in seeing that a good name should be attached to all his transactions, and the stamp of A in a circle when seen on a piece of Canadian timber was one of the best recommendations that could be given of the quality of that timber, for the McArthur Bros. Co. would place their name on nothing that was not reliable.

The Marquis de Spinola asking Sir Horace Vere what his brother died of, Sir Horace replied, "He died, sir, of having nothing to do." "Alas," said Spinola, "that is enough to kill any general of us all." The writer, speaking of Mr. McArthur to a lumber friend a short time after his death, remarked on the faculty deceased had for work. "Practically he was at his desk up to the last," was the response. Of course, he died away from home, whither he had gone to seek health, impaired somewhat, as a result of close application to business, but when at home he was ever at it, and always at it. Naturally he was a man of strong and vigorous physique and of active habits, and could have had little thought that his end was so near.

Being a limited liability company the death of its late president will make no difference in the management and plans of the McArthur Bros. Co. Mr. Peter McArthur, of Detroit, succeeds his brother as president of the company, and Toronto continues the headquarters, with branches in Montreal, Quebec, Detroit, London, Eng., and elsewhere in the United Kingdom, all under capable management. Besides the brother Peter, the deceased leaves behind him an elder brother, Mr. Archibald McArthur, who still resides at the old homestead in Glengarry county, and there conducts a sawmill business. Another brother is Dr. R. D. McArthur, a successful physician of Chicago. Of his own family there remains a widow and five children, of whom, quoting the words of Timber, "In later years they will never want friends while Mr. McArthur is remembered, and will have the

THE LATE ALEXANDER MCARTHUR.

inheritance of a name unblemished and unquestioned business integrity and fair dealing."

Mr. McArthur was interested, to no small extent, in mining operations in Canada, and here, as in everything that he touched, success met him.

GETTING OUT TEAKWOOD LOGS.

WE take the following information in regard to the teak industry in Siam from a paper read before the Indian Section of Arts by Mr. Charles Stuart Leckie, who for the last fifteen years has been a resident of Siam in the interest of the Borneo Company. Mr. Leckie says: When we come to the next important industry of Siam, the teak trade, we have a trade almost entirely British. In the northern towns of Chiengmai and Lakon one meets with British houses established in business, directing the working of the teak forests; one meets with British Burmans and Shans in numbers working the forest contracts, and when the teak has been passed down to Bangkok you find three steam mills belonging to British firms, and only one worked by a Chinese-Siamese firm. There are four smaller establishments with some machinery—one an Anglo-French firm, another Austrian-French, a Dutch and an Italian—but those four firms together do but a very small import business. In these mills you again find only British machinery. As the export of teak from Siam is almost entirely confined to Europe (the cargoes being sold through London), or Bombay or Hongkong, one may speak of the teak trade of Siam as a British trade, carried on by British capital and British management. London merchants have put down large sums of money in the north of Siam in this teak industry, for the business entails the employment of a large capital. There are no German or French firms connected with the northern teak forest works.

Ten years ago the British trade in teak was confined to the Bangkok district, and the only means open to the Bangkok merchants of securing teak was by buying rafts of rough timber from the natives as they reached Bangkok, or by buying hand-sawn squared teak from the Chinese hand-sawyers in Bangkok. Nowadays the British firms work the wood themselves out of the forests, and pass it down the rivers to their Bangkok mills.

A teak forest is generally supposed to be something entirely different from what it actually is. One can go up the bed of a stream flowing into one of the northern rivers, and you may walk miles without seeing a single teak tree. You meet with paddy-fields, dense jungle, open jungle, mountain gorges, splendid scenery, but the thing you meet with seldom enough, when looking for it keenly, is a teak tree. The teak grows here and there on the sides of the hills which spread for miles from the stream, and although in places it grows in rich patches, it was never my fortune to get into a really rich patch.

The method of the work is tedious. A forester sends his elephants, in care of their mahouts, into the forest, for which his employers have a lease from the government or the working rights from the holder of the lease, and drags, during the rainy season, as many logs as his elephants can manage to the bank of the stream. It is quite a usual thing for the teak to be dragged four or five miles to the stream, and it is a good forest which can show a record of fifty logs being worked by one elephant in one season.

After passing through the rapids, which descend to the lowlands extending from the sea to the foot of the northern plateaus, the wood is caught by rafters and tied up into rafts of one hundred and fifty on the Me Ping, or one hundred logs in the Eastern River, and sent on down the four hundred miles or so to Bangkok in care of the rafters. The rafting waters are from June to November. The work is slow, for the average time used in delivering a teak tree into Bangkok from its stump where it was felled is about three years, although the distance actually covered is not over six hundred miles.

The Burmese and Shan foresters who work for the British firms are all British subjects, and, as the trade is carried on for the most part through them, the teak trade in the forests is really a British trade. The owners of the forest leases, with but few exceptions, are the Laos chiefs and princes, who receive a royalty on every log worked out of a forest, and the government collects a second duty before the wood enters Bangkok. The labor is mostly supplied by the native hill tribes, Kamouks and Kariengs. Kamouks come to teak workings from across the Mekong, and, as they are now being cared for by the paternal government of France, it is possible our labor problem in the teak forests may become difficult.

The annual export of teak from Siam to Europe, Bombay and Hongkong is likely to increase as the northern forest work gets better organized and the elephant force employed increases. The annual supply of rough logs into Bangkok is so entirely dependent on the rainfall for the year that there must always be the great variation in quantity shown by the export lists of the past six or eight years.

Timber, London, Eng · "Pitch pine timber has perhaps never been sold at such low figures. The prevailing spot prices have effectually stopped all c. i. f. transactions."

VALUE OF FOREST TREES.

By Their Reproduction and Care.

A LECTURE of much importance to the people of Canada was delivered by Mr. H. G. Joly de Lothbiniere in the Somerville course, in the Natural History Society's building, Montreal, Que., a fortnight ago, the subject being : "The Value of Forest Trees, Individually and Collectively."

Hon. J. K. Ward, one of the best known lumbermen of Quebec, and himself a careful student of forestry, occupied the chair.

The Chairman in introducing Mr. Joly, said : "I deem it an honor to have this opportunity of introducing a gentleman whose name and character are as familiar as household words to all of Canada, and far beyond it, not only for his public services, but as a scientist in the

Mr. H. G. Joly de Lothbiniere.

art of arboriculture and forestry. It would be folly on my part to attempt to eulogize one so able and willing to tell us how the woods indigenious to our country can be propagated, conserved and made to beautify the land. He can also tell us the commercial value of the product of the forest, how it supplies the material that furnishes employment to a great number of men, representing a large population, and making up the greatest industry in our country, except agriculture ; how the lumberman with his axe carves his way into the woods, making his road as he goes along, building his shanty and stables, cutting down the giants of the forest to be converted into timber and sawlogs, hauling them to the lakes and streams, down which they are floated in the spring, followed by the hardy driver, cant-dog in hand, until they reach the mills, where they are made into boards, planks and deals ; then the artisans, mechanics and laborers, who build and man the mills, steamboats, ships and barges, to freight all this material to its many points of distribution, to the hundreds of workshops where it is manipulated into every conceivable article from a piano frame to the tiny match. Then as to the utility of the forest, though it may not attract the rain or influence its downfall, there can be no doubt as to its regulating the flowing of the waters by holding them back in the glades and swamps, sheltering the land from the fierce rays of the sun, preventing evaporation to a great extent, and thus equalizing the flow of water, preventing oftentimes damaging floods and dried-up streams."

THE LECTURE.

As to the value of forest trees individually, Mr. Joly said, timber for use as fuel, and for the construction of houses, ships, etc., could easily be replaced by coal and iron, but nothing could displace the forests for the laying up and dispensing gradually the store of water necessary to the fertility of the land, upon which depended the life of nations. Many instances, he said, had been found on the old continent of the fatal results following the destruction of the forest, once fertile land, being transformed into wildernesses.

In Algeria, Southern France, Colorado, Idaho and the West, Mr. Joly continued, forests have been planted more for the sake of water and irrigation than for the timber they will yield. The forest acts as a screen against the drying winds, which suck the moisture of the land. It is even claimed that they increase the rainfall. Their temperature being lower than that of the open country, it is said that they cause the vapor in suspension to condense and descend in the form of rain.

How are we provided with forest trees in our old settlements ? Many lands have been denuded of their natural forests, and the scarcity is now seriously felt by the farmers.

There is a very simple remedy : plant trees. It is not easy to procure young forest trees, worth planting. The trees raised in the nurseries can generally be relied upon, and they are sold at moderate prices, but, owing to distance, want of easy communications, delays in forwarding and delivering (which are often cause that the trees, when received, are unfit for planting) and to the cost, however moderate, it is very seldom that the farmers have recourse to the nurseryman for the forest trees they intend planting (I do not allude, here, to fruit trees).

They generally go to the woods for them, often a distance of several miles. Those who have tried it know how hard it is to find such trees as they want, how much time and trouble it takes to dig them up, and how im possible it is, even with the greatest care, to avoid wounding and tearing off the roots. They know, too, how little satisfaction they have generally derived from all that work. Trees taken out of the forest and transplanted on the open are placed at a great disadvantage ; they fail so often that people get discouraged, and many give up tree planting, as too difficult an undertaking.

Nothing is easier ; in the proper season, with soil fit to grow the kind of tree you wish to plant, if the tree is in good order, with a little care you ought to succeed. But the trees you dig out of the woods are seldom in good order, and they cost you a high price in time, if not in money. If you wish for good trees, in great number, safe to grow, without trouble nor expense, procure them from a nursery, but let that nursery be your own.

Any farmer can start, in the corner of his garden, a nursery of forest trees, by sowing the seeds of the trees he wishes to plant. With a little observation, it is easy to find out when the seed is ripe ; for instance, towards the end of June, beginning of July, the seed of the elm and of the soft maple (acer rubrum) is ripe ; by sowing it at once it will sprout and the little trees grow nearly one foot in height this summer.

The maple, oak, ash, birch, butternut, &c., ripen their seed in autumn ; better sow it at once than winter it in the house. Sow in straight rows, with a garden line, leaving a picket at each end to guide you when weeding Sow, say half an inch deep, for the maple seed, and for other kinds, in proportion to the size of the seed, two or three inches deep, for butternut and walnut. Thin after the first year, if needed, and transplant further on the little trees removed in thinning. After three or four years, more or less, (the time will depend on the rate of growth of each kind of tree) plant your young trees where they are destined to stay. In our cold climate it has been established beyond a doubt that the spring is the proper season for planting. It is always a great trial for a tree to be transplanted, but much less so in the spring, when everything is in its favor, than in the fall, when everything is against it. Choose a cloudy or rainy day in the spring, and, without leaving home, with no trouble, without breaking any roots, you will take up and plant at once, without allowing the roots time to dry, one hundred young trees, certain to grow in less time than it would take you to go the woods and dig up ten trees, with a poor chance of their taking root and living.

These young trees will cost you nothing ; your children will soon learn how to weed and take care of them, especially if you set them the example. Our own children when quite young, took pleasure in sowing acorns and watching the growth of the young oaks as they came up. By sowing, you can procure, with no expense, any number of young trees, and rewood, by degrees, all the land which is not fit for cultivation and ought to have been kept as wood land.

There is a general prejudice against growing forest trees from seed ; people think it takes too long. It is a a great mistake, as will be found on trial. Here Mr. Joly showed samples of black walnut, soft maple, oak and elm, grown by him from seed ; these samples consisting of trees one year, two years and three years old, showing the great progress of growth from one year to the next.

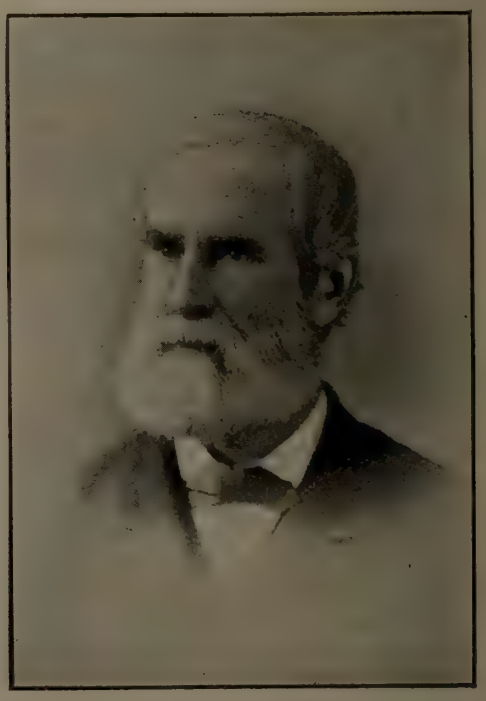
But, do not forget to fence carefully your nursery and your plantations, so as to keep out the cattle. No use planting trees without fences, the cattle will destroy everything.

In many cases nature will spare you the trouble of sowing where the ground is favorable, in July and August, along the ditches, the roads, the fences, on the moss on barren patches ; wherever there is a little dampness in the neighborhood of the elms and soft maples, you will find hundreds of young elms and maples, just sprung from the seed fallen from those trees ; plant them in your nursery ; try it this summer ; the seed of the elm is so minute and delicate that it is better to pick up those young seedlings than to attempt sowing the seed.

In the maple groves the ground is covered with a regular carpet of young maple seedlings. You can pull them up easily by hand in the fall or early spring, when the ground is still damp, without breaking any of the small roots. Plant them at once in your nursery.

It is very difficult to collect pine and spruce seed. Early in the spring, when the ground is still soft and spongy, in the pastures, near where those trees grow, you will see a number of young pines and spruces that you can pull up very easily ; plant them at once, for that kind of tree you must shelter them from the sun until they are well rooted.

Whenever the ground of a garden has been dug up and worked in the fall, if there are any maple or ash growing in the neighborhood, it will be noticed that the ground, in the spring, is more or less covered with maple



Hon. J. K. Ward.

and ash seedlings, grown from the seeds fallen from those trees. It takes a very little time to pull up and replant hundreds of them, and scarcely any of these will fail. Of course they must not be pulled up too roughly or it may damage the delicate roots ; if the ground is too hard, use a trowel. As much as practicable, they ought to pulled up when they have only got their two first leaves, which are easily known by their peculiar shape, long and narrow, from one inch and a half to two inches long and about a quarter of an inch wide.

For several years past I have been seeking the cheapest and, at the same time, most effective mode of restoring the woods, where they have been destroyed. Many of our old settlements are completely denuded of trees, and I can recommend this simple mode as the best, from my personal experience. Let those who suffer for the want of fuel, of timber for building, of trees for shelter and ornament ; and those who would look to have a sugar maple grove at their door ; let them start their own nurseries this very next summer. It will entail no expenditure of money, take but very little time and repay them bountifully.

Mr. Joly, continuing, alluded to the number of black

walnuts (over ten thousand) sown in the district of Montreal within the last two years. He based his calculation on the number of bushels imported by Mr. Wm. Evans, seedsman, of Montreal, who has taken much interest in the matter. Mr. Joly said he felt a sense of responsibility toward those who had made the experiment at his request, and would tell them all he had learned on the subject by eighteen years personal experience. He showed samples of black walnut fifteen years old, for which he had been awarded a medal at the Chicago Columbian Exposition. Though he had not yet received that medal, the mere fact that our black walnut was so much appreciated by competent foreign judges ought to be an encouragement for us. Those trees had begun to yield nuts when twelve years old, and he showed young trees grown from these nuts, one, two and three years old, of a fine vigorous growth.

Then he came to the difficulty experienced in transplanting the black walnut, owing principally to the great length and depth of the tap root; showed several samples illustrating the way in which the natural downward direction of the tap root could be altered, by placing a flat stone or other obstacle under the nut when sown, so as to send the tap root horizontally near the surface, instead of letting it run down perpendicularly to a great depth. He preferred, however, cutting the tap root about ten inches or a foot under ground, with a good neat cut, removing every wounded part of the smaller roots, and he exhibited several samples, showing how rapidly a number of new roots had formed all around the end of the old root when that end had been carefully trimmed. He then alluded to the fact that the head of the black walnut very often dried up after transplanting, but this was no loss, as, by allowing one of the buds lower down on the stem to develop itself, and removing the next year the dead wood above it, one secured a fine straight leader; in fact, he often removed the head when growing, if he was not satisfied with the shape, thereby improving the tree.

Of course, it was better to avoid transplanting the black walnut, by sowing the nut at once where the tree was destined to grow, but for a large plantation that was not always practicable, as it required the previous preparation of a large extent of ground, and much more trouble in weeding and looking after a number of little seedlings scattered over that extensive ground than if the same number of seedlings had been growing close to one another on the limited surface of the seed bed. Furthermore, as only a certain portion of the nuts sprouted, one could not rely on a regular plantation, when sowing them at once where they were meant to remain. It would be a good precaution in the latter case to sow three or four nuts in each hole. Beware of squirrels; they are very fond of the nuts and are guided by a wonderful instinct in looking for them in the ground. They never make a mistake, do not fumble to the right or left, but go straight to the spot where the nut is hidden in the ground.

As the burl, that part of the tree which is found underground, is of the greatest value, selling by the pound weight when cut up in thin strips for veneering, it is a question whether transplanting, though not affecting the ultimate success of the remainder of the tree, may not interfere with the full development of the burl. Time will show. He drew attention to the beautiful tracings and patterns on the burls of the black walnuts he had exhibited at Chicago.

As for the severe cold of our Canadian winter, Mr. Joly's experience tends to show that it affects those parts of the black walnut, the roots, which one would think safely sheltered under ground, much more seriously than the stem and branches, which stand out boldly and with no protection, exposed to the icy breath of the north winds. As the black walnut grows very rapidly, sometimes it does not mature the whole of the summer's growth, and a few inches at the end of the new branches may get burnt by the frost, but the damage is scarcely noticeable.

On the other side, one look at the tap root, which is much thicker than the stem, shows how soft and spongy its composition is when young, and how much water it can absorb and retain. In exposed places, where the wind sweeps away the snow as it falls, and leaves the ground completely bare, the first great frosts congeal suddenly the water in the roots, and cause them to expand and burst the bark that covers them, separating it completely from the roots and leaving them bare. This kills the young tree as assuredly as if the whole bark was stripped off the stem. It took some time before he could account for the death of many promising young trees, as he was looking for the cause above ground; the moment he looked under ground, and saw the roots stripped of their bark, the remedy suggested itself at once—to retain the snow as it fell at the foot of the trees, by preventing the wind from sweeping it away. Either a fence or hedge or some stones, or any other obstacle answers the purpose equally as well. Since then he has not lost any walnut trees from that cause.

The last point was the care of trees after planting them. In the open, along the roads, avenues, and in isolated groups, all trees, except fir trees, grown solely for ornamental purposes, require pruning. Planted in close order and in large numbers, after a few years' growth they prune themselves. Mr. Joly alluded to the careless habit of pruning observable in so many places, the leaving of stumps too long to be covered by the growing bark before they began to rot. He illustrated his meaning with samples, showing the inevitable progress of decay from the time when a branch had been removed, leaving a stump, until that stump began to decay; then he showed that decay, penetrating gradually into the stem, reaching the heart and finally killing the tree.

Close pruning was the only safe pruning. He showed eight samples of good pruning: In the first the branch (a large one several inches in diameter) had been cut as close to the tree as it was possible to cut it; in the second, the bark was beginning to form like lips round the wound, and each successive sample showed the drawing closer and closer together of these lips, and the gradual healing of the wound until in the last it had completely disappeared. A ninth sample showed by a cross section of a wound so healed how thoroughly the tree had recovered from it.

In conclusion, Mr. Joly made a strong appeal to the present generation, asking them earnestly to repair the damage done to the forest by those who had preceded them, telling them that, if they did not all live long enough to enjoy the fruit of their labor, their reward would be in the feeling that if those who came after them would reap the benefit of their work, it would not be lost.

COMPRESSED WOOD.

THE enormous advance which has of late taken place in the price of some of the hardwoods required in various special branches of trade, says the English Mechanic, has directed attention to the possibility of producing some less expensive material as a substitute, and in one branch of trade this has been carried out with very successful results.

For the manufacture of loom shuttles boxwood has hitherto been very largely used, but the price of this description of wood has become almost prohibitive, and it has been found that by compression of cheaper classes of timber—teak being about the most suitable for this purpose—a substitute meeting all the requirements can be obtained.

For carrying out this purpose, Sir Joseph Whitworth & Co., of Manchester, have completed for Robert Pickles of Burnley, a powerful hydraulic press to be used in compressing timber for loom shuttles. This press consists of a strong cast-iron top and bottom, with four steel columns and steel cylinder, with a large ram. In the center of this ram is fitted a smaller ram, with a rectangular head, fitting into a die which is placed on the top of the large ram. The timber is put into this die, and a pressure of fourteen tons per square inch is applied. The pressure is then relieved, and the large ram decends. The top pressure block, which fits the die, is then removed, and the small ram rising pushes the timber out at the top of the die.

The timber so treated is made very dense and uniform, and so close-grained that it is capable of taking a very high finish. For the manufacture of shuttles it has been found as good as boxwood, and there is no doubt it might be applied to other branches of industry where expensive hardwoods have been used.

DRY ROT.

DRY rot is about the worst enemy timber has. In fact, if attacked by it the fall of the wood is only a matter of time. The struggle may be long or short, but dry rot is always the victor. Every reader knows that, and if he be an owner—we do not say a builder—of property, he bears the acknowledged fact well in mind, and does everything he can to prevent it occurring. It does seem strange to say it, but dry rot is damp rot, and occurs only where there is damp. This may seem stranger still, since dry rot has been thought to occur in dry places. The places though were only apparently dry, or the wood was damp. What are the causes of this fell complaint? It may be due to the fact that a parasite has entered through a branch wound in the tree while standing in the forest, and continues to grow in the tree even after it is cut down, providing the wood contains a portion of its moisture; such wood will suffer from dry rot when used. Perfectly sound timber may be infected during the time it is lying in the forest, as, for instance, when peeled timber is in immediate contact with the ground. Every timber merchant knows that the bottom plank of a stack is often covered with the white fungus, a fact which illustrates the above point. Peeled timber piled upon supports and exposed to the air throughout, stands little chance of being affected. The germs of dry rot may be produced, though, in timber exposed to the heat of the sun. The wood cracks and the rain enters, carrying with it any spores (seeds) it may contain. The wood then swells and the cracks close, and decomposition enters upon its first stages. Thus timber merchants and others can not be too careful about piling logs, round or square, or timber and planks, and of protecting them from rain and heat, that is, provided they desire to have perfect timber. It is maintained by authorities who know much more upon the subject, that dry rot is also more likely to affect timber felled in summer, than timber cut in winter. Winter felling takes place in the lowlands (abroad) and in the less elevated mountains. In these districts the timber is chiefly removed from the forest by land, after it has lain with or without the bark. Such timber is either free from spores, or should it contain spores that have entered by cracks formed in the alburnum (sapwood) during drying, it is asserted that it afterwards remains dry, and therefore sound, because the spores are unable to germinate in dry wood. On all the higher mountains felling takes place in summer. The wood is peeled and piled on supports, and in winter is conveyed on the snow to the streams, and rafted in the spring. The timber cracks just after felling, and the spores enter. During floating, the logs are saturated and the cracks close. On reaching the saw mills, the logs are indifferently piled all together, and do not dry; while the summer weather is suitable for the germination of the spores; again the initial stages of dry rot commence. Red stripes in timber and brown-colored wood are sure signs that the stuff will suffer from dry rot when used.—Timber News, Liverpool, Eng.

SOME STRONG FOREIGN WOODS.

ONE of the strongest timbers in existence is said to be the Borneo ironwood, whose breaking strain is 1.52 that of English oak. It is of a dark brown color, turning to a deep red when seasoned, and becoming as black as ebony on long exposure. It neither swells nor shrinks under any degree of dryness or humidity. The white ant and teredo fail to perforate or destroy it. It weighs 80 pounds per square foot, that of lignum vitæ 83 pounds, boxwood 88 pounds, ebony 74 pounds, and African oak 62 pounds. The Quebarcho wood in Argentina, is said to have extraordinary durability. Posts that have been in the ground one hundred and fifty years, in soil alternately sodden by tropical rains or parched by great heat, were found to be in sound condition. This wood is free from attacks by insects, does not decay and is not compressible, and weighs 78 pounds per cubic foot. These qualities make it a splendid material for railroad ties.

John Nicol, jr., Queensboro, Ont.: "I would not be without the CANADA LUMBERMAN for twice the price of it."

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

THE SPRUCE SITUATION.

THE organization a month ago, at Boston, of the Northeastern Lumbermen's Association, has brought the matter of spruce prominently to the front. The purpose of the Association is to protect the spruce manufacturers of Maine and the Maritime Provinces by fixing prices that would leave to them a fairly profitable margin. The question that has been agitating the spruce market since that date is whether these prices can be maintained. It is a big jump from the figures that were obtained a year ago, and buyers do not take at all kindly to the increased rate, and are holding off making purchases, believing that the figures cannot stand.

Secretary James claims that a step of this kind has become necessary, because of the rapid depletion of the spruce forests. This has introduced a nice question of forestry, but those who do not hold with the Association view say that there is very little in this; it is simply allowed to serve as a very pretty background. As a matter of fact, it is claimed, there is no danger of the supply of spruce becoming exhausted for many years in the future. Whether this be so or not we shall not discuss at the present time. Suffice it to remark that the spruce forests are likely being denuded more rapidly than some people may anticipate, and the time will come when even Maine and the Maritime Provinces may find themselves in the same position in regard to spruce, as Michigan is to-day, so far as white pine is concerned. One thing is very sure, that the growth of the wood pulp industry will, in the future, make inroads into spruce, such as has not been experienced in the past, and if the Association will really make it an honest part of its work to help preserve the spruce forests, great good must be accomplished.

After all, this is a little aside from the question that is really agitating the spruce market. Will the Association accomplish its purpose, so far as an advance in prices is concerned? Rumors are flying thick and fast that even among its own members the price is being shaded, and it looks as though this shading is likely to continue, so that the actual market prices will rule lower than those that have been given out by the Association. At the same time it is agreed by all sensible lumbermen that it cannot be a healthy thing for trade to let prices get down to $10 and $12 a frame, as was the case not long since. For manufacturers to sell at this figure is simply suicidal, and can have only one ending.

Canadian operators, it is alleged, are proving a thorn in the flesh to those who are within the ranks of the Association, it being freely stated that cargoes have been bought in Nova Scotia, to arrive in Boston as soon as the season opens, at $11.50, and a further rumor says that Canadian stock has been even as low as $11.

It is very certain that at present the trade is at sixes and sevens. The Association has an energetic and capable secretary in Mr. James, and is fighting vigorously for the policy that was outlined at the meeting in February. But lumber, unfortunately, for the best interests of the lumber business, is subject to the same conditions and contingencies as other lines of commerce. When men have notes to meet and are hard up, and stocks can be realized on at a certain figure, they are likely to let the stock go at a cut price, so that the money can be secured to meet their notes. Again an anxiety to do business is sufficiently great that, where dealers will give certain prices and nothing more, and trade continues, as it is just now, to move slowly, rather than do no business, sales will be made at a cut price. We do not say that this is a healthy condition of trade. Spruce manufacturers know just how strongly it worked against them a year ago. Other branches of lumbering are not without their experiences in this direction. But just at present we are simply stating history as it exists at the present time.

UNSATISFACTORY BUSINESS METHODS.

FRAUD is a strong word to use, though it is the best term to fitly express the actions of some men. There are frauds in the lumber business, and we have taken occasion several times to show how Canadian lumbermen are being defrauded by those engaged in the business, both in Canada and the United States. In making these exposures we have only been pursuing a plan that should be followed, it seems to us, by every class journal that desires to give honest protection to its readers.

It is the duty of a trade journal, however, to do something more than merely expose those who have proven themselves to be engaged deliberately in fraudulent practices. A method may be questionable and yet not be deserving of the term fraudulent, though plain people would be likely to speak of it in that way. We have before us at this time a letter from Mr. Fred Deutschmann, lumberman, Teeswater, Ont., making complaints against the methods adopted by Mr. Carl Gartner, of Hamburg, Germany, and London, Eng., in accounting for consignments of lumber that had been forwarded to him by lumbermen on this side of the Atlantic. If the statement, as given by our correspondent, is not open to any satisfactory explanation by Mr. Gartner, it is certainly one that reflects somewhat seriously on his business methods. These may be all right, but Mr. Fred. Deutschmann, who has had to pay the piper, naturally thinks them peculiarly wrong.

The charge made by Mr. Deutschmann is that in May, 1893, he sent a shipment of two car loads of maple plank to Mr. Carl Gartner. The shipment, he alleges, turned out to be No. 1 quality of lumber. This lumber he states was piled for nearly 18 months in sheds at London. Mr. Deutschmann says.: "Mr. Gartner held out great inducements for my lumber before it was shipped, telling what he could realize for it in order to profit me, but to my sorrow I find now that no dependence could be placed on his flattering statements, as I realized 4 per cent. in all; 96 per cent. was lost." Mr. Gartner, seemingly, has the faculty of running up a bill of heavy charges. This Teeswater lumberman tells us that he had to pay a freight bill of $274.04, and the piling of the lumber and insurance cost $306.91, or a total of expenses of $580.95. Aside from this he says, "It has been like pulling teeth to get even what little was supposed to be due me. By Mr. Gartner's own statement, in July, 1894, the last of my lumber was sold. In September I received a statement of it, pointing out several errors in his favor. On 25th of Nov. I received payment for part of it from the manager of the storage sheds, Armstrong & Co. About a month later I received the balance from the same firm. Armstrong & Co. seem to own the Indian dock sheds, and Mr. Gartner is piling lumber for storage in those sheds. I think it is due to Canadian lumbermen that they should know what is likely to be the fate of their consignments when they are sent to Mr. Gartner."

This is a statement of facts told in Mr. Deutschmann's plain, blunt way. If the case has not been correctly stated, and it is but fair to say that we have as yet had presented to us only one side, we shall be glad to hear what Mr. Gartner has to say on the matter. It so happens that a case very similar to this one is recited in a late issue of the Timberman, of Chicago. A consignment of 15,000 sawed staves was made by Henry Dunkort, of Cincinnati, to Carl Gartner. Mr. Dunkort makes no complaint of the gross receipts for the consignment, but the items of expense, which absorb over four-fifths of the gross receipts, have given him serious concern. The details of the bill are given in full by the Timberman.

Mr. Dunkort's complaint is supplemented by some interesting comments from the editor of the Timberman, in his "Impressions formed in Foreign Lands," being notes of a trip that he made through Great Britain and the Continent a year ago. The Timberman says: "Mr. Gartner is a persistent worker and a very pleasant gentleman, as far as the social relations with himself go; but we are entirely justified in view of the unfortunate character of business transactions he has made in the past, and the relationship he is seeking to maintain with the lumbermen of America at present, in saying that this transaction (of Henry Dunkort) is only one of many that might be referred to at this time, as showing that the expenses of doing business with Mr. Gartner, and the delays incident to the sale of the property and the charges which necessarily follow the deposit of timber or lumber upon his so-called "American yard," are so high as to render it well-nigh impossible for the consigner to receive any adequate compensation for the timber, of whatever kind. Mr. Gartner has a wide acquaintanceship in Germany, and occasionally makes an excellent sale and a prompt one, and secures thereby for a shipper on this side adequate returns for his lumber for one or two shipments. Yet the very next shipment might meet adverse conditions, and as Mr. Gartner has little or no means with which to wield a business of the character he is assuming to handle, and is sure to make a full and complete list of charges for whatever he does, and has the stock in his possession up to the time he sells it and gets the money for it, the results of such a transaction leave him no chance for personal loss. The shipper himself stands all the brunt of depreciation in value of stock, and, when finally sold, accepts what is left after the long list of charges made up by Mr. Gartner has been satisfied."

BRITISH COLUMBIA RED CEDAR.

IN the presentation, before the Board of General Appraisers at New York, of the claims of the British Columbia red cedar lumbermen, asking for a reversal of the order exacting 25 per cent. duty on red cedar going into the United States, some interesting facts bearing on the character of this wood were produced. Because red cedar was ranked as a cabinet wood the 25 per cent. duty was enacted. The Board of Appraisers admitted, if it had been classified wrongly, and it was proven that red cedar belonged really to the softer woods, then their duty in the premises was clear. The question, in a word, was a botanical one, and the services of those who could speak with authority on these matters were brought in.

Paragraph 676, tariff act of 1894, of the United States Congress, provides for the free importation of "sawed boards, plank deals and other lumber, rough or dressed, except cedar, lignum vitae, lancewood, ebony box, granadilla, mahogany, rosewood and all other cabinet woods." The botanical testimony in the case is very clear. The British Columbia lumber on which this 25 per cent. duty has been exacted is manufactured from the "Arbor Vitae—Thuya Gigantae—trees, and is the same species of trees as are described in the Condensed American

Cyclopaedia under the head of "Arbor Vitae"—T. Gigantae—"found west of the Rocky Mountains, and attains a height of 100 to 200 feet." The same authority says under the head of "Cedar": "No true cedars are native of North America. The tree called red cedar is a juniper, while the term white cedar is applied at the east to a cypress and at the west to an arbor vitae. The 10th census report of the United States, the volume of forest trees, was brought into service to bear testimony on the matter. There, it is stated: "The Thuya Gigantea is not a cedar, but an Arbor Vitae; no true cedar grows in North America."

Not the least interesting of the botanical information placed before the Board of Appraisers by Mr. J. G. Scott, of the Pacific Coast Lumber Co., New Westminster, B. C., who so ably represented the case for the Coast lumbermen, is the following list of the various cedars grown, with the local name, botanical name, and place of growth.

Local Name.	Botanical Name.	Habitat.
White Cedar...	Libocedrus decurrens.....	Washington, D.C., Oregon, East Canada and N. E. States.
White Cedar....	Chamæcyparis sphærodia.	Southern Maine and along coast of Florida.
Red Cedar.....	Thuya gigantea.....	Washington, Oregon, and B. C.
Red Cedar.....	Juniperus Virginiana.....	Widely distributed
Red Cedar.....	Juniperus occidentalis....	over the continent of North America.
Yellow Cedar or Yellow Cypress.	Chamæcyparis Nutkænsis.	Washington, Oregon, B. C., and Alaska.
Port Orf'd Cedar or Lawson's Cypress...	Chamæparis Lawsoniana..	Oregon and California
Stinking Cedar or Savin.....	Torreya taxifolia.....	Western Florida.
Stinking Cedar or Cal. Nutmeg.	Torreya Californica.....	California.
Cedar Pine, Spruce Pine, or White Pine....	Pinus Glabra.....	South California to Florida.
Cedar Elm....	Ulmus crassifolia.....	Arkansas and Texas.

The strongest evidence submitted, at least it would seem so to the ordinary observer, was that which showed that out of the 314 woods tested as to their power to resist indentation, Thuya Gigantea takes the 297th place—proof enough, surely, that this is a soft wood and not a cabinet wood. And out of 429 woods tested as to their specific gravity Thuya Gigantea ranks 411th in its relative order of weight—another strong item of evidence.

At this writing we are still unable to say what decision has been reached by the Board of Appraisers, but whether from the business point of view, or the technical, the case would seem complete in every particular, so far as the claim of the British Columbia red cedar men is concerned.

EDITORIAL NOTES.

The Western Retail Lumbermen's Association is meeting with some criticism, because of its determination, and success has met it in this particular in the past, to maintain a paying list of prices. The charge is being made that the Association is only another name for a combine to keep up prices. Its history during the several years of its existence shows very conclusively that it has done an excellent work for every one interested in lumber, not the least the consumers themselves. The president, in his address at the annual meeting, which was fully reported in the Lumberman at the time, said distinctly, "that in no instance is the price of lumber being advanced by the Association." We had thought ourselves that the Association was very open and frank in its methods of doing business, as was shown by a reduction made in prices when freight rates were made sufficiently favorable to permit of this. So much injury has been brought upon the community by the greed of the monopolist and the arbitrary steps assumed by various combines, that public opinion swings sometimes to the other extreme, and reasonable men forget that a combine may be necessary for the protection of all concerned. A condition of trade that permits of a cutting of prices to such an extent that failure becomes a rule of the business, rather than success, and a mere fraction on the dollar is received by creditors, can never be healthy for any community. This is invariably the outcome of a cutting system, and when conditions reach this point, and it is too often the case, then the business falls into the hands of a few who put up prices unreasonably. An organization of business men that will go on the principle of securing to each other a living profit, must always work for the benefit of the consumer. A community never thrives on the bankruptcy of its business men.

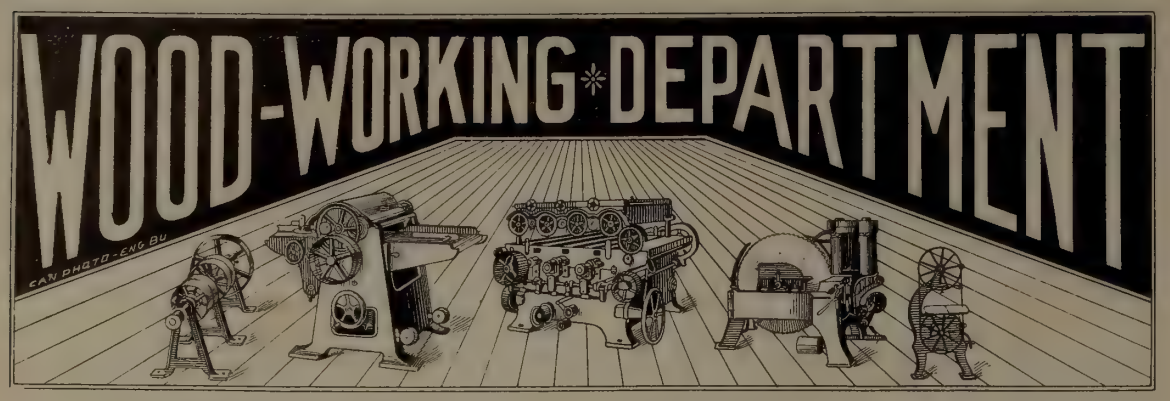
On the evening of February 25th, and less than half an hour after the employees had left the building, a small upright boiler in a soda water factory on Sherbourne street, Toronto, exploded, completely wrecking the building and knocking out the windows and otherwise damaging surrounding residences. Luckily the absence of employees from the factory and of foot passengers from the sidewalks opposite the building, avoided more serious results. Portions of the outer shell of the boiler were found imbedded in the frozen ground in the yards of the locality, having cut their way through the felt and gravel roof of the factory. The force of the explosion is sufficient evidence that it was not caused by low water. Had five hundred pounds of gunpowder exploded inside the building, it could not have exerted a more destructive force. It is supposed that the fire in the boiler had not been securely banked for the night, and that it had burned up, causing a rise in steam pressure to at least 300 lbs., and that the safety valve was not in proper working-order. This occurrence should suffice to dispel the prevalent notion that while proper inspection and skilled supervision are required for steam plants of large capacity they can safely be dispensed with in connection with small plants. It should likewise direct the attention of the municipal authorities to the necessity for an ordinance to prohibit the locating of factories in the center of thickly populated residential districts, like the one in which this accident occurred.

Complaint is made by the Mississippi Valley Lumberman, of Minneapolis, that in the competition between yellow pine and white pine the success of the latter is handicapped by the discriminating freight rates given in favor of yellow pine. The Minneapolis journal recognizes that yellow pine is now an important factor in the market, but does not think that competition should be intensified, as against white pine, by unreasonable freight rates. It is claimed that the rate on yellow pine to Kansas, Nebraska, and other central western points is fixed at a very low figure, and that yellow pine is being brought into Chicago at a rate of 22c. The Mississippi Valley Lumberman goes so far as to say that the difficulty, if not remedied, will resolve itself into a decision by the northwestern mills to close down, until such time as the railroads see it is to their advantage to grant an equitable rate all round. The rate of white pine from Minneapolis to Omaha, Neb., is 17c, a distance of 325 miles, while the yellow pine is carried to Omaha, a distance of about 1000 miles for 22c. The rate from Minneapolis to Lincoln, Neb., is 20c for 100 lbs. as compared with a 22c rate on yellow pine, brought more than double the distance from the south. The white pine people claim they should get a rate of 12c to Nebraska. We mention these facts to indicate the unreasonable position constantly taken by railroads in the fixing of freight rates. We experience this unfairness in Canada in different ways. Just one condition seems to guide railroads in fixing rates and that is how far they can go in keeping rates up. And where pressure of the strongest kind, or competition from another road, cannot be brought to bear, railroads become quite unreasonable. The information imparted by our Minneapolis contemporary also shows that the lumbermen in that state, as well as in the eastern states and in Canada, are recognizing that yellow pine is every day becoming an increasing element in the lumber situation, especially in its relations to white pine.

Wickes Bros., of Michigan, say that they have furnished machinery this winter to American lumbermen operating mills in the Georgian Bay district, capable of adding about 1,000,000 feet a day to the cut of these mills. For the season, these figures, according to Mr. Wickes' calculation, will represent about 180,000,000 feet. The Northwestern Lumberman takes this fact as a text for reiterating its complaint that the recent change in tariff legislation will be productive of good to Canadian lumbermen, largely at the expense of United States lumber interests. The argument is that wherever this lumber will go, and of course, it is taken for granted, which is the fact, that it will be shipped almost entirely to the United States, that it will displace just that much white pine of the northwest or yellow pine from the southern states. We do not know that this is exactly the position, for we are greatly mistaken, if our Chicago contemporary, when it has been in the mood to adopt another line of argument, has not pointed out that after all the shipments of lumber from Canada to the United States would represent so small a percentage of the entire output of that country that it would be a mere drop in the bucket. It has taken Chicago, as an illustration in this respect, pointing out that of the lumber consumed in that district alone the exports from Canada would represent a mere fraction. This also is the case: United States lumbermen have purchased heavily of limits in Canada, because in Michigan in particular, the forests have become so denuded of timber that it has been necessary that they should seek other fields of operation, and Canada, in no small measure, has been the choice. At the same time the tariff is working two ways, for, as we have pointed out before, lumber is coming into Ontario from Duluth, and also from the southern states. Even the Washington shingle men are making a bold effort to get their shingles as far in as Ontario. Minneapolis lumbermen have the opportunity, and are taking advantage of it, of increasing their exports from that state into Manitoba and the district thereabouts. Besides what about the 400,000,000 logs that are towed across to Michigan and there cut into lumber at the mills of that state?

The very full report of the excellent lecture by Mr. H. G. Joly, on the value of our forests, that we give in another page, once more brings to the front the question of forestry in its many different phases. We shall not, at this time, enter into any general discussion of the question, though it is worth noting that more than ever the question of practical and intelligent forestry is being taken hold of by lumbermen themselves. We do not know a time when the lumber journals of the country have given so much attention to this question as during the past year, and, perhaps, more particularly, within the last six months. A reference here to a suggestion that has been made for the re-foresting of pine lands may fitly be noted. We are clearing away the white pine of this country rapidly enough to make it important that consideration should be given to this distinct phase of reforestation. Mr. Austen Cary, a special agent of the forestry division of the agricultural department of the United States government, who has been making investigations of pine growth in Lower Michigan, has expressed the opinion that the cut over pine lands in that district will rapidly produce a second growth of pine, were only forest fires and stock prevented from pasturing on such acres. Further attention to this particular phase of work is embodied in an article written by Mr. A. K. Ferguson, of Manistee, Mich. He claims that white pine (pine strobus) is the quickest growing tree that abounds in the pine belt. His suggestion, however, is that white pine, birch and poplar, also rapid growers, should be planted with pine trees in order to protect them and force their growth upward, and thereby secure long, clean trunks. The denser the growth of the young trees the fewer limbs will be thrown out and the taller, straighter, smoother will be the trunks, an important consideration when the commercial value of the tree is taken into account. The Northwestern Lumberman, commenting on Mr. Ferguson's letter, suggests that men of wealth might devote some of their means to the converting of the vast wastes of denuded pine lands into areas of health giving, climate equalizing, water preserving, profit bearing, beautiful forests. The question is also asked, why should not single individuals, who have large denuded lands on their hands, replant pine trees and eventually reap a rich and perpetual harvest of profit from the enterprise? What do Canadian white pine lumbermen say to these suggestions?

The Guelph Heading & Stave Co., of Guelph, Ont., has been granted incorporation.



A WORD WITH WOOD-WORKERS.

A GOODLY share of space has always been given in these columns to the wood-working departments of lumbering. Further prominence, however, is given the subject commencing with the present issue, because of the growing importance of this branch of the lumber trades. Besides, with the publication of the WEEKLY LUMBERMAN, discussing specially the commercial side of the business, we have more space to devote to mechanical matters.

The effort will be to present to readers regularly statements of progress being made in wood-working. Cuts of new machines will be published monthly, and wood-workers will be kept posted in regard to the new patents that are being issued in wood-working machinery.

We would like readers to feel that they can add to the interest of the department by frequent correspondence and suggestions. If the reader has in mind something of interest to his fellow workmen, let him send on the information to us. Let no one hesitate, because writing is not in his line. We will attend to the matter of form of expression. It may be that readers can forward us, in connection with correspondence, designs of wrinkles in wood-working that have grown out of their experience. We shall always be glad to reproduce such designs in these pages.

THE PHILOSOPHER.

PHILOSOPHY in anything as practical as wood-working? Some of the world's soundest philosophy has come from the men, whose daily avocations have been along mechanical and industrial lines. The Philosopher will talk occasionally in these columns on matters of every-day import to the wood-worker, indulging, he hopes, in some commonsense philosophy that will be productive of good results.

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The Philosopher has sometimes queried to what extent workers at the bench and before the machine strengthen their position as mechanics by cultivating the mind in directions bearing distinctively on their trades. Perhaps there is a little bit of fad in the tendency of the present day to make mechanics through the schools and colleges, rather than by the old process of straight apprenticeship to the trade intended to be followed. Everyone knows, of course, that schools of journalism have a place in some of the universities of the present day. And yet there are those, high up in the profession, who doubt if there is any school that can equal that which starts as a primary department in the country printing office, and with the pupil as a small imp. Probably, it is the case, in this, as in many matters, that there is a happy medium. The editor, who has had a university training, if he can profit also by the practical education so necessary to his work, is going to be that much stronger in the position he holds. The technical schools, both on the continent and in this land, have done much for the mechanics of the country. The Philosopher has always felt that a great deal of the thoroughness that is a feature of all work in Germany is due, in no small degree, to the training that the mechanics of that country receive through its well equipped technical schools. It is the old story that the man, in whatever calling, who brings to his work, along with diligence, a well cultivated brain, is going to outstrip, in the race of life, the other fellow who thinks only of how easily he can slip through with his work before the bell rings for quitting.

The Philosopher deems it most essential to intelligent success, that wood-workers, without exception, should have a knowledge of mathematics, of drawing, and of the real bearing and possibilities of the machinery with which they are working. In Canada, fortunately, there has been an encouraging development in this direction and there is opportunity presented to every workman through the technical and manual training schools of the country, which are fast taking a position unequalled by few schools of a like kind of any country. The boy, who makes a start through these manual training schools, is likely to stand a much better chance of success than a youth who goes into a trade handicapped with little education. The superintendent of the mechanical training department of one of the large colleges of the continent tells of boys who have gone out to their trades equipped in this manner able to earn several dollars more per week than those who come into the work perfectly green and with little previous education to help them on. The advantage of school-taught mechanics gives the boy a standing upon entering the workshops much above the raw beginner, and if he has proven a worthy student his acquirements are soon discovered and his time under instruction in the shop is shortened, and he is generally paid much higher wages.

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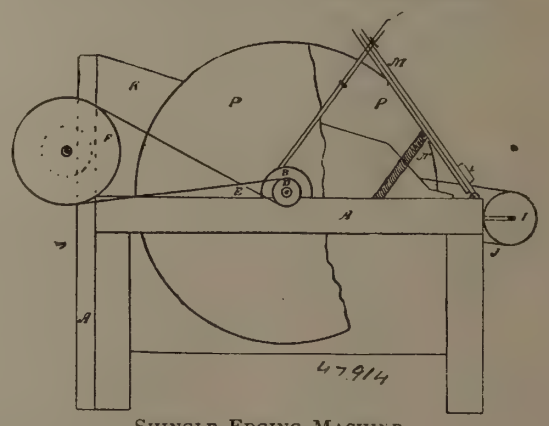
It is one of the hard lessons of life, that real genius consists simply in the faculty of doing one's work well and thoroughly. The Philosopher thought of this as he talked with a friend the other day on the make shifts that are resorted to too often in workshops. The policy is to make the thing do, trusting that it will be all right. A machine gets out of repair, and the disposition is with a little tinkering to make it serve the purpose, where the right plan would be to put it at once into proper condition. Time may be lost in putting on useless fringe and furbelows in one's work. The pottering workman is one who indulges in this kind of nonsense. But time is never lost by the mechanic, who determines that the piece of work he is on will be made as complete as his ability and the equipment at his command will permit him to make it. That this is an old text to hammer on there is no doubt, and yet in a day where there is so much scamp work, and the temptation is to get through things with no regard as to who will suffer in the future, the subject will bear something of line upon line.

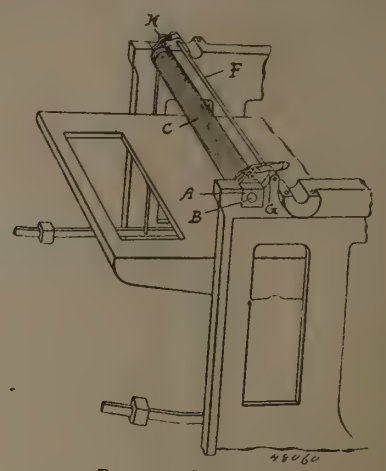
NEW PATENTS IN WOOD-WORKING MACHINERY.



SHINGLE EDGING MACHINE.

Patentee: John Henry Askert, Lucknow, Ont., 15th January, 1895; 6 years.

CLAIM.—1st. The combination of two saws P and P, on one shaft or mandrel C, within from six to eighteen inches of each other, or may be worked on two shafts or mandrel same as C. 2nd. The belt J and guide box K, in combination with said machine and said two saws P and P, substantially as and for the purpose as set forth.



PLANING MACHINE.

Patentee: William Clark, Galt, Ont., 29th January, 1895; 6 years.

CLAIM.—In a planing machine, the combination of the feed or delivery roll movably journalled in the frame work, and means for holding the roll in its proper relation to the table, of the machine when displaced by the passage of the material between the roll and table, substantially as specified. 2nd. A rock shaft journalled in the frame above the roll and a pivotal connection between the journals of the roll and the rock shaft. 3rd. Vertically movable bearing boxes for the journals of the roll, a rock shaft journalled in the frame above the roll, two links connected to the rock shaft and located one above each of the bearing boxes, and a pivotal connection between the links and the bearing boxes. 4th. A snug connected to each of the bearing boxes, and a pivot pin passing through each of the snugs and its respective link, substantially as specified.

SHAPERS AND SHAPER WORK.

I HAVE often observed, says a writer in the Wood Worker, that in woodworking plants of limited size any given number of machines is not quite sufficient to fill the requirements of the variety of work that will be ordered, with despatch and with profit to the owners. It is a well-known fact that no two mills have the same system, though they may be in the same locality. Their methods are entirely different in regard to the handling of work.

It came under my observation recently that a contract was given to a mill which was the lowest bidder for the entire factory work. The plans and specifications called for first-class finish in every particular. One of the features of the finish to the front porch (or gallery, as it is known in certain localities), was turned posts and turned balustrades. The posts were eleven inches in diameter, turned top and base, tapered in size from top to bottom, between the ornamental turnings. Between top and base a plain turned surface was left for raised beads, which presented a fine, rich appearance, and was different from the general run of turned columns. The same style of raised beads was carried out on the same balusters. The posts were of cypress, and the balusters of heart yellow pine.

Now the question was, how were these raised beads to be worked on the posts, as the diameter was large and the beads had to begin and stop at certain points where the ornamental turning came in. The balusters could be handled easy enough, as they were 3 x 3 inches and short enough for a fluting attachment which the mill was fortunate enough to have. Much hand work was out of the question, as it would take so much to complete the columns. The only reasonable way it could be done was with a long, verticle spindle, with the posts hung between centers secured to a guide form. The spindles on an ordinary shaper were not long enough to reach the center of the diameter of the posts, which were, as I have said, eleven inches, but it was the mill's fortune that in ordering a double-spindle shaper one of the spindles was ordered made longer than the other, for

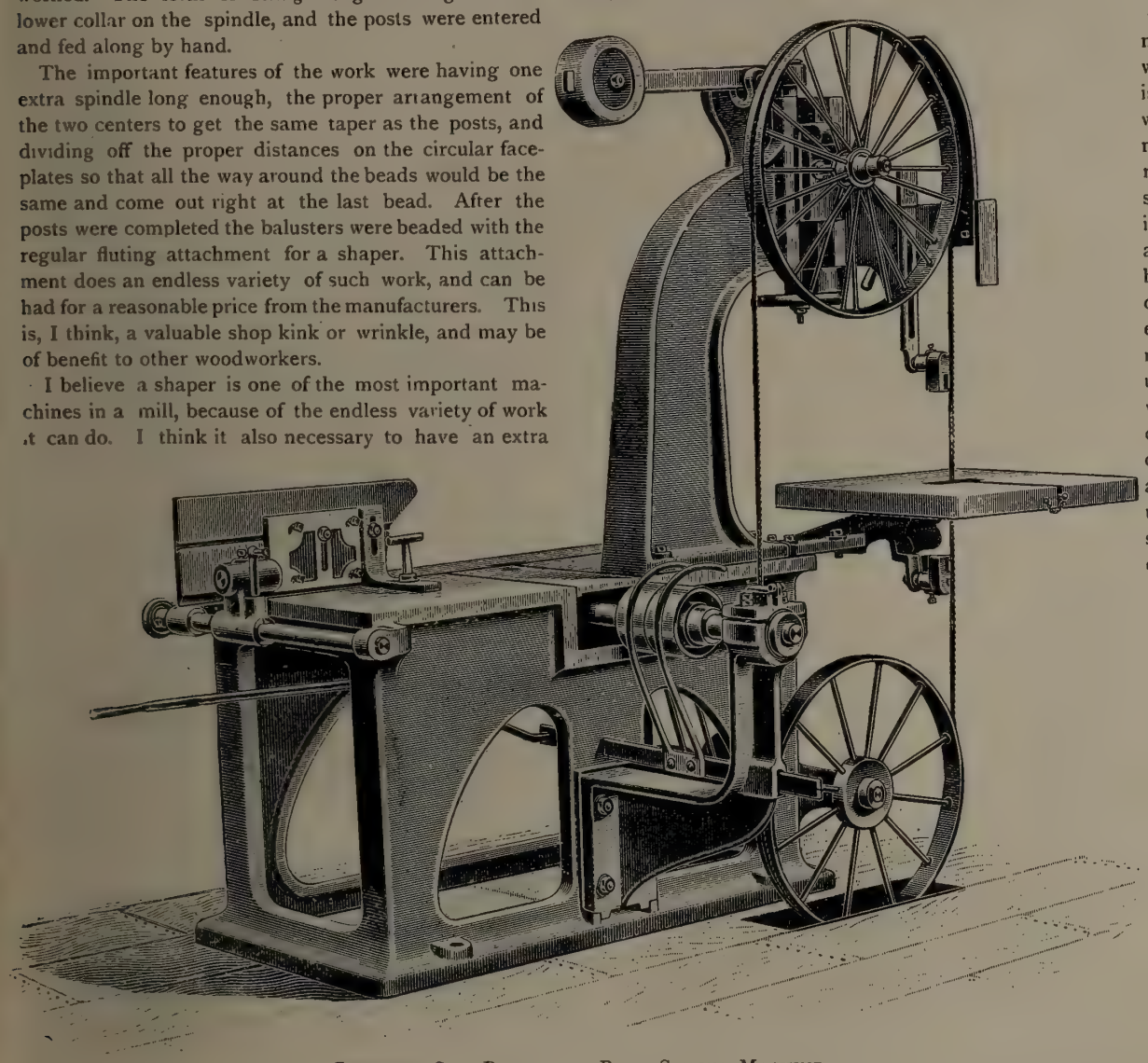
special work, and was sufficiently long to do this raised beading.

A skilful machine man was selected to do the work, with the assistance of the regular shaper man. This man, after careful observation and reflection conceived a way by means of which he could accomplish this work entirely by machine, with no hand work outside of sandpapering the beads.

His first step was to make the cutters. The two centers were made of iron, projecting through wooden face-plates (circular in form) at each end, which held the post. One face-plate had saw kerfs spaced off at equal distances around its diameter. There was a saw kerf in the first piece, which was secured to the form or straight-edge. A piece of saw blade was used as a stop, and was inserted into these kerfs as the different beads were worked. The form or straight-edge ran against the lower collar on the spindle, and the posts were entered and fed along by hand.

The important features of the work were having one extra spindle long enough, the proper arrangement of the two centers to get the same taper as the posts, and dividing off the proper distances on the circular face-plates so that all the way around the beads would be the same and come out right at the last bead. After the posts were completed the balusters were beaded with the regular fluting attachment for a shaper. This attachment does an endless variety of such work, and can be had for a reasonable price from the manufacturers. This is, I think, a valuable shop kink or wrinkle, and may be of benefit to other woodworkers.

I believe a shaper is one of the most important machines in a mill, because of the endless variety of work it can do. I think it also necessary to have an extra



Combined Saw Bench and Band Sawing Machine.

long spindle for a shaper, for special work that often comes in. In a small or medium sized mill it is invaluable, for the reason that the other machines are apt to be crowded and the work delayed, whereas on the shaper it could be gotten out quickly. Take, for example, a small mill where one hand-jointer has to do all the jointing of door and window frames, cabinet work, mantles, brackets and a variety of other work. With a double spindle shaper, with one long spindle a great deal of this work can be done, such as working face molds on mantel breasts, reeding such work, and chamfering large and small posts and columns. A spindle 13 inches above the table is long enough, but this spindle should not be less than 1⅛ inches in diameter at the smallest part above the table between the collars, not less than 1¾ inches below the table between the bearings, nor less than 1½ inches in the bearings, as it would not do good work.

All shapers should have three different changes of collars: One set of collars as small as the spindles will allow, for small curves or the small places; one set medium size, for ordinary work, and one large set, say about five inches diameter, for shaping pickets and such work, which cut faster and do better work.

In regard to cutters for shapers, a good plan is to have steel of different widths and in lengths already beveled. It may cost a little more, but it is a great deal cheaper in the end, as a great deal of time is saved in grinding the bevels, and it is far better. Shaper cutters as a rule are never made until they are really needed, and then in a hurry, and grinding the bevel on the two edges always takes time. It is often the case that small spindles are sprung and ruined by carelessness in not getting the two cutters exactly the same width in grinding them; if the cutters are not the same width exactly, in tightening down the nut with the wrench the collars draw the spindle over, and as a result the spindle is sprung. I have seen a spindle ruined from this cause.

Speaking of the rapid manner in which work can be done on a double-spindle shaper, I say double-spindle shaper, because I believe a single-spindle shaper is only a makeshift outside of a very limited line of business. At present there is a large sale for 1¼x1¼ square-pointed pickets. Most of these pickets are done on a picket-header, and there is a close margin of profit. After some delay in pointing these pickets, we by accident found a better, simpler and much quicker method. A "jack" or form was made V-shaped to receive the pickets to be pointed, which were held securely in place in the "jack" by small pointed iron pins. The cutters were beveled to an angle of 45 degrees in pairs on each spindle, one bevel up and one bevel down between each set of collars. It will be readily seen that the right-hand spindle cutters cut two corners, and the left-hand cutters cut the other two corners, the pickets being diamond-pointed to a finish without changing or turning them over, which would have to be done if an ordinary flat form or pattern were used, and pieces would have to be nailed on each edge to keep the pickets in proper place on the pattern. In this case, if the pickets were not dressed exactly alike all around, they would not fit in between the pieces the same, and the point would not come out perfect, causing some delay; whereas with the V-form all this is obviated and made much simpler, whether there is a slight variation or not, and the operation is so easy that an intelligent boy pointed the pickets with perfect ease in half the time it would take any other way.

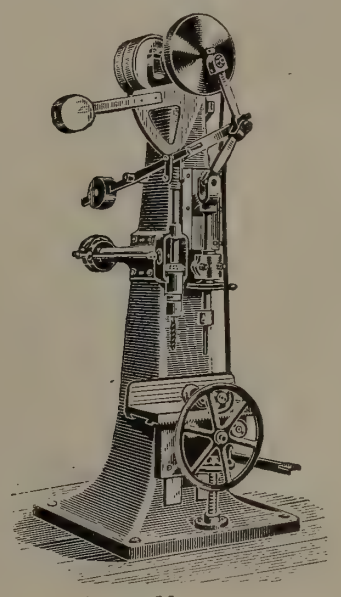
In belting a shaper there should be binder pulleys attached to the countershaft frame or stand. Several makers build shapers on this plan. The advantage of this is the belts run steadier at a high speed and it prevents that disagreeable flapping motion, which gives a slight jar to the shaper top or table, when it becomes worn by use. With the binder pulleys attached to countershaft, the belts run at the right place on the spindle pulleys and do not drop down when they become slack, and belts last longer where this arrangement is carried out. These binder pulleys should have an adjustment back and forward, on slides properly and simply arranged, to take up the slack of the belts when they become stretched.

COMBINED SAW BENCH AND BAND SAWING MACHINE.

THE novel saw bench herewith illustrated, and described in the Timber News and Saw Mill Engineer, of Liverpool, Eng., will be interesting to all woodworkers. It is planed perfectly true on the surface, and is fitted with strong parallel fence, regulated by hand wheel and screw. The framing for the circular saw is massive, cast all in one piece, and has planed facings to receive all the parts fitting to it. The saw spindle is of steel, and works in long gun metal bearings; the fence is made to cant, for cutting work on the bevel. It is also arranged so that it will turn over the end of the bench, for cross-cutting when cutting deep stuff. Fences of this class are apt to give way a little at the end nearest the saw; to prevent this occurring in the above machine the makers fix a stay behind the fence, to be used when required. The band saw apparatus is made very strong, and has wrought iron pulleys 30in. diameter, covered with india-rubber tyres. The table is made to cant, for cutting work on the bevel. The top pulley is also fitted with canting motion. The tension of the saw under heat is taken up by weight, or, if desired, by a spring. These combined arrangements make a very complete and substantial machine.

STEAM MORTISER.

THIS figure represents a machine for cutting mortises in timber. The operation is simple, and is performed by means of a reciprocating chisel. By means of an ingenious link motion the stroke of the chisel can be regulated by the foot-lever, which brings it down into

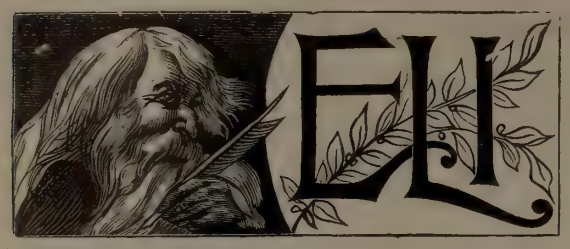


Steam Mortiser.

the timber from a state of rest to its full throw, so that when entering the timber the stress on the chisel may be brought on gradually, and so obviate any excessive jar to the foot of the workman and undue strain on the chisel. These machines are usually provided with a boring apparatus, by means of which a hole may be first bored into the timber before mortising, to relieve the chisel. This is found of advantage when working hard wood.

PUBLICATIONS.

Elizabeth Stuart Phelps, Mrs. A. D. T. Whitney. Rev. Robert Collyer, and Walter Besant are all going to tell in The Ladies' Home Journal of either the man or women who most influenced their lives.



SOME days ago Mr. C. H. Clark, of Barrie, Ont., drew my attention to a comment in the WEEKLY LUMBERMAN, where it was intimated that one reason why prices for white pine were cut in Duluth, was because there were not a few men engaged in the trade there lacking the capital which would enable them to hold out for better prices. Our friend Clark has about made up his mind to become a resident of Duluth, and has already spent considerable time there, and done some business. He tells me there is no lumber section in the States where men stronger financially are engaged in the lumber trade, and that if a long pull is necessary they are quite equal for it. I have no doubt but that this is the case, and, for my part, I did not read the paragraph named as meaning that, financially, Duluth lumbermen were weak. I am quite sure, however, that Duluth is no different to other lumber sections, and that among those engaged in the trade are quite a few who find it necessary to make a quick turn-over of their product, and cannot always hold lumber for a better price. We have had such experiences in Canada. During the past winter, when lumber was so terribly dull, from time to time a break in prices would occur in Michigan from just the same conditions. The large majority of the Michigan men held on bravely to their stocks, and to this cause is due the fact that there was no general break up in white pine. Nevertheless white pine could at times be bought at a good shading under market prices. In new districts these conditions are almost sure to prevail in a larger degree than in the older territories. What is the trouble with lumber in the southern states? A lot of jobbers have located themselves there, who are simply into the business for speculation. They are not particular whether they pay their workmen even. All they want is to get a certain quantity of lumber cut, shove it on the market, make their sales, pocket the money, and in many cases get out. This, of course, is demoralizing to the general trade. It is almost certain to be the case in Duluth, where the lumber business is developing rapidly, that to a modified degree, at least, these same methods will prevail. Or else Duluth is different to any other lumbering district that has yet come to light.

* * * *

Nearly every day additional illustration reaches us of the importance that is attached to the timber products of Canada by United States lumbermen. Michigan lumbermen are such heavy investors in Canadian timber limits at the present time that a busy newspaper man has started the rumor that Michigan lumbermen intend to form a syndicate and completely control Ontario lumber affairs. Of course, an item of this kind serves very well for a daily newspaper, but anyone who is disposed to reflect a few minutes on the question would see the absurdity of any such suggestion, and for the good sense of the Michigan men themselves, let it be said, that they only laugh at the proposition. United States money is being liberally spent in some of the lumber districts of Ontario, and this year, more than in previous years, our country will benefit by the energy being put forth, from the fact that a number of the larger concerns have, within the year, erected their own mills and will cut on this side of the line, where, without free lumber, they would either have not made the investment at all, or sent the logs over to Michigan to be cut there. A fortnight ago I met Mr. W. S. Taylor, of Taylor & Felin, lumbermen, Philadelphia, Pa. Mr. Taylor was prospecting a little and has some notion of securing a timber berth or two, and perhaps locating a mill here. His firm have to get lumber from some point, and like others, he looks with favor upon Canada. Mr. Taylor tells me that the outlook for lumber this spring is encouraging. In Philadelphia building operations will be engaged in on a liberal scale, and generally throughout that section of country trade looks hopeful.

A correspondent, representing one of the largest lumber firms in the province, has written, saying: "Write up Canadian joists instead of Georgia." Now, this is a sensible suggestion, and I have been thinking a good deal along that line. Recent unfortunate events in Toronto have provided strong arguments for the use of white pine in our larger buildings, rather than the yellow pine of the southern states. I do not need to reiterate the position taken by the lumber section of the Board of Trade, after the large Globe fire in Toronto the early part of the year—a position that has found further confirmation in recent fires since that date. The case rests a good deal with the architects. They have been in the habit, in a measurable degree, of recommending yellow pine for joist, contending that it is possessed of a degree of hardness and endurance that is not general to white pine in similar places. This statement is questioned by white pine men, who believe they know what they are talking about. Furthermore, white pine is not possessed of those obnoxious elements that add flame to the fire when a big conflagration takes place in any city. Saying this much, and there is no doubt that white pine men have reason, as well as patriotism on their side, I am never one to scare over anything of this kind. It is a harsh doctrine, perhaps, the survival of the fittest, but it is one that serves with unswerving exactness throughout all nature, and it is not likely that any exception will be provided amid the trees of the forest. If it can be established that yellow pine, for certain particular purposes, is the best wood that can be used, it is going to be used. Crying it down will not close it out. So with white pine. It has held a premier position among the woods of the continent for years, and the introduction of a new rival by no means indicates its annihilation. I always think that white pine holds a position so substantially strong that every man who owns a stick of it may feel that he has got a gold mine. There is not such a quantity of white pine anywhere that its displacement by any other wood need be feared.

* * * *

The clever fellow who holds the quill of the Bobcaygeon Independent has written up a sketchy account of lumbering operations in the far north. He tells how 30 years ago Bobcaygeon was the centre of lumbering operations; 10 years later the centre had moved back about 30 miles; and to-day the great lumbering field of the Gilmour Company is 100 miles to the north. Then follows a brightly written account of the changes in methods of lumbering, how the cross-cut saw has superceded the axe, and the many changes that have taken place in the way of hauling logs, how the railway has become a part of the equipment of lumbering in the woods, just as it has cut its way in as a helper in every other branch of commerce. For anyone who wants the details of these changes I refer them to the Bobcaygeon Independent. What struck me in connection with the sketch was the lesson reflected in the first few sentences, telling how from decade to decade Bobcaygeon was moving back from the centre of lumbering operations. What is the matter? Geographically, I fancy, Bobcaygeon stands to-day where it stood 30 years ago. The surveyor's lines would mark the same place to-day as then. But the timber has been gradually cut away, there, as everywhere else throughout the province, and the man who would engage in timber operations to-day needs to get a long way into the interior to find his product. This fact explains the downfall of not a few villages in Ontario. It has been the custom to talk of certain places as ruined because of the rafting of logs to the American side. To some extent this has been the case, but what is true of Bobcaygeon is true of Midland and other places, once thriving saw mill towns—the logs have got far away from the saw. Another lesson: and it is a serious one; no matter how much timber may still be remaining in the interior, we are rapidly clearing our timber out. Thirty years ago Bobcaygeon was in the woods. The woods are a long way from it to-day, and in place of these woods is a barren waste, which as a country we are doing really nothing to replace.

* * * *

"I just wish the LUMBERMAN would give it strong to the sharks and "skins" who manage to get into the lumber trade," was the way I was greeted, as I stepped into the office of a local lumber concern the other day. What is the matter? I remarked. "Well if you had to get out on the road and buy lumber as I have to do," said this person, "you would take in the full import of what I have said. Take last week, I was out north at one of the mills buying lumber to meet some calls we have from the States. It was the hardest thing in the world to get this mill man to come to any other conclusion than that the great majority of wholesale lumbermen of Ontario were a lot of rogues. He, unfortunately, had been soft in his day and got badly fooled by some of the real sharks himself. He was one of the mill men who made a donation of several cars of lumber to a certain firm of lumbermen in Toronto, who to-day are *non est*, whose creditors bemoan their sudden collapse, and one of the principals of which has had a chequered career running the gauntlet of detectives and police courts. And because these fellows had bitten him badly the mill man was going to be particularly sharp after this and watch everybody who wanted to buy lumber." I remarked that this kind of thing was too bad, and yet in a sense one could not blame the mill man for being careful where he placed his lumber. He was only going to the opposite extreme, which, is too much the rule with everyone. This led to a discussion of another phase of the lumber business, where sharp practices prevail. I remarked to this friend that the LUMBERMAN was likely to have something to say about the operations of a certain German lumber commission house, and I told him how some Ontario mill men had fared with this concern. My friend took another line this time and in his usual plain-spoken manner said he knew something of the situation and was not sorry that mill men sometimes got sold by these outsiders. "They have only themselves to blame," said he. They get a nicely worded letter, with a letter-heading that is unusually prepossessing, from some presumably big concern on the continent, who holds out all sorts of inducements to them. I remember talking to a mill man on this point one time, and he was very "cockey," as the saying sometimes runs. He was not going to bother selling goods to Canadian wholesalers any longer. They could not be counted on. He was going to be his own exporter, and was going to send his goods to Germany, United Kingdom, the United States, and it was hard to say where else throughout the civilized and uncivilized world. All he had to do was to ship his goods, and promptly on their arrival a sight draft, covering the full amount would be paid. This man has had his experience, just as I judge some of the others whom the LUMBERMAN, I understand, will talk about have had their experience. The mill men ought to learn the lesson by this time that their best customers after all are the wholesalers within their own country. They know the state of the market, know what the lumber is worth and are ready to pay the best price that is going at any time. The outsider, who tempts with a little bit of sugar on the stick, offering a higher price than lumber is really worth, needs watching. He is after more than the lumber, unless it is the whole lumber and nothing but the lumber."

* * * *

ON the size of the white pine log crop of the new season will rest, to a good extent, the future of the market. One is able to form a better idea now than earlier of what this crop will amount to, and it seems safe to say, so far as Canada is concerned, that the crop will not be in excess of that of a year ago, and the probability is that it will run rather lighter. This is likewise the report that reaches us from the white pine districts of the United States. The crop there will certainly not be larger than a year ago, and to such an extent has the spirit of caution marked the work of the lumbermen during the past winter, one feels sure in saying that the crop will be a comparatively light one. In those sections that suffered by fire the crop will necessarily be heavier than would otherwise have been the case. Self protection has demanded this. But this excess in spots will not make any serious effect on the average of the crop, taking the white pine territories in their entirety.

The factory and saw mill of the Port Elgin Brush Co., Port Elgin, Ont., is advertised for sale.

CANADA LUMBERMAN

WEEKLY EDITION

The Lumberman Monthly Edition, 20 pages } $1.00 PER YEAR { The Lumberman Weekly Edition, every Wednesday

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CANADA LUMBERMAN

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Weekly Lumberman, published every Wednesday. Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

Lumberman, Monthly. A 20-page journal, discussing fully and impartially subjects pertinent to the lumber and wood-working industries. Contains interviews with prominent members of the trade, and character sketches and portraits of leading lumbermen. Its special articles on technical and mechanical subjects are especially valuable to saw mill and planing mill men and manufacturers of lumber products.

☞ Subscription price for the two editions for one year, $1.00.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type, and no display is allowed beyond the head line. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue.

SHINGLES OR LUMBER WANTED IN EXchange for 50 H.P. engine, nearly new.
PARK & BORROWMAN, Amherstburg.

GREAT BUSINESS CHANCE.

LARGE FURNITURE FACTORY, WITH SAW Mill, Elevator and Dry Kiln for sale in the thriving town of Waterloo, lately carried on by Wegenast & Co. In good running order. Good stock of lumber on hand.
WM. SNIDER, Assignee,
Waterloo, Ont.

TIMBER LIMITS FOR SALE

Township of Lumsden

Sealed tenders addressed to the undersigned will be received up to 12 o'clock, noon, of

THE 18TH DAY OF APRIL, 1895,

for the purchase of the license to cut the timber on said Township of Lumsden, containing thirty-six square miles.

This berth has never been cut over; the pine is large and of good quality, and short haul; the Vermillion River runs through it and is a splendid stream to drive. Chelmsford Station, on the Canadian Pacific Railway, is only seven miles distant.

TERMS.—Cash, or the equivalent if time is required for the payment of a portion of the purchase money.

The highest or any tender not necessarily accepted.

For further particulars apply to

THOMAS McCRAKEN,
No. 2 Victoria Street,
Toronto, Canada.

Huron Shore, Mich., mill operators dissatisfied with the slow market for bulk stocks are starting yards at Lake Erie points. Albert Pack, of Alpena, is running one at Cleveland, O., as the A. Pack Lumber Co.; Frank Gilchrist, of Alpena, under the style of F. W. Gilchrist & Son, is planning a yard enterprise in Buffalo, and Geo. M. Fletcher is making a like venture in Toledo, O.

CURRENT TRADE CONDITIONS.

ONTARIO.

ENTHUSIASM is an element that does not play much part in the lumber situation of to-day. The trade believe that business will be all right, but it is a hard matter to get them to warm up on the subject. They have been waiting from week to week and month to month, expecting that each would bring an improvement in trade, but it must be admitted, that whilst there is no discouraging depression in the lumber trade, there is no large amount of stir as yet this spring. Everybody is hanging off. "In a week or two, or within another month, no doubt, trade will open out," is the frequent answer that one will get from wholesalers and mill men when the question "How is business?" is put to them We do not ourselves believe there is any need for despondency. Trade is slower opening out than is usual, but it will open out before long. At the same time this continued peering into the future for sales and turn over of stock is one of the things that, when there is too much of it, goes hard with average human nature. Some transactions of an ordinary character are taking place, but there is no general moving of stocks. There are spurts here and there, trade moving a little in spots, but nothing better to report. It can be repeated that prices are just as firm as at any time during the season. Mills are getting in good shape for the season's cuting. It will be a fortnight, however, before the saw mills of the province, as a whole, will be in full swing. Caution is being exercised in this branch of work as well as in every other. It is not believed that stocks are heavy at any point, and at the same time the winter's work in the woods will, perhaps, be a little less than had been figured on a month or two ago. These are all conditions that will help to keep prices firm and give backbone to what trade is doing.

QUEBEC AND NEW BRUNSWICK.

Representatives of Canadian houses, who have been spending part of the season in the British markets looking up trade, are either on their way back again, or are preparing to return at an early date. They will bring back with them some business, and this will start trade in Quebec and New Brunswick moving. There is some doubt, however, whether the orders booked are of large size, as the English market is slow to improve. Denny, Mott & Dickson, of London, Eng., say on this point: "Quebec shippers, who are still on this side can only hope to book very few orders in this market for next season's goods, as the prices demanded deter cautious traders from buying for stock," The current issue of the Timber Trades Journal says: "In the Canadian trade we hardly ever recollect such a quiet time at this unusually busy season of the year. Trade is not active as compared with other seasons, or yet as compared with what might reasonably be expected. The market is in a state of suspended animation; sales of fourth pine and Lower Port spruce stocks of the log being reported as unusually small, while on the Upper St. Lawrence there is for an ordinary demand no over abundance. Prices are expected to hold, but in London sales are very difficult at present, importers have no confidence in the stability of values. There is nothing here in first hands that can be called dry, and the demand is mostly for small parcels in anticipation of possible contingencies." Business from these provinces with the United States remains in the same quiet condition, though there are some signs that in the near future fair shipments will go forward.

BRITISH COLUMBIA.

It would look as though a fairly satisfactory business would be done on the coast the coming season. The domestic trade is assuming very decent proportions, and exporters are finding profitable and somewhat liberal outlets for stocks. If Australian trade continues to improve, as is expected, British Columbia will profit nicely by the change. The demand for vessels is better, and to some extent vessels are scarce, especially those suitable in the China trade. The charters for the past month have been more distributed, though there is little doing in any particular quarter. A new development is the fixing of a steamer to carry lumber to South America.

UNITED STATES.

It is hardly possible for the opening of navigation to be so close without a better feeling prevailing in the lumber trade. Almost for a certainty, business will this year move with greater freedom, and yet it must be admitted there is no swelling of business to mark the situation generally. Manufacturers are a little more active, and in saw mill sections operations will commence within a week or two; all these things will help trade. But the movement of lumber continues, with a few exceptions, at particular points where local conditions are favorable, to be nearly as slow at the end of March as at any time since the first of the year. This is the worst feature of the trade. Business, everybody says, has got to be better, and of course will be better, but practical lumbermen would like to see these things shown in a removal of stocks from their yards and in their stead bank drafts in their vaults or their bank account swollen on the right side. When the season's trade comes to be figured up, and everything is taken into consideration, it will likely show up pretty fair, but nothing large need be expected. The money made will be due a good deal to the caution that is going to be exercised in selling goods. There will not be much reckless selling this year. And also in the fact that expenses will be kept down. The cut of logs, particularly of white pine, will not be over large, probably will come less in size than the cut of a year ago.

FOREIGN.

We do not know any section of the lumber world more difficult to secure reports from, that would point to decidedly better conditions, than Great Britain. The movement of goods in February was, of course, phenominally small, because of the prolonged frosts, and it would be unfair to give any statistics of English trade for that period. This fact has swollen the deliveries for the month of March, but as Denny, Mott & Dickson remark, it can scarcely be hoped that the leeway will be fully made up, as postponed purchases have an awkward tendency to diminish in bulk during dull times. English lumber journals all join in the one refrain that immediate business is slow and the prospect of the future is not bright. Reports that we publish elsewhere from New South Wales and Australia indicate that there is an anticipated improvement, even though this improvement is not a present factor.

HARDWOODS.

Lumbermen, whose business is more particularly in hardwoods, are not complaining very much of the conditions of trade. No one is doing anything large, but there is a very fair movement in hardwoods of all kinds. We learn of quite a number of shipments of mixed car loads going to United States points, and perhaps a better demand exists among the home trade. Maple is the slowest hardwood at the present time. In fact it is dragging a little. Birch continues in good demand, and some difficulty is experienced in getting just the kind that is most called for. Ash, elm and basswood are all on good call. A lumberman who has recently visited the hardwood districts of the north tells us, that stocks are getting pretty well thinned out. Asked the question, how the cut of hardwoods was this year, he thought that this was fully as large as, and perhaps, a little beyond the average. With abundance of snow the temptation in hardwood districts was to cut generously, as the mill men were able to get their logs out easily. Mills cutting hardwood will likely have a busy summer. Prices for leading lines are disposed to advance a little.

STOCKS AND PRICES.

CANADA.

A good deal of oak timber is being gotten out in Liverpool county, N. S.

The Royal City Planing Mills, New Westminster, B. C., shipped in three car loads of lumber last week to Manitoba.

An order for 500,000 feet of spruce lumber has been placed with W. H. and J. Rourke, of St. Martin's N. B., by a New York firm. The stock is to be delivered by the end of May.

The Central Lumber Co., of Saginaw, Mich., has purchased 7,000,000 feet of pine logs, cut on the Blind river by R. A. Alger, jr. They will be rafted across the lake for this concern.

A cargo of 750,000 feet of deals, etc., cleared last week from St. John, N. B., for Cork, Ireland. 1,250,000 feet of long lumber, 300,000 lath and 2 cargoes of piling went to United States ports.

The Delta Lumber Co., of Detroit, Mich., is reported to have purchased of J. T. Hurst and the Holland-Emery Lumber Co., a limit in the Georgian Bay district, estimated to cut about 150,000,000 feet. The stock is to go to the Detroit mills of this concern.

It is understood that the privilege of cutting on 60 square miles of Indian reserve on Lake Temiscamingue, secured by Geo. E. Kidd, Barrister, Ottawa, for $21,000 was on account of the St. Anthony Lumber Co., of the Ottawa district. The reserve contains over 38,000 acres of pine, spruce and tamarac, 9 inches thick on the stump The price is considered by some mill men to be a very generous one.

The report of the foreign commerce and navigation of the United States shows that for the year ending June 30, 1894, the amount of dutiable lumber imported by that country from Canada is as follows: (We give the comparison also with 1893.) Lumber 1893, 800,000,000 feet; 1894, 500,000,000 feet; shingles 1893, 469,000,000 feet; 1894, 378,000,000; lath 1893, 327,000,000, 1894, 283,000,000. The lumber was chiefly for consumption in the New England and eastern states.

A large deal in Lower Province timber lands is reported. H. K. Blanchard, of William Haskins & Sons, Boston, and associates, have closed a trade with Weston F. Milliken, for what is known as the C. S. Clark property, on the St. Francis, at Brompton Falls, Que., all timber lands and all stock at mill and on wharf there. The associates are Canadian mill men, though their names, purchase price, the capital stock and price are not given out. A strong bid will be made by the new concern for the car trade of New England. The mill has heretofore sawed only for the South American trade, and is one which, under its first owner, established the line in quality and manufacture of spruce rails, so called, for the Argentine Republic.

UNITED STATES.

Hardwoods are brisk at Tonawanda, N. Y.

Prices for good lumber at Saginaw, Mich., are firm. Log run is held at $16.

Export clearances of lumber from New York for last week were less than 500,000 feet.

Logs are being purchased for the mills at Saginaw, Mich., at about $2 a thousand less than last year. Pine logs range from $7 to $10.

Of the 141,000,000 feet of lumber said to have been on the mill docks of Saginaw, Mich., at the close of the season, only a few million feet now remain.

Various estimates have been given this season of the quantity of logs that will be rafted from the Georgian Bay and North Shore districts to Michigan. A late calculation is as follows: Saginaw Lumber and Salt Co., 20,000,000 ft.; Holland-Emery Lumber Co. and J. T. Hurst, 80,000,000; Hale & Co., 20,000,000; Turner & Fisher, 50,000,000; C. K. Eddy & Sons, 10,000,000; Col. A. T. Bliss, 12,000,000 to 15,000,000; Central Lumber Co., 7,000,000; J. W. Howry & Sons, 12,000,000; Wm. Peter, 20,000,000. Other exporters will include S. G. M. Gates, Edmund Hall and others.

An association has just been organized in connection with the yellow pine interests of the south, known as the Mutual Lumber Co., Ltd., who will endeavor to put in force a price list, that will help to remove the cutting and slashing that has been common to yellow pine for some time. The following figures have been adopted by the company, representing stocks delivered on a rail rate of 22c per 100 lbs.:

	Timber.
6x6 to 8x8, 16 ft	$ 15.00
10, 18 and 20 ft	15.50
22 and 24 ft	17.00
8x10 to 12x12, 16 ft	16.00
10, 18 and 20 ft	16.50
22 and 24 ft	18.00
6x14 to 14x14, 16 ft	17.50
10, 18 and 20 ft	18.00
22 and 24 ft	18.50
6x16 to 16x16, 16 ft	19.00
10, 18 and 20 ft	19 50
22 and 24 ft	20.00
	Finish.
1x4 to 1x6	$ 18.00
1x8 to 1x12	18.50

For every 2 inches over 12 in. add $1.

	Flooring.
13-16, 3⅛ in. face	$ 14 50
3¼ in. face	14.75
27-32, 3⅛ in. face	15.00
27-32, 3¼ in. face	15.25
⅞, ¾ in. face	15.50

For straight grain, add $5. For ceiling, same price for same thickness and faces.

The better elements in the trade will gladly welcome, we believe, any movement that will give greater steadfastness to prices of yellow pine.

THE LUMBER SITUATION.

REFLECTED THROUGH CORRESPONDENCE OF "WEEKLY LUMBERMAN."

A. Dickie, Lower Stewiacke, N. S.: "Stocks are moving very slowly. Dry pine is asked for but not to be had. Stocks of deals in this district are very heavy. Prices for deals, which is the principle product in this section, will likely be about the same as last year. The general outlook is none too encouraging."

J. Taylor, Chatsworth, Ont.: "Stocks are moving slowly, soft elm, basswood, birch and black ash being in most demand. No important sales in this locality, outside of a few carloads of soft elm at $11 per 1,000. Stocks are considerably smaller than last year in this locality. Prices of soft elm, basswood and birch are a little better than last year, that is with American buyers."

J. D. Roche, Masham Mills, Que.: "Our trade is largely local and country trade. We find stocks moving more actively lately. Plain lumber, dressed, tongued and grooved, and building material generally in most demand. On the Gatineau ties are in good demand and pulp wood, as also spruce, balsam and poplar. There has been a heavy cut of mixed woods on the Gatineau and tributaries the past winter. Plenty of snow; labor has been cheap; teams plentiful and provisions and fodder low."

William Foster, Owen Sound, Ont.: "I have just returned from a trip among some 25 saw mills in this section. I find the stock of logs will be up to the average of last year, and of a better quality, as mill men have learned that it does not pay to get out bad stock. The old stock is pretty well done, except in the case of a few mill men who are holding for higher prices. Considering shrinkage and interest, parties who sold last spring have done the best, as they have turned the cart wheel over, to use an American expression. Now able to log in a new stock they can cut to suit the market. Prices are a little firmer and enquiries are better than for the past few months. I do not anticipate a great improvement nor an advance in prices, but a careful and cautious business done until people get more confidence and money a little easier."

CONDITIONS IN NEW SOUTH WALES.

The Prices Current and Trade Review, of Sydney, N. S. W., says: Timber—(Duty 1s 6d per 100 feet sup. on rough; 3s per 100 feet sup. on dressed; doors 5s each; sashes 3s each; palings 1s per 100; laths 1s per 1,000; pickets (dressed) 3s per 100 feet sup. For a short time of the year this market was fairly well situated, and early arrivals did very well. Towards the close, however, of the year the market became decidedly weaker, and this movement accentuated by the close arrivals of three or four vessels with Oregon, which was intended on distributor's account. The following are the receipts of timber for the last four years:

	Rough.	Dressed.
1891	58,000,000	12,500,000
1892	40,000,000	7,000,000
1893	36,000,000	4,500,000
1894	32,000,000	6,000,000

BUSINESS DIFFICULTIES AND CHANGES.

The mill property at Cross Creek, N. B., at one time under the management of Sampson Bros., has been sold on a mortgage for $3,250.

A co-partnership has been registered between Donald Fraser sen, and jr. and A. Fraser, saw millers. The firm name is Donald Fraser & Sons, Fredericton, N. B.

Buntin v Vale Barrel Machine Company.—R. McKay, for plaintiffs, moved for an injunction restraining the transfer of shares in the company. W. F. Walker, Q. C., for defendants Blackley and the Vale Barrel Machine Company. Order in terms of consent minutes, as against defendant Blackley. Motion refused as against the defendants the Vale Barrel Machine Company.

In the lumber suit of William Irwin & Co., of Orillia, Ont., vs Turner & Fisher, Bay City, Mich., referred to in the news columns of our monthly edition, was a day or two since settled out of court, and by the settlement the defendants must pay the plaintiffs, Irwin & Co., $21,000 within fifteen days. This amount represents the unpaid balance of a $95,000 contract to cut and deliver the defendants certain Algoma timber.

The case of Traversy vs. Tourville & Co., was heard before the Court of Appeal in Montreal a day or two since. The case involves a charge for damages caused by the erection of booms at the mouth of the St. Francis river. Tourville & Co., are owners of what was once known as the Pierreville Mill Co., who carry on their operations on the St. Francis river. The defendants claim that their property was damaged to the extent of $50 per annum through the erection of said booms. The case was decided in favor of the defendants.

LUMBER TRADE IN AUSTRALIA.

Fraser & Co., Ltd., of Melbourne, Australia, say.: We anticipate a more settled state in business to ensue in the early future, and look to orders from the trade within the next few weeks to show considerable improvement upon those which have of late been executed. No very important additional charters have been arranged from the usual shipping centers, though there are indications of supplies of New Zealand white pine being on a full scale in the course of the present year.

No imports of Oregon Pine (fir). The demand has not been equal to that shown during the past few months. A limited business has been done at unaltered prices, but an improvement in sales may be fully looked for in the early future.

No imports of red wood. The demand is small and the stocks are light. Values remain without alteration.

No imports of sugar pine and door stock. Some fair inquiries have been made for these lines. Supplies of the former are small, while there are no stocks in first hands of the latter. Importations are requisite to meet wants of the trade.

SHIPPING MATTERS.

Not a vessel is loading foreign at Portland, Me., and but one is chartered.

Lumber freight rates from Michigan points to Buffalo and Tonawanda, will open, it is said, at $1.50.

Two vessels have been chartered to load at St. John, N. B., for British ports at 39s, and two up the bay at 38s.

Geo. Cassidy & Co. Ltd., of Vancouver, B. C., are making arrangements to charter a vessel to load lumber for Southern California.

A vessel capable of carrying 1,000,000 feet of lumber has been chartered to load at the Royal City Mills, New Westminster, B. C., early next month.

The American schooner Olga is loading 700,000 ft. of lumber at the Brunette Saw Mill wharf, New Westminster, B. C., for San Francisco.

The barque Fred E. Scammell has been chartered to load deals at Spencer's Island, N. S., for Great Britain, at 37s 6d. The vessel is chartered by the new firm of J. H. Scammell & Co.

A despatch from Vancouver, B. C., says that the Canadian Pacific Railway has lowered the rate on lumber to the east $2.60 per 10,000 ft. Local lumbermen expect this will help them in securing trade that now goes to Puget Sound dealers.

The Olivebank, now loading lumber for South America at the Hastings Mill, Vancouver, B. C., is without exception the largest sailing vessel that has ever entered the Vancouver harbor. Her tonnage is 2,650 and her cargo capacity 4,480 tons, or expressed in feet of lumber 2,400,000.

Rates for Nova Scotia charters are quoted at $2 and $2.50. J. L. Sullivan, ship broker, Boston, reports the following charters: Schr Mary Standish, March 13, 250,000 spruce; schooner Mary E. March 14, 140,000 spruce; Annapolis, N. S., to Boston on private terms.

Charters reported are: Barques Lynnwood, New York to Buenos Ayres, W P lumber, $5.-75; Earnscliffe, Philadelphia to Port Allegre and Rio Grande do Sul, bridge material, etc., p t; ship Everest, Pensacola to U K, sawn timber, 90s, less 1s 3d for picket ports; 640-ton barque, Pugwash to direct port U. K., deals, 40s; May chartered a broad, 606-ton barque Miramichi to Belfast, Lorne or Ayr, deals, 42s, May chartered abroad, bgt Bertha Gray, Guantanamo to Delaware Breakwater, sugar 12s; schrs Sahrina, Pt. Johnson to St. John, N. B., coal 70c. Eureka, Jersey City to St. N. B., oak lumber, $2.50.

LUMBER FREIGHT RATES.

Lumber freight rates for pine on the Grand Trunk Railway have been made a fixture, until, at least, April 30th, 1895. Of any intended change after that date due notice will be given the lumbermen at a conference to be held in February.

General instructions in shipping by Grand Trunk are embodied in these words in the tariff schedule: On lumber in carloads, minimum weight, 30,000 lbs. per car, unless the marked capacity of the car be less, in which case the marked capacity (but not less than 24,000 lbs.) will be charged, and must not be exceeded. Should it be impracticable to load certain descriptions of light lumber up to 30,000 lbs. to the car, then the actual weight only will be charged for, but not less than 24,000 lbs. The rates on lumber in the tariff will not be higher from an intermediate point on the straight run than from the first named point beyond, to the same destination. For instance, the rates from Tara or Hepworth to Guelph, Brampton, Weston or Toronto, would not be higher than the specific rates named from Wiarton to the same points. The rates from Cargill and Southampton to points east of Listowel and south and west of Stratford will be the same as from Kincardine, but in no case are higher rates to be charged than as per mileage table published on page 9 of tariff.

Rates from leading lumber points on pine and other softwood lumber, shingles, etc., are as follows: From Glencairn, Creemore, Aurora, Barrie and other points in group B to Toronto, 6½c.; Collingwood, Penetang, Coldwater, Waubaushene, Sturgeon Bay, Victoria Harbor, Midland, Fenelon Falls, Longford, Gravenhurst and other points in group C, to Toronto, 6½c.; Bracebridge to Toronto 7c.; Utterson, Huntsville, Navor, Emsdale, Katrine to Toronto, 7½c.; Burk's Falls, Berriedale and Sundridge, to Toronto, 8c.; South River, Powassen and Callender to Toronto, 9c.; Nipissing Junction and North Bay, 10c. Rate from Goderich, Kincardine and Wiarton to Toronto, 6½c. These rates are per 100 lbs. Rates from Toronto east to Belleville are 7½c. per 100 lbs.; to Deseronto, 9c.; to Brockville and Prescott, 10c.; to Montreal and Ottawa, 11c. The rates on hardwoods average about from 1c. to 2c. per 100 lbs. higher than on softwoods. For rates on railway ties, mahogany, rosewood, walnut, cherry, and other valuable woods, application must be made to the district freight agent.

On the Canadian Pacific the rates on pine and softwoods may be illustrated as follows: Cache Bay, North Bay, Sturgeon Falls and Warren, to Toronto, 10c; Algoma, Cook's Mills, Massey, Spanish River and Whitefish to Toronto, 13c.; Ottawa to Toronto, 10c From Ottawa, Hull, Aylmer and Duchesne Mills to station on the Lake Erie and Detroit River, Erie and Huron, Toronto, Hamilton and Buffalo, and Michigan Central Railways, the rate is 14½c. per 100 lbs. Regulations apply as to minimum size of carload of 30,000 lbs., and an advanced rate is charged for hardwoods.

Lumber freight rates on the Canada Atlantic Railway are as follows: Ottawa to Toronto, 10 cents per 100 lbs.; Ottawa to Oswego, $1.90 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Montreal, $1.00 per M ft., (3,000 lbs. and under per M ft.); Arnprior to Montreal, $1.50 per M ft., (3,000 lbs and under per M ft.); Ottawa to Quebec, $2.00 per M ft.; Arnprior to Quebec, $2.50 per M ft.; Ottawa to Buffalo, 12 cents per 100 lbs.; Ottawa to Port Huron and Detroit, 14 cents per 100 lbs. Ottawa to New York, five carloads or over $3.00 per M ft.; Arnprior to New York, $3.50 per M ft.; Ottawa to Boston, Portland and common points, local 15 cents; exports 13c. per 100 lbs.; Arnprior to Boston, Portland and common points, local 17 cents; export 15 cents per 100 lbs.; Ottawa to Burlington, 6 cents per 100 lbs.; Ottawa to Albany, 10 cents per 100 lbs.; Arnprior to Albany, 12 cents per 100 lbs.; Ottawa to St. John, N. B. and common points, 20 cents per 100 lbs.; Ottawa to Halifax, N. S. and common points, 22½ cents per 100 lbs Minimum carload weight for shipment of lumber, lath, shingles, etc., is 30,000 lbs., and rates quoted above are in cents per 100 lbs., except when quoted per M ft. the minimum carload charged is 10 M ft., lumber not exceeding 300 lbs. to the M feet. Ottawa rates apply on shipments from Rockland and Hawkesbury.

MODIFICATION OF HARDWOOD RATES.

The Grand Trunk Railway and Canadian Pacific have receded in part from their arrangement of a few weeks since when they combined and made the rates on hardwood from certain points to Toronto and Hamilton 8½c. per 100 lbs. John Earls, W.D.F.A., of the Grand Trunk, has written the hardwood men as follows: "After careful consideration we have come to the conclusion that, on and after Jan. 1st, 1895, a modification will be made in the present arrangements for hardwood lumber, to the effect that the rate will be 7½c. per 100 lbs. from our Northern and Northwestern branches to Toronto and Hamilton. This rate, however, will not apply from main line points and the straight run between Toronto, Sarnia and Windsor; also that so far as rates on common lumber to points like Guelph, Galt, London, Woodstock, Ingersoll, etc., from all lumber shipping stations the rate will be the same on hardwood as on pine." On the old principle, we suppose, that half the loaf is better than none, hardwood men have something, possibly, to be thankful for, though there is no good reason why the rates generally on hardwood should not be as low as on pine. It is understood that the C. P. R. rate will be made uniform at 7½c. from same points.

CEDAR —ORDERS PROMPTLY FILLED FOR telegraph, telephone or electric poles, ties, posts, cedar shingles and cedar light wood; also hemlock dimension lumber—J. E. Murphy, Hepworth Station.

MILLS

Having Brown Ash 12, 14 and 16 ft. firsts and seconds, inch Bass firsts and seconds 12 feet, or any other Hardwood Lumber, can sell same for cash by addressing

H. D. WIGGIN,
No 89 State St., Boston, Mass.
Inspection at mill.

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....MANUFACTURERS OF....
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HARDWOOD a Specialty
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LUMBER, LATH AND SHINGLES
Bills cut to order.
Lumber shipped to all parts by rail or vessel.
Excellent quality of 18 inch Pine Shingles for sale. | WHITBY, ONTARIO

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MANUFACTURERS OF LUMBER LATH AND SHINGLES
—: HUNTSVILLE, ONT. :—
HAVE for sale a large quantity of nice Mill Cull Stocks, mix d, 10 and 12 inches wide, at $8 per M. Also a quantity of Mill Cull Sidings at $7. In stock, quantities of 1¼, 1½, and 2 cuts and better. Also 1 x 6, 8, 10 and 12 inch Stocks. Correspondence solicited.

H. G. WATTERS & CO. LUMBER BROKERS . . . ST. JOHN, N. B., CANADA
Wanted for the American Market,
Correspondence Solicited
Spruce Lath, Spruce Shingles, Spruce and Pine Clapboards, Birch Flooring, Pine and Spruce Lumber, also Hemlock Bark.

Ottawa Lumber Co. Ottawa Canada
WHOLESALE LUMBER, LATH, SHINGLES, ETC.
Write for Stock List

Is it Your Wish . .
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A PARTICULAR LOT OF LUMBER
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Will secure for you a Buyer or Seller, as the case may be. Address,
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FOREIGN EXPORTERS AND IMPORTERS

WE want to buy FOR CASH the following kinds of Lumber : : : : :
1, 1¼, 1½ and 2 inch BLACK ASH
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1 inch and thicker BIRCH
EMPIRE LUMBER CO. - BUFFALO, N. Y.
Write us, stating what you have for immediate shipment, with full description of stock, etc.

ALWAYS IN THE MARKET FOR HIGH GRADE LUMBER.
L. G. MULLER
MAPLE FLOORING, N. C PINE, CYPRESS REDWOOD.
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Cut to order for Factories, Houses, Wharves, Bridges, Trestles and Cars . . . . . .
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Business Wisdom: "If you have genius, industry will improve it; if you have none, industry will supply its place."—Reynolds.

The Price Lists that here follow will be revised each week up to the hour of going to press, and in connection with these we would draw attention to the week's trade review under the heading of "Current Trade Conditions" on the first page, immediately followed with matter marked "Stocks and Prices," which presents the lumber situation of the week, together with a record of the week's sales and transactions.

PRICES CURRENT.

TORONTO, ONT.

TORONTO, March 27, 1895.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		2 30
XX shingles 16 inch		1 40
Lath, No. 1		2 00
Lath, No. 2	1 80	1 85

HARDWOODS—PER M. FEET CAR LOTS.

Quality, 1s and 2s unless otherwise specified.

Ash, white, 1 to 2 in.	$26 00	$28 00	Cherry	1 " 1½	50 00 60 00
" " 2½ to 4 in.	30 00	32 00	"	2 " 4 in.	60 00 55 00
Ash, black, 1sts and 2nds, 1 to 1½ in	21 00	23 00	Elm, soft	1 to 1½	$14 00 $15 00
Ash, black, 1sts and 2nds, 2 to 4 in	23 00	25 00	" "	2 " 3 in.	15 00 16 00
Ash, M. R., 1 " 1½	18 00	20 00	" rock	1 " 1¼	16 00 18 00
" " 2 " 4 in.	20 00	24 00	" "	1½ " 3 in.	20 00 22 00
Birch, 1 " 1½	24 00	26 00	Hickory	1½ " 2 in.	28 00 30 00
" 2 " 4 in.	26 00	29 00	Maple	1 " 1½	16 00 18 00
" sqrs. 4x4 " 8x8	28 00	32 00	"	2 " 4 in.	18 00 20 00
Basswood 1 " 1¼	16 00	18 00	Oak, red, p'n 1	" 1½	28 00 30 00
" 1½ " 2 in.	19 00	19 00	" "	2 " 4 in.	30 00 32 00
" m. r. 1 " 1¼	14 00	16 00	" white " 1	" 1½	28 00 30 00
Butternut 1 " 1½	23 00	25 00	" " " 2	" 4 in.	30 00 35 00
" 2 " 3 in.	25 00	28 00	" quart'd 1	" 2 in.	48 00 52 00
Chestnut 1 " 2 in.	22 00	25 00	Walnut 1	" 3 in.	85 00 100 00
			Whitewood 1	" 2 in.	32 00 36 00

OTTAWA, ONT.

OTTAWA, March 27, 1895.

Pine, good sidings, per M feet, b.m.	$30 00	37 00
Pine, good strips, " " "	26 00	31 00
Pine, good shorts, " " "	19 00	25 00
Pine, No. 1 dressing sidings, per M feet, b.m.	19 00	24 00
Pine, " " strips, " " "	17 00	20 00
Pine, " " shorts, " " "	15 00	17 00
Pine, 10 s.c. and better stock, " " "	16 00	18 00
Pine, 8 s.c. " " "	13 00	15 00
Pine, " sidings " " "	13 00	15 00
Pine, " strips " " "	11 00	13 00
Pine, " shorts " " "	9 00	11 00
Pine, box culls " " "	9 00	12 00
Pine, mill culls " " "	8 00	10 00
Lath, per M	1 40	1 75

QUEBEC, QUE.

QUEBEC, March 27, 1895.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	16 @	22
For fair average quality, according to average, etc., measured off	20	26
For good and good fair average, " " " " "	25	30
For superior " " " " "	32	40
In shipping order " " " " "	36	42
Waney board, 18 to 19 inch " " " " "	36	42
Waney board, 19 to 21 inch " " " " "	38	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	45	51

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	28	32

BIRCH.

16 inch average, according to average and quality	21	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $40 to $43 for 3rd quality.

Bright spruce, according to mill specification, $40 to $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality. F.O B. batteau.

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N. Y., March 27, 1895.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in.	$47 00	50 00	Shelving, No. 1, 13 in and up, 1 in.	31 00@	33 00
2½ and 3 in.	50 00	53 00	Dressing, 1¼ in.	25 00	26 00
4 in.	54 00	56 00	1¼x10 and 12		26 00
Selects, 1 in.	38 00	39 00	1½ in.	24 00	25 00
1¼ to 2 in.	40 00	42 00	2 in.	26 50	28 00
2½ and 3 in.	47 00	50 00	Mold st'ps, 1 to 2 in.	33 00	35 00
4 in.		52 00	Barn, No. 1, 10 and 12 in.	21 00	23 00
Fine common, 1 in.	35 00	37 00	6 and 8 in.	20 50	22 00
1¼ and 1½ in.	37 00	38 00	No. 2, 10 and 12 in.	17 00	18 00
2 in.	34 00	35 00	No. 3, 10 and 12 in.	14 00	16 00
3 in.		45 00	6 and 8 in.	16 50	18 00
4 in.		45 00	6 and 8 in.	13 50	15 50
Cut'g up, No. 1, 1 in.	27 00	29 00	Common, 1 in.	16 00	18 00
1¼ to 2 in.	32 00	33 00	1¼ and 1½ in.	18 00	20 00
No. 2, 1 in.	16 00	17 00	2 in.	10 00	22 00
No. 3, 1¼ to 2 in.	18 00	19 00			

ALBANY, N.Y.

ALBANY, N. Y., March 27, 1895.

PINE.

Uppers, 3 in. up	$50	$52	Dressing boards, narrow	$19	$21
2½ in.	50	52	West India shipping boards	16	17
1 to 2 in.	45	48	Box boards	12	14
4 inch uppers	50	52	10-in. dressing and better	26	30
Selects, 2½ in. up	40	42	10-in. common	14	15
1 to 2 in.	36	40	12-in. dressing and better	25	32
Fine common, 2½ in. and up	38	40	Common, 1x11	14	16
1 to 2 in.	34	38	No. 1 barn, 1x12		20
No. 1 cut, 1 to 2 inch	25	35	1x10	18	21
No. 2	18	25	1x8	16	18
No. 3	17	20	No. 2 barn, 1x12	17	19
No. 1 molding, 1 to 2 in.	33	36	1x10	17	19
No. 2 molding, 1 to 2 in.	25	28	1x8	17	19
Stained saps		20	Shaky or star clear, 1 to 2 in.	19	21
Bracket plank	30	35	Dressing	16	18
Shelving boards, 12-in. up	28	30	Common	11	15

LATH.

Pine	$2	25	Spruce	$2	00

SHINGLES.

Sawed Pine, ex. XXXX	$4 25	$4 30	Bound butts, 6 x 18	$6 00	$6 15
Clear butts	3 25	3 35	Hemlock	2 15	2 30
Smooth, 6 x 18	5 40	5 50	Spruce	2 20	2 30

BOSTON, MASS.

BOSTON, March 27, 1895.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$12 00	12 50	¾ inch	$ 9 25	9 75
Coarse No. 5	15 00	16 00	11-16 inch	8 50	9 00
Refuse	12 00	13 00	⅝ inch	8 00	8 50
Outs	9 00		Clapboards, sap ext.	48 00	50 00
Boxboards, 1 inch	10 75	11 00	Sap clear	44 00	45 00
⅞ inch	9 75	10 00	Sap, 2nd clear	38 00	40 00
			No. 1	23 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in.	$50 00@	$51 00	Fine com., 3 and 4 in	43 00	45 00
1¼, 1½ and 2 in.	52 00	53 00	No. 2, 1 in. Fine com.	28 00	30 00
3 and 4 in.	59 00	63 00	1¼, 1½ and 2 in.	29 00	31 00
Selects, 1 in.	43 00	45 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in.	45 00	47 00	No. 2	36 00	37 00
3 and 4 in.	55 00	57 00	No. 3	28 00	30 00
Moulding boards, 7 to 11 in. clear	36 00	38 00	Cut ups, 1 to 2 in.	24 00	32 00
60 per cent. clear	34 00	36 00	Coffin boards	19 00	20 00
Fine common, 1 in.	38 00	40 00	Common all widths	22 00	26 00
1¼, 1½ and 2 in.	41 50	42 00	Shipping culls, 1 in.	15 00	15 50
			do 1¼ in.	15 50	16 50

SHINGLES.

Spruce	1 30	1 50	Second Clear	1 80	2 25
Cedar, extra	2 75	3 00	Extra No. 1	1 50	1 75
Clear	2 40	2 75			

HEMLOCK.

Boards, rough	9 00@	10 00	No. 2	7 00@	
Planed	11 00	11 50			

LATH.

Spruce			By cargo	1 80@	1 90
By car	1 80@	2 00			

NEW YORK CITY.

NEW YORK, N. Y., March 27, 1895.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply, rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$28 00 @	40 00	Building orders $26 00 @ 35 00
Decking	44 00	50 00	

SPRUCE.

6 to 9 in.	14 00	14 50	10 to 12 in.	15 50	16 00
6 to 12 in.	14 75	15 25	Lath	1 90	2 00
9 to 12 in.	15 25	15 50			

SAGINAW, MICH.

SAGINAW, Mich., March 27, 1895.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$45 00	Selects, 1in., 8in. and up wide	$38 00
1¼, 1½ and 2 in.	44 00	1¼, 1½ and 2 in.	38 00
2½ and 3 in.	53 50	2½ and 3 in.	45 00
4 in.	55 00	4 in.	50 00

FINE COMMON.

1 in., 8 in. and up wide	32 00	2½ and 3in., 8in. and up wide	38 00
1¼, 1½ and 2 in.	34 00	4 in.	45 00

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	25 00	2½ and 3in., 7in. and up wide	35 00
1¼, 1½ and 2 in.	30 00	4 in.	38 00

STRIPS. A AND B (CLEAR AND SELECTS).

1¼ in., 4, 5 and 7 in. wide	34 00	1 in., 4, 5 and 7 in. wide	32 00
6 in. wide	36 00	6 in. wide	36 00

FINE COMMON OR C.

1¼ in., 4, 5, 6 in. wide	30 00	1 in., 6 in. wide	32 00
1 in., 4, 5 in. wide	28 00		

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24 00	1 in., 4, 5, 6 in. wide	23 00

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in	17 00	1 in., 4, 5 and 7 in.	17 00
1 in., 6 in.	18 00	1 in., 6 in.	18 00

NO. 2 FENCING OR NO. 4 FLOORING.

1 in., 4, 5 and 7 in	14 00	1¼ in., 4 to n.	14 00
1 in., 6 in.	15 00	No 3 fencing, 1 in., 6 in.	13 00

SHELVING.

No. 1, 1 in., 10 in. stocks	25 00	No. 2, 1 in., 7 and 8in. stocks	20 00
1 in., 10 in. and up wide	26 00	1 in., 10 in. stocks	21 00
1 in., 12 in. stocks	29 00	1 in., 12 in. stocks	23 00
1 in., 12 in. and up wide	29 00	1 in., 10 in. and up wide	22 00
1¼ in. 1½ and 2in., 8in. and up wide	29 00	1 in., 13 in. and up wide	24 00

BARN BOARDS OR STOCKS.

No. 1, 12 in.	19 00	No. 2, 9 in.	14 00
10 in.	17 50	8 and 7 in.	14 00
9 in.	17 50	No. 3, 12 in.	12 50
8 and 7 in.	17 00	10 in.	13 00
No. 2, 12 in.	16 00	9 in.	12 50
10 in.	14 00	8 in.	12 50

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$10 00	1 in., 13 in. and up wide	$12 00
1 in., 6 in. wide	11 00	1¼, 1½ and 2 in., 7 in. and up wide	12 00
1 in., 7 in. wide and up	11 00		

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9in. wide	17 00	1 in., 10 in. and up wide	17 00
1 in., 6 in. wide	17 00	1¼, 1½ and 2 in., 8in. and up wide	17 00

COFFIN BOARDS.

No. 1, 1 in., 13in. and up	20 00	No. 1, mill culls	9 00
No. 2	17 00	No. 1, or red horse	7 00

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23 50	No. 2	19 50
No. 1 (nearly clear)	22 50	No. 3	17 00

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16ft.	$11 00	Hemlock, 2x4 to 10, 12 to 16 feet	8 50
18 ft.	13 00	2x12	9 00
20 ft.	14 00	Add $1 to each additional 2ft. in length.	
22 and 24 ft	15 00		

SHINGLES, 18-IN.

Fancy brands, XXXX	3 25	Standard brands. river made, XXXX	2 90
Clear Butts	2 00	Clear Butts	1 90

WHITE PINE LATH.

No. 1	1 50	No. 2	1 00
		Hemlock	1 00

OSWEGO, N.Y.

OSWEGO, N. Y., March 27, 1895.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$45 00@	46 00	
Pickings, " "	36 00	38 00	
No. 1, cutting up, " "	31 00	33 00	
No. 2, cutting up, " "	24 00	25 00	
In strips, 4 to 8 wide, selected for moulding trips, 14 to 16 ft.	30 00	32 00	

SIDING

1 in siding, cutting up		1¼ in selected	38 00@ 43 00
ricks and uppers	32 00@	1¼ in dressing	20 00 22 00
1 in dressing	19 00	1¼ in No. 1 culls	15 00 17 00
1 in No. 1 culls	14 00	1¼ in No. 2 culls	14 00 15 00
1 in No. 2 culls	13 00	1 in. No 3 culls	11 00 12 00

1X12 INCH.

12 and 16 feet, mill run	21 00	24 00	
12 and 16 feet, No. 1 and 2, barn boards	19 00	20 00	
12 and 16 feet, dressing and better	27 00	31 00	
12 and 16 feet, No. 2 culls	15 00	16 00	

1¼X10 INCHES.

Mill run, mill culls out	$22 00@	25 00	No. 1 culls 17 00 18 00
Dressing and better	27 00	35 00	No. 2 culls 14 00 15 00

1X4 INCHES.

Mill run, mill culls out	17 00	21 00	No. 1 culls 14 00 15 00
Dressing and better	24 00	30 00	No. 2 culls 12 00 13 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20 00	25 00	6, 7 or 8, No. 1 culls 16 00 17 00
6, 7 or 8, drsg and better	25 00	30 00	6, 7 or 8, No. 2 culls 14 00 15 00

SHINGLES.

XXX, 18 in pine	3 60	3 75	XXX, 18 in. cedar 3 40 3 65
Clear butts, pine, 18 in.	2 60	2 75	Clear butt, 18 in. cedar 2 40 2 65
XXX, 16 in. pine	2 90	3 10	XX, 18 in. cedar 1 75 2 00
Stock cedars, 5 or 6 in.	4 50	5 00	

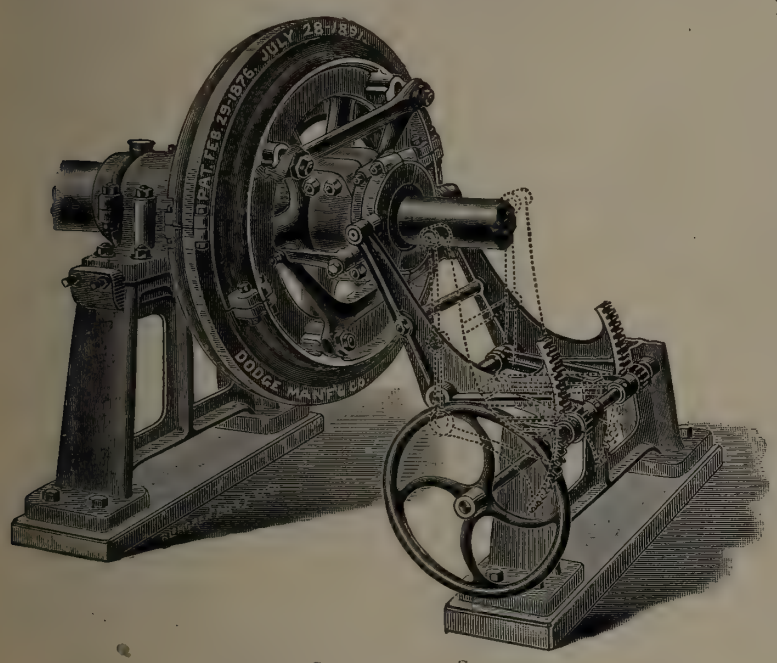
LATH.

No. 1, 1¼	1 85	No. 2, 1¼	1 75
No. 1, 1 in.	1 50		

THE DODGE PATENT SPLIT FRICTION CLUTCH AND CUT-OFF COUPLING.

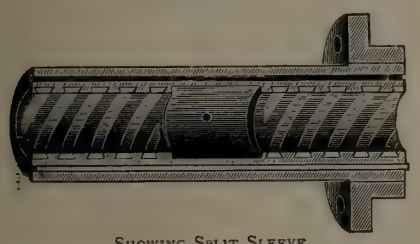
THE utility of friction clutch pulleys for power transmission has been fully demonstrated by long and continuous service, and their advantages over the belt destroying shifter are so numerous and obvious that one wonders why their already extensive use is not universal. Even in the matter of first cost the clutch equipment is not greatly in excess of that of tight and loose pulleys, when the extra pulleys and double widths necessary for the drivers are considered. By placing the clutch pulley upon the driving shaft, the belts and all the auxiliary shafting connected or controlled by the clutch are thrown out of action, saving belting, power, oil and danger from hot bearings and pulleys. Amongst the comparatively new clutches on the market is the Dodge Split Clutch, manufactured by the Dodge Wood Split Pulley Company. This clutch is made for service as a cut-off coupling, or may be used in connection with pulleys, gears, sprockets, rope sheaves, friction or hoisting drums, and various other power connections. Its simplicity is readily appreciated by mechanics who have ever had any experience with clutches of more or less complicated mechanism and those having a large number and variety of parts.

The friction disc is made of iron with perforations therein, through which hardwood friction blocks are



Dodge Clutch with Shifter.

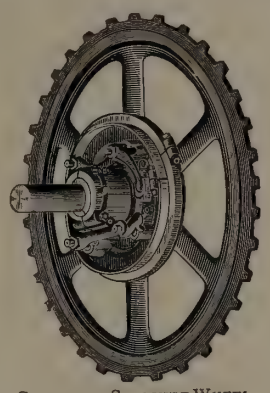
fastened, presenting two surfaces of end grain for frictional contact. This disc is a part of the extended sleeve or portion of the clutch connected to the pulley, or whatever driving appliances may be used, and runs loose on the shaft where the clutch is located at the driven end of the transmission. The friction connection is made through two finished cast iron plates, one of which is keyed to the shaft, and which are thrown in contact with the wood filled disc by throwing in a sliding collar which works loose on the shaft, through the thrust of the collar actuating the toggle levers which operate four draw-bolts, forcing the friction plates to



Showing Split Sleeve.

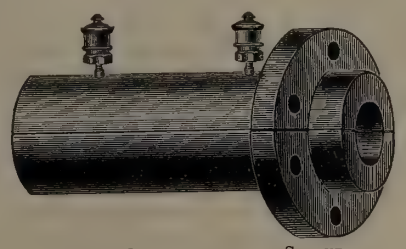
contact with the friction disc—this connection operating the pulley or transmission wheel in conformity with the moving shaft. One of the main difficulties existing in the various styles of clutches is the lack of clearance between the friction disc and plates; this trouble is entirely obviated in the Dodge clutch, the clearance being large and instantaneous, actuated by powerful coil springs which separate the plates quickly upon a withdrawal movement on the sliding collar. Two levers are used with four points of contact on the plates, there being no loose or rattling joints; the levers are made solid in one piece and have carefully finished fulcrum points on the outer or loose friction plate.

The Dodge Wood Split Pulley Co., appreciating the trade demand for a simple, quick acting clutch, with all possible points of advantage considered, have incorporated the split or separable feature as being one of the most important and quickest of appreciation by consumers. The advantages in a split clutch are manifold, they are easier and quicker to adjust to shaft or repair, and effect quite a saving in time and labor. None of the shafting or other equipment need be disturbed in placing the clutch in position. When this point is fully understood and appreciated we bespeak a more rapid change from the old tight and loose pulley ideas to the modern plan of machine driving. It is the expense of the split clutch as formerly made, as well as the trouble and expense involved in putting on solid clutches that has kept many manufacturers from making the changes long ago. This clutch is put on the market at about the same price as any other first-class clutch, but having the split feature to its credit. The Dodge split clutch is particularly adapted to service with gears, sprockets and other connections, and the only necessary features of these appliances over the regular goods is the large bore necessary to fit the extended sleeve. This sleeve is separate from the friction disc and may be easily detached for repairs without handling any portion of the clutch mechanism. For ordinary service the sleeve is lined with genuine babbit and fitted with compression grease cups to insure continuous efficient lubrication. The pulley is clamped over the sleeve and keyed securely. An improvement of very great practical importance is the patented separable or detachable hub, which bears to the clutch the same relation that the Dodge and Philion bush bears to the pulley. It enables the manufacturers to carry finished clutches in stock to be furnished with hubs as ordered also from stock—or at most with delay of only a few hours. It also enables the owner to keep a clutch on hand, and at the expense of a new hub use it in a shaft of different size or as a cut off coupling, as he may desire.



Clutch on Sprocket Wheel.

Many patents have been taken out on the special features, and if the numerous favorable expressions of mechanics and engineers go for anything we feel safe in predicting a large demand for the Dodge patent split clutch. Many shifting devices are shown; one is adjusted to the floor stands used for shaft supports, and another a plain geared apparatus mounted independently and operating through a rock and pinion.



Patent Interchangeable Sleeve.

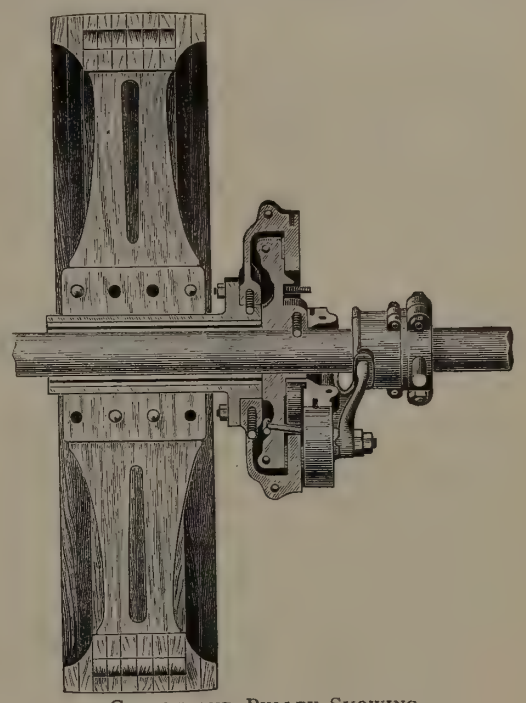
The company issue a handsome catalogue covering their various specialties, and are pleased to mail same free to any one interested. Address, Dodge Wood Split Pulley Company, 68 King Street West, Toronto.

LOOK TO THE BOILER ROOM.

THE enormous coal consumption per unit of output in many electric lighting and power plants is cause for general comment, especially since a recent committee report brought the wide variations of efficiency prominently into notice.

Theories innumerable are advanced to account for the difference between the fuel burned per horse-power in driving the dynamos, as compared with other service; a favorite conclusion seeming to be that compound engines are not satisfactory when working through other than narrow ranges of power variation.

While this is probably true of a great many of the engines used for such work where the cylinder proportions and general make-up are no credit to those responsible for the designs, yet there is little doubt but that one main cause of the trouble must be looked for in another direction. A glance through the power houses



Section of Clutch and Pulley Showing Extended Sleeve.

discloses the fact that many of them are run on an easy-going basis, no attempt seemingly being made to maintain proper discipline among the attendants, each of whom shifts for himself without let or hindrance from the directing authority.

A genuine fireman, thoroughly trained in the principles of his profession, would blush with shame at the sight of these boiler departments.

In place of clean grates, giving a bright glow beneath, the bars are masked by clinkers, and the ash pits yawn without a ray of light to show what is going on within.

The air wheezes as it forces a passage through the refuse, instead of passing in with that rustling sound that tells of free combustion.

At frequent intervals, between the discussion of politics, or other matter foreign to the work in hand, an individual, whose only claim to being a fireman lies in his ability to heave carbon against the back of the furnace, rises from an ottoman of coal and canvas, and throwing open a furnace door, leisurely proceeds to shovel in a half ton or so of fuel, after which work of art, with no attempt to level the fire, or clear the grate, he throws himself upon his couch for another restful season.

Under the too common management of such places, there seems to be not the slightest incentive offered a man to properly attend his boilers.

An enormous grate and heating surface, and immense chimney, are relied upon to maintain steam, when a few first-class men at the fires would make fewer boilers do better work.—American Machinist.

The number of boiler explosions in saw mills and other wood-working establishments during 1894 was fully up to the average. Some of them were unusually destructive. Country saw mills, whose boilers are in charge of cheap and ignorant men, furnish most of the casualties.

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

LUMBERMEN of the Ottawa seem to have pretty well made up their minds to resist the new law in regard to dumping sawdust. At least, they will allow the matter to come before the courts, and have it thrashed out there before they will go to the expense of putting in equipments for the consumption of the sawdust. It is stated that a legal gentleman has determined to test the question, and after the 1st of May will lay information against all and sundry mill men, who shall violate the law. But an exception, perhaps, to the general rule is that of W. C. Edwards & Co., whom, it is stated, will build an incinerator to burn all sawdust and refuse from their lumber mill at New Edinburgh. The incinerator will be 20 feet in diameter and 80 feet in height. It will be located on the site of the old office of the firm and the end of the mill nearest Sussex St. The incinerator will be constructed entirely of stone and brick and of such thickness as to endure for 20 years. Carriers of the most improved kind will be laid all through the mills to carry all edgings and sawdust to the incinerator. What the final outcome of the legislation on the sawdut question will amount to, it is difficult to say. If the mill men show fight, it will be a serious thing for Ottawa to have the mills closed down at the season when they are expected to be at the busiest. Leaving out the question of possible trouble from the sawdust act the lumber mills of the Chaudiere are expected to begin operations about the middle of April, if the ice does not interfere. A busy season's sawing is anticipated, and it is not thought that there will be any delays for logs.

Reports of five colporteurs of the Ottawa Auxiliary Bible Society for the month of February, show that they visited 165 shanties and depots on the Ottawa river and its tributaries, travelled 2,484 miles, and sold in the lumbering camps 626 Bibles and Testaments, valued at $350.60.

Some time ago the government issued a fiat to enable Dennis Ryan and Company to take action to set aside the letters patent of incorporation granted to the Ontario Western Lumber Co., of Rat Portage, on the ground that the statements made in the application were untrue. Evidence was taken in the case at Rat Portage last December, but argument was not concluded. The Imperial Bank of Toronto, creditors of the company, asks now that the government allow the fiat to be withdrawn and Sir Charles Hibbert Tupper heard the application a few days ago. He reserved his decision.

OTTAWA, CAN., March. 22, 1895.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN].

THE saw mill of S. T. King & Sons at Kingsville, that was closed down last summer because of the depression in trade, has started going again this season and nearly all the old staff have returned to their first love.

Isaac Porter is this week shipping ton timber by rail to St. John.

Evidence of the starting of the mills generally for the season is seen on many hands.

The return is noticed of Mr. Allen Ritchie, of Newcastle, from the United Kingdom.

Charies Miller's shingle mill, Pokiok, and Barnhill's mill at Pleasant Point have commenced operations.

There is some talk of Montreal capitalists establishing a large pulp mill on the Quebec shore of Bay Chaleur.

A large quantity of logs are now being hauled by Chas. Stillwell, C. J. & Moses O. Colwell, John Mullin and others to be sawed by C. & J. Robinson's mill at the Narrows, Queen's County.

It is not supposed that the lumber cut at Salmon River this season will exceed 9,000,000 feet, about as follows: Hugh McLean, four million; G. G. King, three million; R. D. Richardson, three quarters of a million.

It is noteworthy the number of portable mills that are in operation in different parts of the province. In the vicinity of Weymouth Creek near St. Martin's there are five mills of this class, giving employment to 200 men and 150 horses.

The death of Robert Connors, a veteran lumberman of the Upper St. John, N. B., took place at Hot Springs, Ark., on the 11th inst. He was a native of Nova Scotia, but resided and carried on extensive lumber operations on the St. Francis for many years.

Six teams are hauling deals from Beaver Brook, Albert County, for J. S. Atkinson & Co. In addition to the large amount of spruce timber got out this winter a great deal of hardwood in the shape of ton timber will be shipped from Albert and Riverside this spring. In the vicinity of Albert Station, J. S. Atkinson & Co., and C. and I. Prescott have a large amount of very fine ton timber, which was cut at New Ireland and will be shipped direct to Great Britain from Grindstone Island.

ST. JOHN, N. B., March 22., 95.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE effort to extend ship building in the province is creating a good deal of interst among lumbermen and business men generally. The manner in which the proposal has been met by the different boards of trade shows how the position occurs to the commercial community. It is recognized, had British Columbia her own vessels, that business now carried in foreign bottoms, would come to this province. The lumber trade, of course, welcome any movement in this direction, and would be good customers for such vessels. Besides it would mean a consumption of lumber that would be worth something to the local lumbermen. The hope is that the provincial government will view the matter in a liberal light, and take steps in the direction indicated.

Some large shipments of lumber have gone east within the past week or two from the Brunette and Royal City Saw Mills.

The lumber trade of the province is looking up and there is a good deal of activity among the mills. Shipments of good size are going out for export and local trade, and also business with Manitoba is improving.

Estimates are being prepared for the installation of an electric logging railway on one of our large northern timber limits. Electricity will be generated by water power and transmitted some distance to the limits.

How quickly the standing tree can be turned into lumber is illustrated in the case of a car load of lumber that went east from the Royal City Mills on Thursday of last week, the raw material of which was growing in the woods on Monday.

An Ottawa despatch received here says that judgment has been handed down in the Supreme Court in Canada in the case of B. C. Mills & T Co., vs. Scott, involving an accident at the saw mill of the company. A new trial is given, the appeal being allowed.

NEW WESTMINSTER, B.C., March 18, 1895.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THOUGH another month has gone by, it must be confessed that there is not any great stir in lumber business in this state. Of course mills are getting in readiness for the season's operations, but even these are tardy in their movements. A year ago some of the mills were in good swing early in March. This year it will be the 1st of April and the 15th in many cases before there will be a large amount of stir. All these are evidences of caution on the part of the trade, and is in keeping with the spirit of buyers, who confine their purchases to small lots, where in other seasons they would buy much more generously.

Charles Merrill & Co., are likely to run their mill light this season, having a stock of 16,000,000 feet of lumber on hand, which is not moving very rapidly.

The final decision of the Dominion cabinet in officially announcing the removal of the duty on boom sticks and chains is a satisfactory ending of a difficulty that at one time looked rather threatening for Michigan and Canadian lumber interests.

There is some talk of a Michigan syndicate being formed to control Canadian timber, but it is hard to trace it back to sound foundations. Lumbermen, who ought to know, because of their interest in Canadian timbers, laugh at the suggestion.

The liquidation of the affairs of R. G. Peters, of Grand Rapids, who failed four years ago with over $1,000,000 liabilities, is progressing, under the management of the Michigan Trust Co., in a very satisfactory manner. The trustees announce that within another year the business will be closed up, with a surplus of decent size for Mr. Peters.

In 1851 the mills on the Saginaw river cut 92,000,000 feet. Inside of ten years these figures had only reached 125,000,000 feet. Another decade showed an immense increase, when the cut figured out within a fraction of 600,000,000 feet only to be increased in 1880 to practically 900,000,000 feet, and high water mark was touched in 1882 with an output of more than 1,100,000,000 feet. Then came the toboggan slide act, until last year the record of cut shows only 481,244,039 feet. Stronger evidence of the denudation of this once great white pine state needs not to be offered.

SAGINAW, MICH., March 20, 1895.

Subscribe for the CANADA LUMBERMAN. $1.00 per year.

THE NEWS.

—W. H. Freeman, lumber, Milton, Ont., is dead.

—S. E. Holmes, Harwich, Ont,, is rebuilding his saw mill.

—W. Hamilton will erect a saw and shingle mill at Sand Point, Ont.

—Over three million feet of logs are on hand at the Cashmere, Ont., saw mill.

—Mr. Kushick has just completed the erection of a saw mill at Buckingham, Que.

—Haun Bros., Edgington, Ont., are removing their saw mill to Dufferin Bridge, Ont.

—Wm. Arselstine, of Violet, has purchased the grist and saw mill of G. Deline, at Croydon.

—Scott Bros. have lately thoroughly overhauled the machinery in their saw mills near Galt, Ont.

—C. H. Merryfield has started his saw mill at Monkton, Ont. He has 600,000 feet of logs to saw.

—Messrs. Martin & Jones, of Kemptville, Ont., are erecting a sash and door factory on the south bank of the river.

—Ament Bros., of Brussels, Ont., have their mill yard stocked with 800,000 to 1,000,000 feet of logs this spring.

—Ferguson Bros. have started their saw mill at Eversley, Ont., for another season. They have their yard well stocked with logs.

—The shingle mill of S. A. McAuley at Lower Millstream, N. B., has been recently undergoing repairs, executed by the Robb Engineering Co.

—James Crawford offered to build and equip a large sawmill on Baker's Brook, N. B., provided the council will grant exemption from taxation for ten years.

—D. E. Sprague, of Winnipeg, has a number of men employed placing his log booms in the river near his mill preparatory to the spring break-up of the ice.

—Graham, Horne & Co., of Fort William, Ont., expect to operate their saw mill night and day during the coming summer, employing two gangs of workmen.

—Munroe & McEwen's saw mill at Moose Creek, Ont., has opened for the season. The cut this season will be large, as the number of logs taken out during the winter has been larger than usual.

—A steam barge is being built at Garden Island by the Calvin Company, expressly for carrying timber. The dimensions are 180 feet long, 87 feet beam, and 13 feet hold. She will carry 40,000 feet of oak timber.

—The Wm. Cane & Sons Mfg. Co., of Newmarket, Ont., are consumers of a large amount of timber. In one week recently 60 cars of pail timber were received by the firm. They intend putting in another machine for pail work.

—W. Kerr has been taking the machinery out of his old tannery at Mitchell, and shipping it off to exchange for sawmill machinery. Mr. Kerr has a splendid water power and mill privilege in Algoma, and is putting up a saw and carding mill.

—A movement is on foot to establish a saw mill at Slate River, Ont. A large amount of timber in the Slate River valley is inaccessible to the mills at Port Arthur and Fort William, and there is a demand for lumber in the vicinity also, which cannot well be supplied by these mills on account of distance, except at too great a cost.

—George Gurd, timber dealer, of Tilbury, Ont., has over 2,000,000 feet of logs on the Lake Shore railway, awaiting shipment to Walkerville, from whence they will be rafted to Detroit. He has another 1,500,000 banked on the Krule and other drains for rafting, in addition to a large quantity on Detroit river.

—A deputation recently waited on the Ontario Government urging that further steps be taken for the protection of the timber limits in the northern parts of the province by the appointment of additional fire rangers. Among the deputation were Mr. Thos. Long, of Toronto, Mr. John Long, of Collingwood, and Dr. Spohn, of Simcoe. Consideration was promised by the Premier.

—D. L. Shannon, who recently sold the machinery of his sawmill at Prince Albert, Sask., to Smyth Bros., of Steep Creek, has purchased a 50-horse power engine and boiler, and a more extensive outfit of machinery, and is fitting up his mill to manufacture lumber, shingles and lath. The capacity of the new mill will be 20,000 feet of lumber, 20,000 shingles and 30,000 lath per day. About twenty men will be employed during the summer. The mill is expected to be in operation early in April.

—Wm. Irwin & Co., of Orillia, Ont., have entered suit against Turner & Fisher, a lumbering firm of Bay City, Mich.,

to recover the sum of $22,000, claimed to be due on a $95,000 timber cutting contract in Algoma. The defendants state that 7,000,000 feet of the amount contracted for was not cut, and that the plaintiff's scalers fraudulently figured it against them. The plaintiffs deny that this was done, and claim that some $6,000 of dues in respect of the 7,000,000 feet were paid to the Ontario Government.

CASUALTIES.

—A lumberman named John Norton, while cutting timber near the camp at Mattawa, Ont., was crushed by a falling tree. He was taken to his home in Dalhousie, N. B.

—W. A. Johnston, foreman in Robertson & Hackett's factory at Vancouver, B. C., had the misfortune to lose four fingers of his left hand, while working on a buzz planer.

—A man named Harry Smith, of Salmon Beach, N. B., while working in W. M. Roger's lumber camp, at Russell's siding, had his left leg broken below the knee by a falling tree.

—A painful accident occurred at Hardy's saw mill at Limebank, Ont., recently, by which a German employee who was engaged working at a circular saw, had his hand split between the fingers up to the wrist.

—A Chinese mill hand named Ah Sing, met a horrible death at the Taylor mills at Victoria, B. C. He became entangled with the fastenings of the carrying frame and was thus projected on the saw, which almost bisected his body.

—While sawing lumber with a portable saw mill at Stirling, Ont., Anson Dafoe was fatally injured. In putting on the belt his hand was caught, tearing one arm nearly off, breaking the other in two places, and fracturing five of his ribs.

—Simeon Grenier, of Pain Court, was killed a fortnight ago by the bursting of a saw in Scheff's mill, at that place. A piece of the saw struck him in the forehead, killing him instantly. He had been an employee of the mill for many years.

Sylvester Z. Earle and Robert Palmer were recently cutting lumber at Douglass Harbor, N. B., for a new wharf. Earle was hewing and palmer was "scoring." Palmer's axe accidentally struck Earle on the back, inflicting an ugly wound, from which it is feared he will die.

—An accident occurred at Point Fortune, Ont., on the 13th March, which caused instant death to Edmund S. Bradford. He was cutting timber with a portable saw and while stepping over the shaft his clothing caught in the coupling, revolving him around at a speed of about 600 revolutions per minute.

—The saw mill of Martin Bros., at Lake Clear, Ont., was the scene of an accident on the 7th ultimo by which Frank Martin lost his life. A loosened board came in contact with the saw, and in recoiling struck Martin in the stomach, throwing him about twelve feet. The internal injuries caused death in a few hours.

—M. Silter, engineer in Thomson & Avery's saw mill at Sharbot Lake, Ont., was accidentally caught in the belting recently, and had both legs broken, from the effects of which he died in a few hours. He was watching another employee adjust a belt, by the breaking of which he was thrown against the machinery.

—A boiler explosion occurred in S. T. King's steam saw mill at Kingsville, N. B., last week, killing a fireman named Wellington Smith, and injuring eight others. The mill was damaged to the extent of several thousand dollars. The action is supposed to have been caused by the boiler being coated with salt, fully an inch thick on the bottom, which had accumulated from the water taken from the St. John river. The mill employed eighty hands, and was insured for $15,000.

ENTERPRISING LUMBERMEN.

AMONG Canadian lumbermen, who, by their operations show perfect confidence in the future of lumber is to be named Messrs. Hale & Booth, of Pembroke. A fortnight ago we noted a heavy purchase of limits at that time concluded by this firm with the Muskoka Mill and Lumber Company, Toronto. A survey of their operations within the past year shows that altogether their purchases within this time represent not less than $500,000. They may be particularized as follows: January, 1894, they purchased from Wily Bros., of Saginaw, Mich., limits to the value of $80,000; August, from R. Burt, of Saginaw, timber lands to the value of $65,000; November, from the John Spry Lumber Co., of Chicago, timber to the value of $20,000, and to these is to be added those purchased from the Muskoka Mill and Lumber Co., berths 136 and 137 on the north shore of the Georgian Bay, the price said to be $350,000.

They are also heavy operators on the Vermillion River; their output this season will be about 20,000,000 feet of white pine logs, which will be driven to the mouth of the Spanish River. They have extended their business to Michigan, among the lumber kings of that state. Their output there will be about 200,000 cubic feet of board or Waney white pine.

Recently they have purchased from the Perry Lumber Co., of Sault Ste Marie, Mich., 300,000 cubic feet of board or Waney timber, making a total of 500,000 cubic feet of timber, which will string 22 inches and 26 feet lineal. This will be the finest lot of timber that ever left the shores of Lake Superior. We understand that the timber will be brought to Quebec and there prepared for English markets.

The firm are now with a large force of teams and men moving supplies to berths 136 and 137 before the spring opens, and expect to be in readiness for an early start next summer. Evidently Hale & Booth can take a prominent place among the lumber kings of the continent.

TRADE NOTES.

P. W. Ellis & Co. are finding ready sale among the mills for their special silver solder for repairing band saws. A great deal of it has been used, and is said to have given satisfaction in every way. It flows easily and is very strong. They roll it very thin and cut it to any size.

The Wm. Hamilton Manufacturing Co., of Peterboro', Ont., have recently received an order from Audre, Cushing & Co., St John, N. B. for one of their well known Prescott band mills.

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H. P. Eckardt & Co.
WHOLESALE GROCERS - TORONTO.
A call from buyers when in the city solicited.
Letter orders have careful and prompt attention.

CAMP SUPPLIES

Being extensive operators in the lumber business, as well as Wholesale Grocers, we are exceptionally well qualified to fill orders for Lumbermen's Supplies.
MAIL ORDERS GIVEN PROMPT ATTENTION.

DAVIDSON & HAY
Wholesale Grocers TORONTO

Pumps & HYDRAULIC MACHINERY

DUPLEX AND SINGLE STEAM AND POWER

THE NORTHEY MFG. CO., Ltd.
TORONTO

PERSONAL.

Alderman James Scott, manager of the Georgian Bay Lumber Co., is on a holiday trip south.

Mr. John Waldie, manager of the Victoria Harbor Lumber Co., has been nominated by the Liberals of Halton, for the Commons in the coming Dominion elections. Mr. Waldie, some years ago, was the Liberal member for Halton.

John Armstrong, of the firm of S. & J. Armstrong, McKellar, Ont., died of pneumonia at Parry Sound on the 16th of March. Mr. Armstrong has been contracting in logs in this district for over 28 years, and has lumbered in nearly every township on the west side of the district.

ROPE DRIVES.

FOR rope drives, the common rule is not to make the diameter of the smallest pulley less than thirty times the diameter of the rope, and even larger than this is to be preferred. For wire rope it should be still more, and from 50 to 100 times the rope diameter is the common practice when these are used. Excepting for very long transmissions, the wire is seldom used in regular driving, as its weight is objectionable, and its advantages are not enough to make it popular over manilla or cotton ropes.

"MYSTERY" OF BOILER EXPLOSIONS.

WHILE the "mystery" that has so long surrounded boiler explosions seems to be gradually lifting, a great many of the things occurring around an active steam plant have a tinge of the marvelous about them that has a decided tendency to quicken the perceptive faculties of the man who is called on to wrestle with them. A short time ago a neighbor asked my opinion as to the singular action of his boiler, which he had left with nearly three gages of water the night before and had found it in the morning without any water visible in the glass. He was confident that none of the valves were leaking, and when that explanation was suggested, and could not imagine any probable way to account for this loss. A few days afterwards I met him again, and the matter had been cleared up to his satisfaction. It seems that the day before he had left the boiler in the same shape as he commonly did, which sometimes included a partially opened injector valve. As he drew his feed water from a barrel, when the injector ceased working it became virtually a siphon, which drew the water out of the boiler. As on the latter occasion he had merely shut down for dinner, he had returned before much of the water had got out, but it is safe to say that he will be careful to shut all valves hereafter.—F. Riddel in Power.

ADVANTAGES OF WOOD PULLEYS.

THE practical advantages of wooden over iron pulleys are briefly summarized by Power and Transmission as follows:—

Saving in power by better traction surface for belt, 33 per cent.

Saving in weight, 70 per cent.

Reduced size and weight of shafting, hanging, etc.

Corresponding saving in power required to overcome friction in bearings, etc.

Gain in safety speed limit, 400 per cent.

Saving in time in putting on or off the shafts.

Saving in time in procuring pulley when wanted.

Saving in avoiding mutilation or distortion of shafting.

All these considerations become augmented in importance as speeds are increased, and are, therefore, of especial interest to all who are operating electrical machinery.

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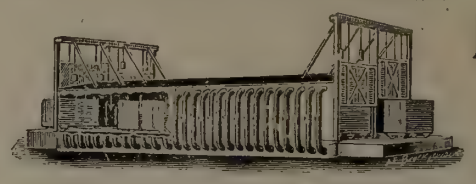

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Dodge Wood Split Pulley Co.

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Shingle Machinery a Specialty

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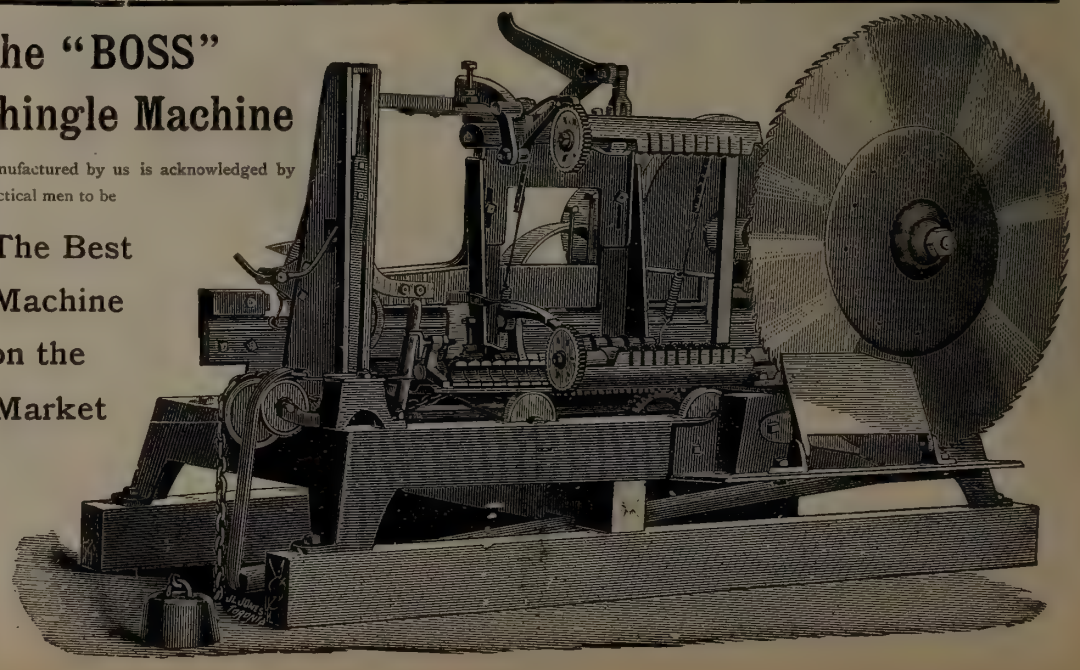
The "BOSS" Shingle Machine

Manufactured by us is acknowledged by practical men to be

The Best Machine on the Market



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COST of erecting, running and maintaining the lowest and results the highest of any dry kiln and drying system in the market. Green Elm, Ash, Whitewood, &c., for furniture dried in six days; only exhaust steam 10 hours per day used.

NO CHECKING, WARPING OR CASE-HARDENING.

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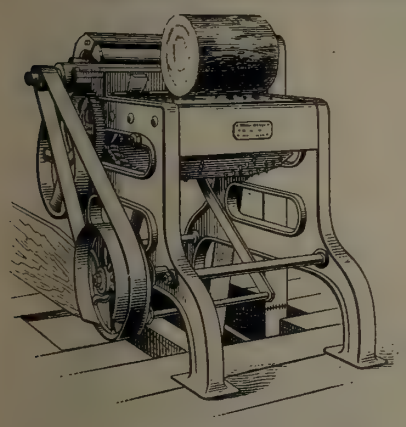
. . . STEARNS BROTHERS . . .

Patent Rossing Machine



Why you should use this Rosser.....

It will do double the work of any other.
It is the only machine made that will peel Cedar Shingle Blocks.
It will peel dirty blocks without taking the edge off the knives as they cut from the clean bark or block out.
It is a self-feeder, and very easy to operate.
It requires less power than a face wheel.
All iron and steel, very simple and durable.
It will ross knotty and uneven timber without waste.
It occupies about the same space as an ordinary planer.
You can have a chance to try a machine before buying it.

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LUMBERMEN'S OUTFIT

.....IS NOT COMPLETE WITHOUT.....

STEEL or CAST SKEIN 3¼, 4, or 4¼ Inches.

ANY WIDTH TIRE

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BAIN'S HEAVY LOG TRUCKS

We solicit a trial order this spring. Our goods are fully warranted. We guarantee satisfaction in every case. Further information cheerfully furnished. Address all inquiries and orders to

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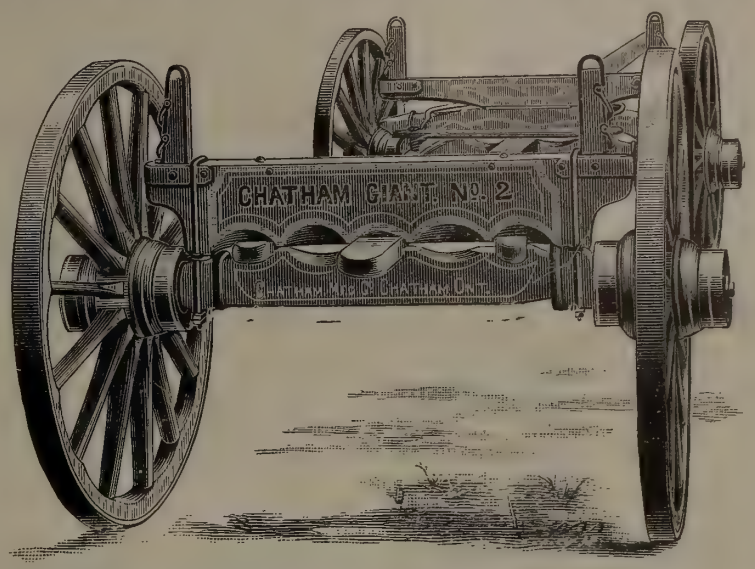
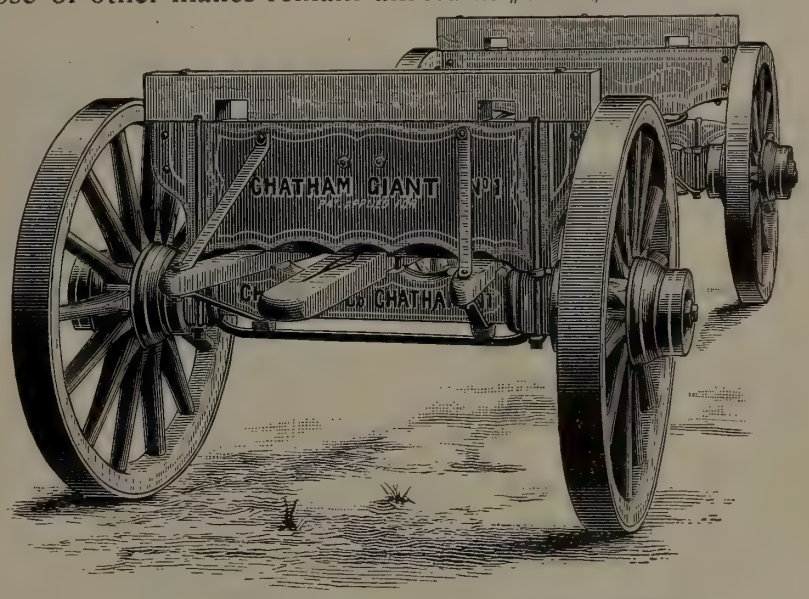
THE CHATHAM GIANT LOG TRUCK.



IT must be self-evident that our GIANT ARM LOG TRUCKS, of which the above is a faithful illustration, is the best log truck made; but if conclusive evidence of this is wanted we refer to every mill man and lumberman in the county of Essex, Ont., where millions upon millions of Elm logs are gotten out every year on them, and where these trucks sell readily, while those of other makes remain unsold at $5 to $10 less.



THE CHATHAM GIANT LOG AND LUMBER TRUCK.

As seen above it is a Lumber Truck, but it is quickly converted into a Log Truck by bunks which are grooved at the ends to receive the stakes and slip down between them, and are perforated for side or lug poles. We build these trucks in all sizes from 2½ to 4 inch Malleable Giant Arms. Farmers all over are extensively adopting the lighter sizes as general purpose wagons.

In reference to above trucks we would call the attention of the reader to the following illustration of VANALLEN'S PATENT GIANT ARM with which they are equipped.

It will be seen that the hind bolster and sand-board are formed to rest upon the flat top of this arm, and being securely clipped to the axles forms a complete and solid truss and render the axles unbreakable and inflexible.

Our Malleable Giant Arm farm and teaming Wagons have no equals on this continent, of which the judges on vehicles at the World's Fair, Chicago, gave us an unqualified certificate in the shape of a GOLD MEDAL AND DIPLOMA.

CORRESPONDENCE SOLICITED.

The Chatham Manf'g Co., Ld.

CHATHAM, ONT.

TRANSMISSION.

The transmission of power by ropes has been largely resorted to in England, the preference being given to what is known as the Lambeth cotton rope, which is made of four strands, the center or core of each strand being bunched and slightly twisted, the outside of the strand having a covering of yarns that are firmly twisted. The four strands are further laid with a core in the center to form a rope and twisted in the same way as any four-stranded rope. In this way a rope is formed possessing extreme flexibility, and the fibers will not break by bending on each other when run on pulleys, the rope also standing elongation or stretching some twelve inches in a length of fifty inches before breaking.

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FINE SITES FOR NEW MILLS
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INTELLIGENT HELP OF ALL KINDS
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For full information write to the undersigned for a copy of the pamphlet entitled

100 Cities and Towns WANTING INDUSTRIES

This will give you the population, city and county debt, death rate, assessed valuation of property, tax rate, annual shipments, raw materials, industries desired, etc.

To sound industries, which will bear investigation, substantial inducements will be given by many of the places on the lines of the Illinois Central R. R. which is the only road under one management running through from the North-Western States to the Gulf of Mexico. GEO. C. POWER Industrial Commissioner I.C.R.R. Co., 506 Central Station, Chicago.

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WE are in the market for one million feet of 4 x 4 scantling, and three million feet of 2 inch plank, as follows: Plank to be good, common 12 and 16 feet long, 20 per cent. of it 6 inches wide, 50 per cent, 8 inches wide, and 30 per cent. 10 and 12 inches wide. Scantling to be 4 x 4 and 10 to 16 feet long, coarse, common, square-edged: all to be delivered between June and December, 1895. In quoting, state separate price for white and red pine, and quantity of each you wish to contract for.—**THE REID CO., OF TORONTO, Ltd.** Head office, cor. King and Berkley Streets. No contract will be made for less than 100,000 feet.

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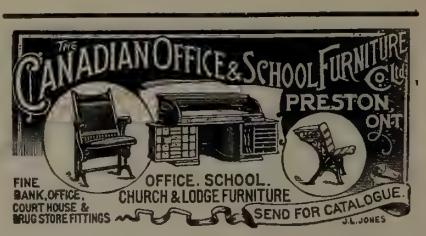
Boiler Improvement

Any person using a Steam Boiler can save 50 per cent. of their fuel and get 50 per cent. more power out of their boiler by having

CALCUTT'S WATER-TUBE IMPROVEMENT

attached. The expense is only a trifle compared to the saving derived. Send for Circular, Box 55, Peterborough, Ont.

Peterborough Steam Boiler Company



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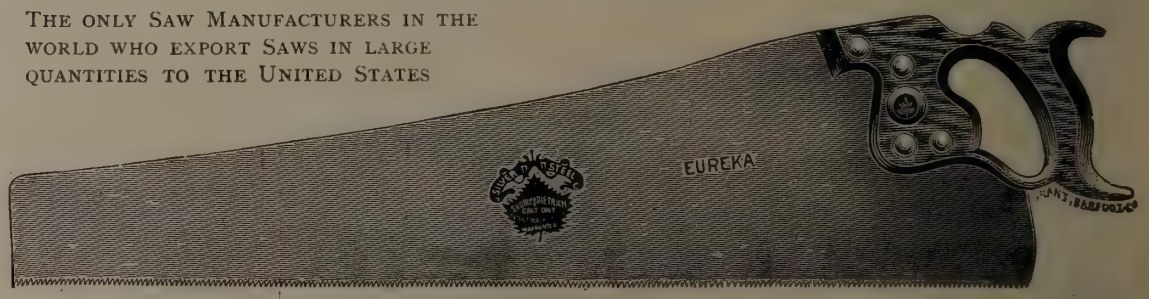

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WHY BAND SAWS BREAK

SIXTEEN REASONS, AND HOW TO AVOID THEM

Being instructions to filers on the care of large band saw blades used in the manufacture of lumber.

A book filled with valuable information on the care of band saws. Giving the reasons for breaking; analyzing each reason; giving instructions to dispense with the causes as laid down in each reason; and full details on filing and brazing. The proper styles of hammers to use are illustrated and described, and views of blades showing the blows of the different styles of hammers form an important part of the illustrations. Improper and unequal tension are then treated, and the manner of properly setting irregular teeth is described. In connection with the treatise is a history of the invention, manufacture and use of the saw from its origin to the present time. The work in whole makes an accumulation of information such as has never before been published.

The book is printed on fine paper, good clear type, and is handsomely and substantially bound in cloth. It will be sent to any address on receipt of the price, **ONE DOLLAR.**

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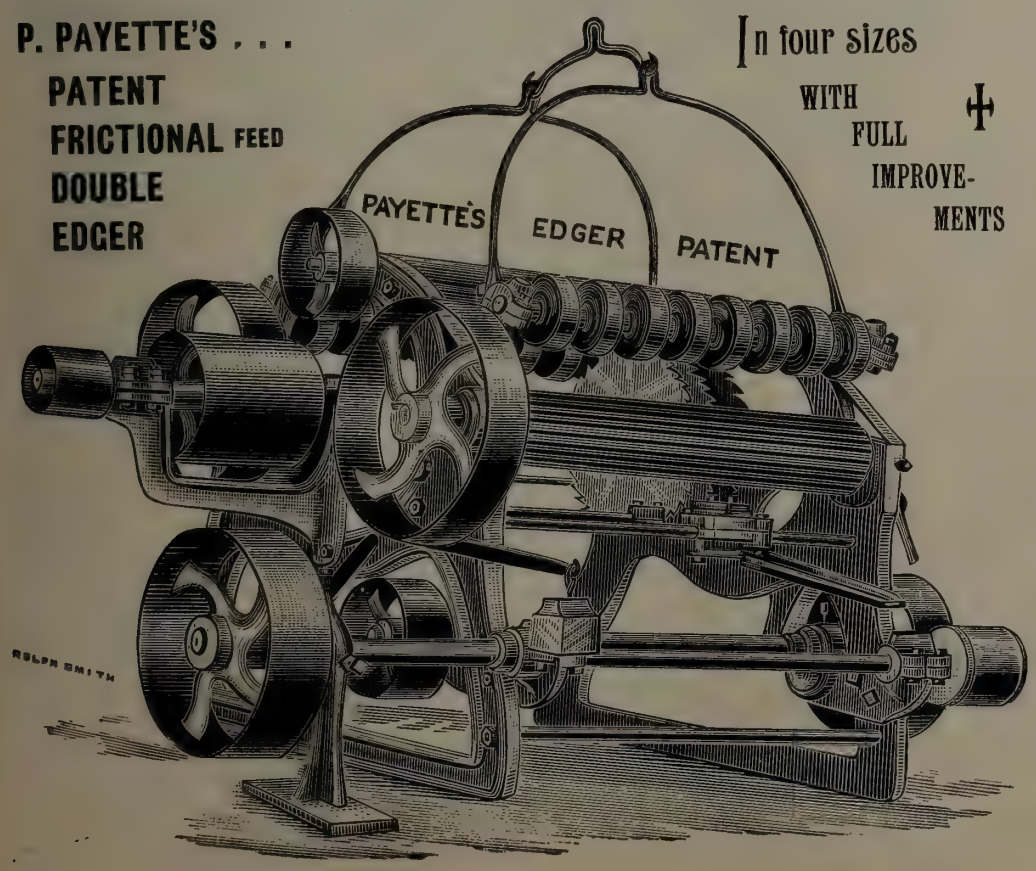
In four sizes WITH FULL IMPROVEMENTS



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Circular Saw Rigs, Light and Heavy Wood or Iron Frames.
Rope and Chain Feed for Saw Carriages.
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Double Edgers, Friction and Direct Feed.
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Machinery for Lath Mill.
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For through rates, information and list of lumber dealers, apply to any officer of these lines or connections, or to

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Contracting Agent, 115 Board Trade
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Ontario Agent, Board Trade
TORONTO

CAPT. J. H. WILLIAMS
15 Lumber District, Albany, N. Y.

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General Freight Agent, Ottawa.

P. S.—The opening of the Ottawa, Arnprior and Parry Sound Railway, Ottawa to the Georgian Bay, offers to the manufacturer and purchaser a new district not heretofore reached by any other line.

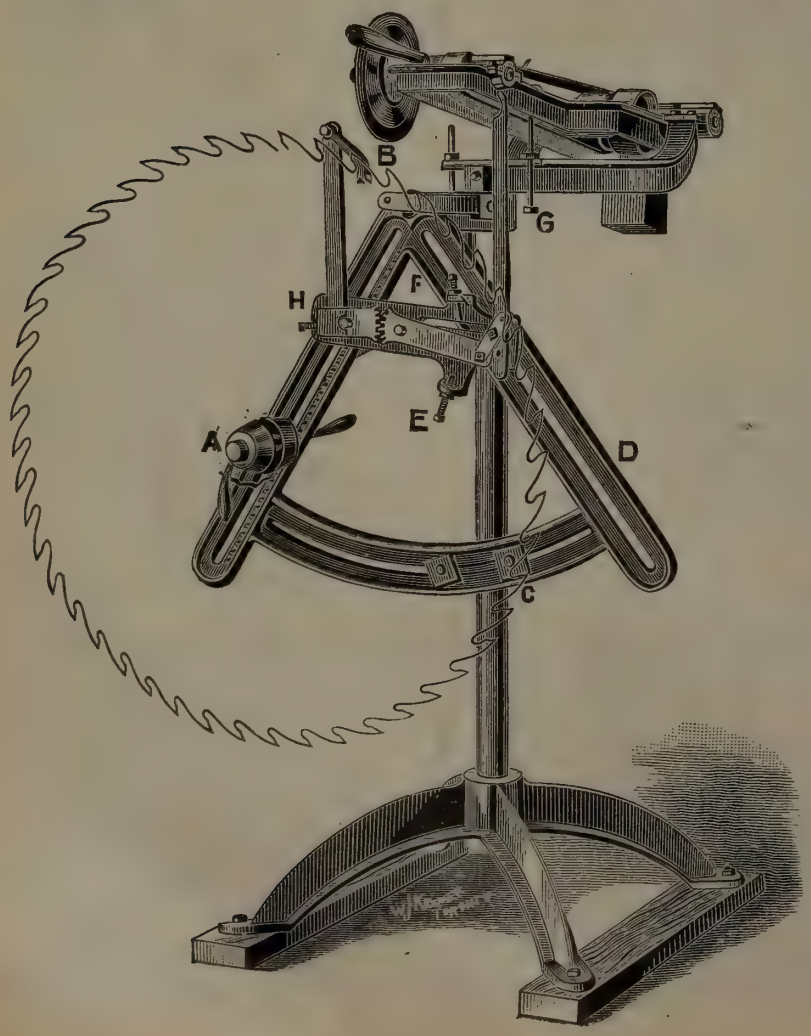
The XXX Saw Gummer and Sharpener

HAS NO RIVAL

FOR VARIETY, CAPACITY OR QUALITY OF WORK

... OR FOR ...

SIMPLICITY, DURABILITY, CHEAPNESS



Will take saws from 6 inches to 6 feet diameter; sets the saw forward one tooth at a time automatically; sharpens any saw (rip or crosscut) perfectly, giving the teeth any desired pitch or bevel, and making all the teeth exactly alike. Will sharpen 20 teeth in an ordinary saw mill in one minute, or 100 teeth in a shingle saw in four or five minutes. The cut shows outline of mill saw 54-inch diameter.

GILMOUR & CO.
Lumber Manufacturers and Dealers

TRENTON, ONT., 26th August, 1891.

F. J. DRAKE, Belleville, Ont.:

Dear Sir,—Your Patent Saw Sharpener is giving us good satisfaction. We average about 100,000 shingles per day, and sharpen the saws for both automatic and hand-feed machines with your Sharpener. As it keeps the teeth all perfectly uniform it must be easier on the machine and sawyer too. It causes also a great saving in files. We now use only about one ten-inch file per week. Before putting in your machine we used about six per week. As regards your Improved "XXX" Shingle Packer—it works first-rate and is the only machine we could get that would press tight enough. We consider it the best we ever had.

Yours truly,

GILMOUR & CO.

MANUFACTURED ONLY BY

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BELLEVILLE, ONT.

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View—it's all the same—from
...every point the...

NEW ALLIS

Stands . .
Unrivalled

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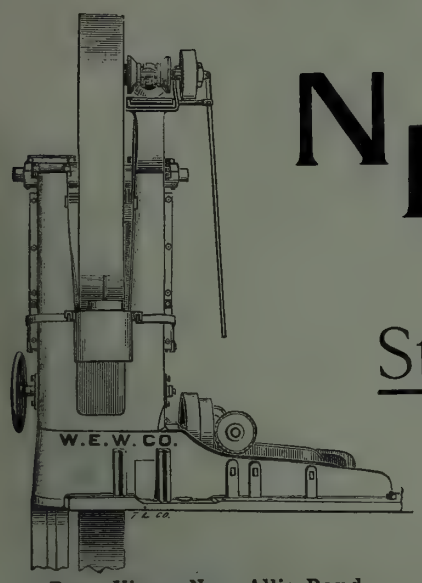
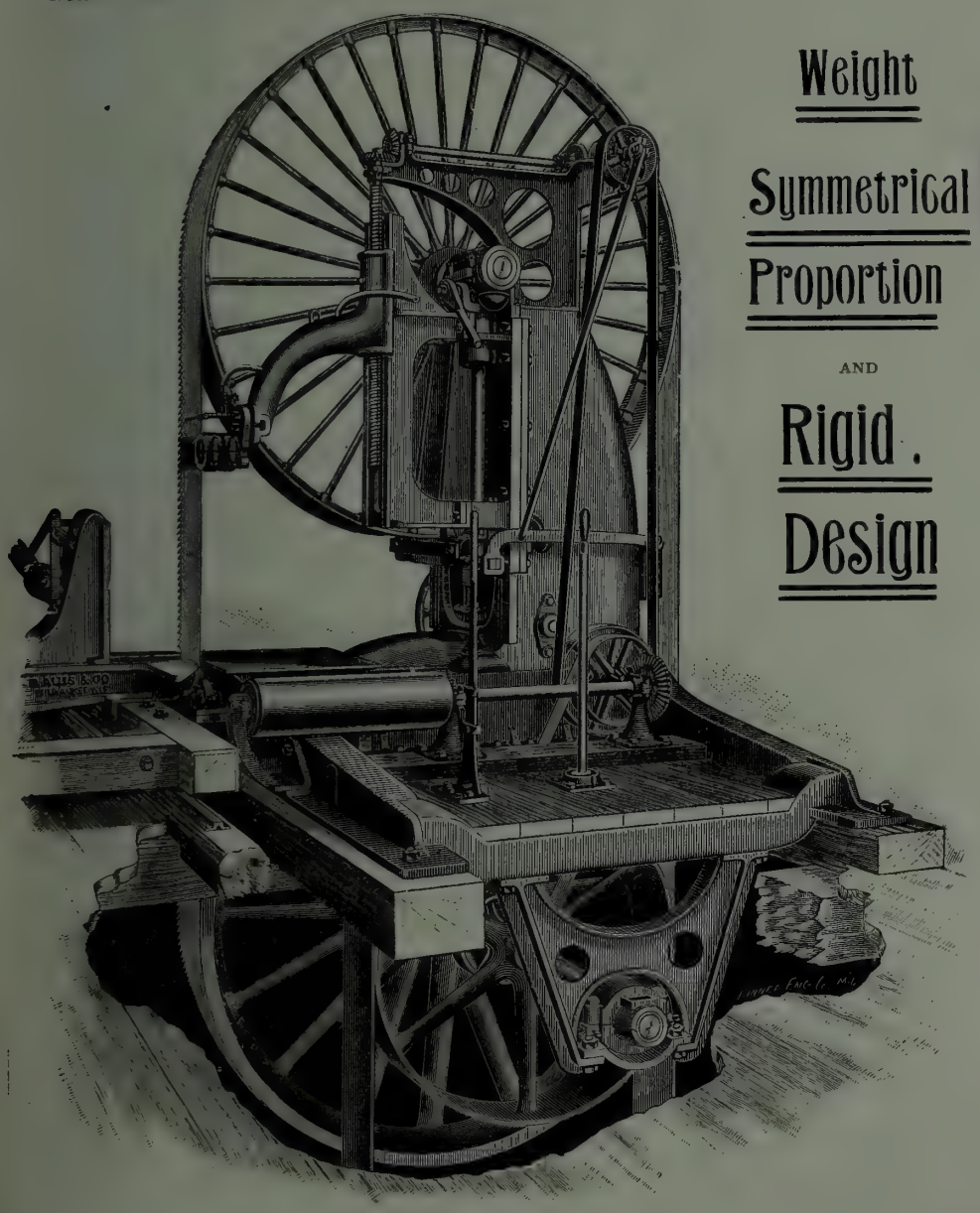
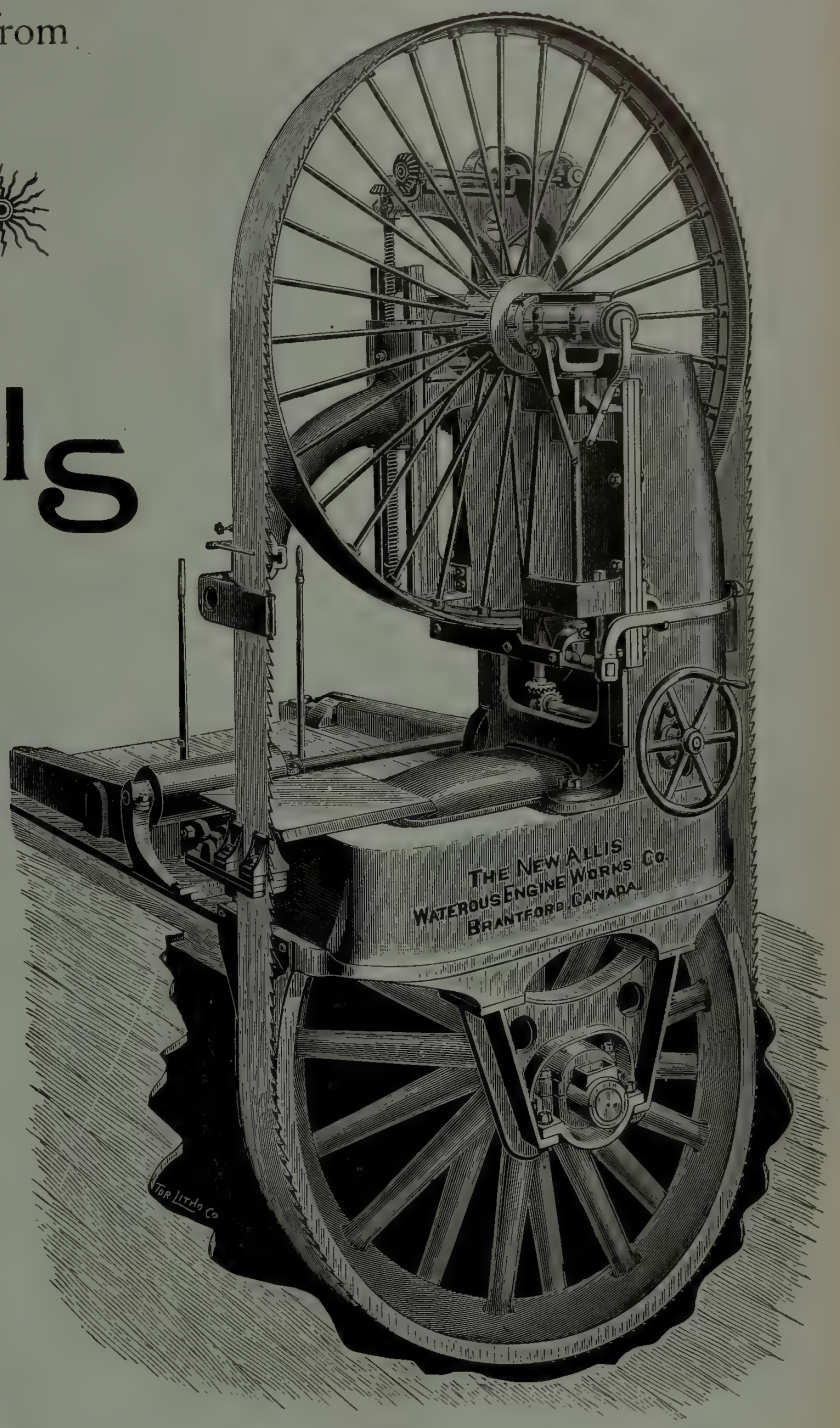
Weight
Symmetrical
Proportion
AND
Rigid .
Design



Rear View—New Allis Band.



Back View—New Allis Band.



Front View—New Allis Band.

Only Band with upper wheel in center of shaft and column.

Only Band with both wheels hung inside of frame.

Patent safety lower wheel removes all casting strain on wheel.

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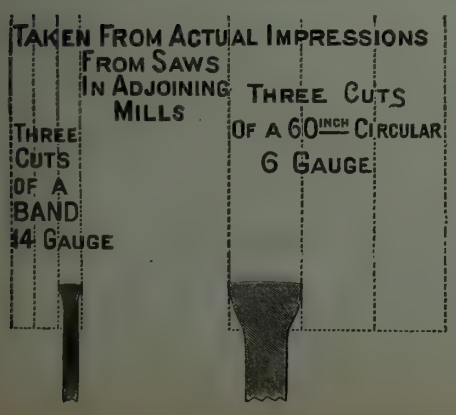

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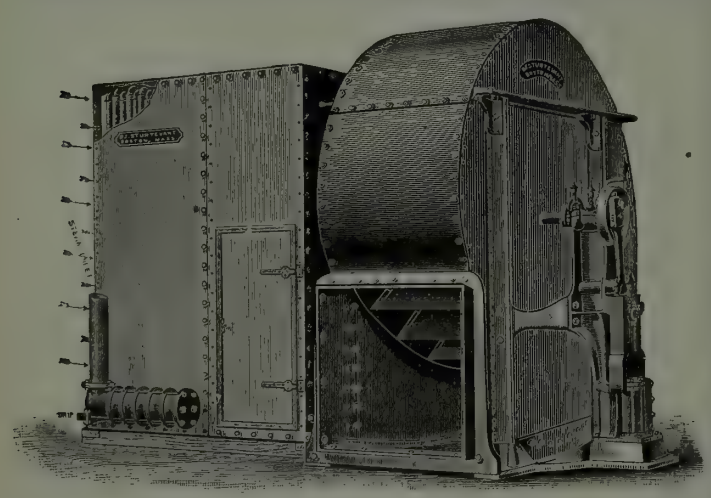

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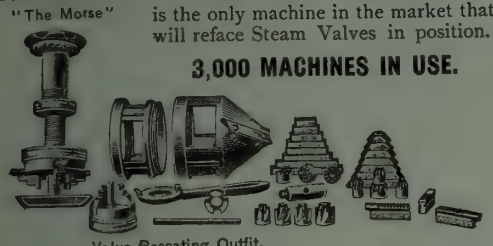

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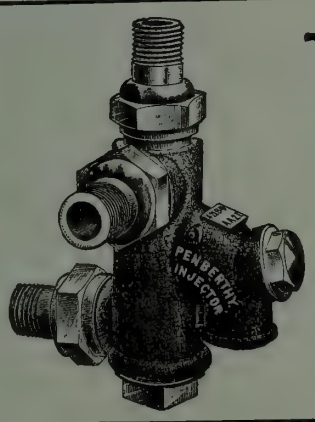

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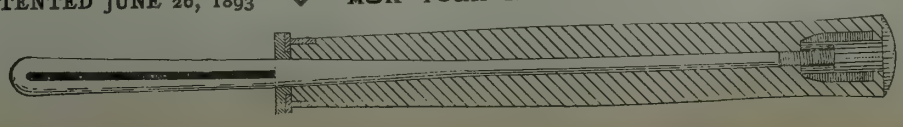

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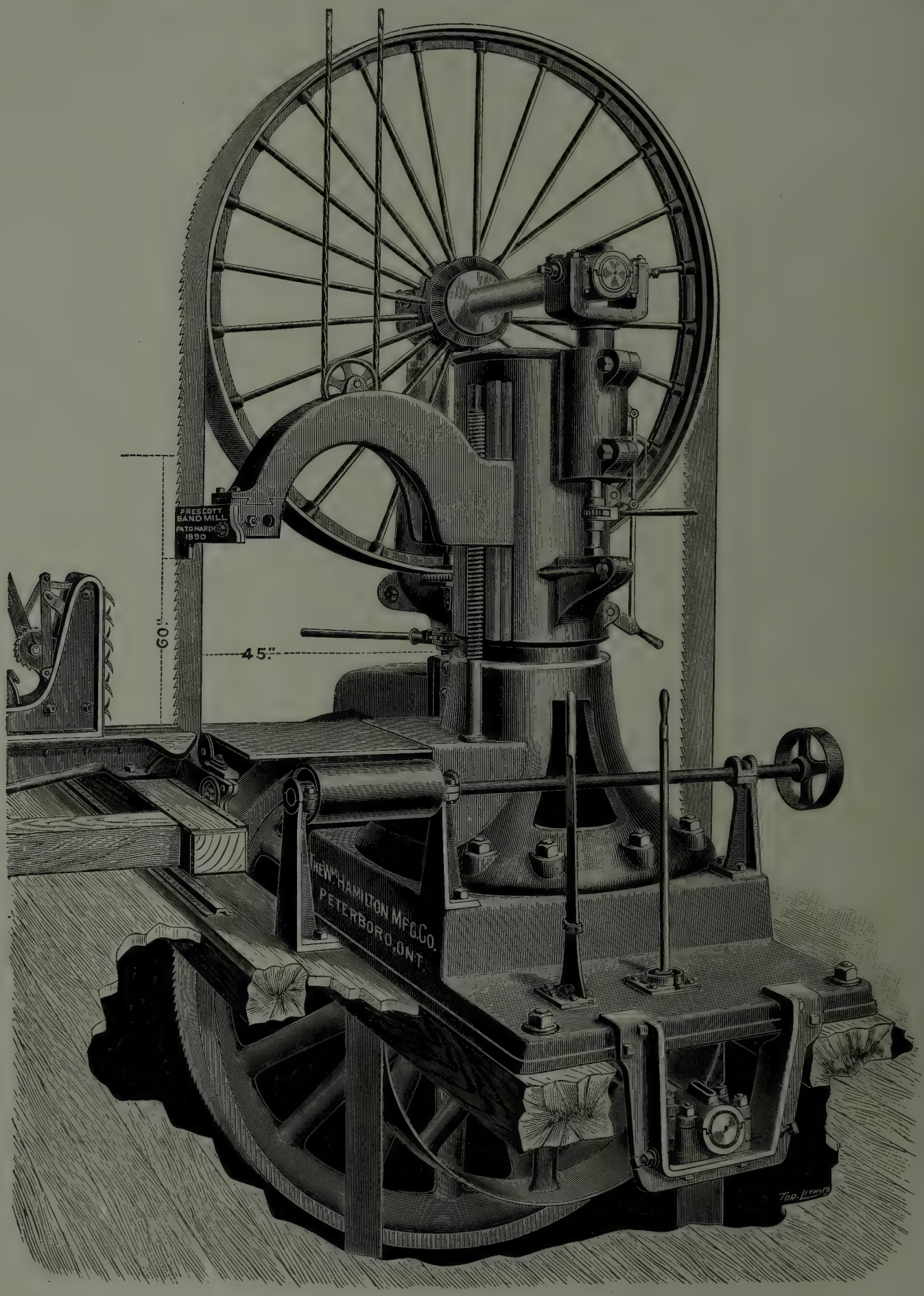

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THE CANADA LUMBERMAN

VOLUME XVI. NUMBER 5. } TORONTO, ONT., MAY, 1895 { TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

BRITISH COLUMBIA TIMBER WEALTH.

TO thousands who have no particular interest in lumbering British Columbia has become famed for the size and beauty of its forest products. The illustration that we give on this page is a familiar one to those who have made themselves acquainted with the natural resources of the province. Where to the traveller, and student of Canadian history, however, the giant cedars of the Pacific Coast are a thing of beauty and wonderment, at the same time, from a commercial point of view, they tell of a measure of wealth that finds few parallels in any other part of the Dominion.

The forest area of British Columbia is 285,000 square miles or 182,400,000 acres. This area is densely covered with some of the most valuable timbers that are known to the lumber world. The most prominent and valuable of these is Douglas fir, named after a noted botanist of that name. It is not local to any particular section, but is distributed generously throughout all parts of the coast. For many commercial purposes it fills a place, that bars out any competitor, because of its immense length, strength and straightness. Some of these trees grow to a height of 300 feet, and have a base circumference of 50 feet. The best averages, however, are 150 feet clear of limbs and 5 to 6 feet in diameter. Professor Macoun classifies it as standing midway between the spruce and balsam, and expresses the view that it would make a valuable paper-making tree. In a day when much value is attached to spruce for paper-making, if Professor Macoun is correct in his diagnosis of its properties the time cannot be far distant when Douglas fir will also be sought after for this purpose.

Both from the picturesque, as well as the commercial standpoint, the red cedar (Thuya Gigantae) follows closely after Douglas fir. This tree is likewise well distributed throughout the province, though it reaches its greatest size and majesty on the coast, where it quite outgirths any other tree. As a general-purpose timber red cedar is the most valuable of the Pacific Coast woods. It grows to a height, sometimes, of 200 feet, and 20 feet in diameter. The settler on the coast finds it beside him when building his rude hut, whilst the resident who has reached the point where he has discarded the humble beginnings of his early struggles finds in red cedar a wood that gives beauty and finish to the finest mansion. For inside finish it takes a beautiful polish and is in popular demand for the interior finishing of residences, not alone at home, but to a wide extent, abroad. Just at the present time interest centers around this wood because of the hindrance that has been placed upon its export by the ruling of the United States custom authorities in placing it under the 25 per cent. duty list. It is expected, however, that this difficulty will be shortly overcome. A companion wood to red cedar is the yellow cedar, which is possessed of great durability and likewise grows to a great size.

On the coast is found a species of spruce, known as white spruce (Picea Sitchensis), which is found interspersing the forests where the other trees grow, and in swampy lands. In circumference it is almost the equal of Douglas fir, but does not grow to nearly the same height. It makes a beautiful lumber for doors, dressing, etc., and large quantities of it are used in making salmon boxes, fruit boxes, and to some extent, barrels. Other woods of the coast are hemlock, white pine, (though this is in no way to be ranked along with the white pine of Ontario), cotton wood, balsam, and crab apple, which grows in swampy ground.

The area covered by timber in British Columbia is not the most remarkable feature of the province. Its density is so great that as high as 500,000 feet have been taken off a single acre, and it is recorded that on one acre in the Comox district 508,000 ft. have been found. This, of course, is exceptional, but a fair average would run as high as 75,000 feet.

With forest products in rich abundance, it is to be expected that the saw mill industry would take rank as one of the most important of the province. At present there are upwards of 60 saw mills in British Columbia, with a daily capacity of over 3,000,000 feet. The whole cut of the province last year was 65,000,000 feet.

PRIMEVAL FOREST GROWTH, BRITISH COLUMBIA—A GIANT CEDAR.

Speculation is indulged in there, as in other lumber producing countries, as to the possible longevity of its timber resources. Mr. R. E. Gosnell estimates that there are over 100,000,000,000 feet of good timber in sight, and that the present saw mills running, fully employed and making an average output, would take between 150 and 200 years to exhaust the present supply. Another authority has figured down the possibility in this respect as low as 60 years. One thing we may be certain of, taking other countries as an example, that British Columbia will come to the end of its timber resources much earlier than they anticipate. It seems a difficult matter in all new lumbering districts, whilst the virgin timber exists in great abundance, to impress lumbermen with the fact that, as steady droppings wear away the hardest stone, so will continuous, and too often prodigal, cutting wear away the wood products of a country, as rich even in their resources as British Columbia.

British Columbia will rise to its greatest importance as a lumber district after lumbermen have exhausted the province of Ontario and other provinces of the Dominion. Then they will flock to the coast, and as has been remarked, the men who possess large holdings of timber will find themselves quickly becoming millionaires. This pleasant experience has fallen to the lot of several in Ontario and Quebec, who years ago bought limits at practically a nominal price, and in later years disposed of them at a figure to represent a handsome margin.

The lumbermen of British Columbia find a market for their products both at home and abroad. As the province itself has grown, and the adjacent northwest territories and Manitoba, they have been able to cultivate a domestic trade of fair volume, and one that will grow as the country grows. Large quantities of timber are exported to Great Britain, Australia, South Africa, South America and other foreign points. This trade will receive a great stimulus when the projected Nicaraguan Canal has been completed. Since the removal of the United States duty a fresh market has been found in California, and within the past four or five months some considerable shipments have gone into that territory, and the trade is growing rapidly. It may be expected that in time it will be found profitable to send these products a greater distance than simply the neighboring state of California.

The red cedar shingle industry has reached large proportions on the coast, and these shingles are well known, not only in their native province, but throughout Ontario, and to some extent they have been placed in different parts of the United States. Just at present this industry is in somewhat a depressed condition, suffering from that bane that comes to every business that seems to show great possibilities —over production.

Mr. J. R. Anderson, provincial statistician, is authority for the statement that the total extent of lumber leases in British Columbia is 524,573 acres and the principal owners or lessees are as follows :

	Acres.
British Columbia Mills, Timber and Trading Co., Ltd.	87,433
Toronto and British Columbia Co.	60,982
McLaren-Ross Lumber Co.	51,190
Vancouver Saw Mill Co.	36,306
Brunette Saw Mill Co.	22,331
Victoria Lumber and Manufacturing Co.	18,537
Andrew Haslem	17,934

Leases of surveyed, unpre-empted crown lands may be obtained for a period not exceeding 21 years by those tendering the strongest cash bonus subject to the payment of an annual rental of 10c. per acre and a royalty of 50c. per thousand feet on the scale measurement of the logs. The lessee, though not actually engaged in the manufacture of lumber, must, to retain his limits, erect a mill capable of cutting at least 1,000 feet a day for over 400 acres of land included in the lease, within two years, and give a guarantee equivalent to 10c. an acre that he will do so before obtaining his lease. A timber license may be granted for 1,000 acres for four years on payment of $10 annualy and 15c. for each tree (except hemlock), and no person not licensed may cut timber on crown lands except for farming and mining purposes. Only one license at one time is obtainable and is not transferable. A special license for 1,000 acres for one year may be obtained by application in the Official Gazette and the payment of $50 to the chief commissioner of lands and works.

The Upper Ottawa Improvement Co. has commenced its operations for the season, when the first gang of men went to work on the booms and saw logs left from last fall in Thompson's Bay. The start this year is about two weeks later than last season, on account of the river not being clear of ice. There will be no rafts of square timber down for some months, as all of last year's timber passed down to Quebec before the winter closed in.

TRANSMISSION OF POWER BY BELTS.*

By Geo. Fowler.

I VENTURE to say that there are few appliances so much abused and neglected as the one under consideration, namely, the old and tried friend of all shops and factories, the belt. We find it stretched out of all resemblance to its former self. We see it laced in a slipshod manner with perhaps half the lace holes torn out, giving opportunity for the belt to catch against the fingers of the shifter and finally tear out and come down on somebody's head. When we go into a shop or factory and see the belts in the condition described, we are pretty sure to find a shop where the time of attending to the shafting, hot bearings and attendant ills would make a big item in the accounts if it was counted on the list of running expenses. But this kind of a shop never keeps much account anyway, and guesses at the charges to be made for work, with the result of losing money.

It is not idle capital to have belts running slack and doing less work than they might possibly be made to do, for it is much better to have the capital invested in this way than to have delays, cut boxes, and the annoyance that follows in the wake of all unsatisfactory machinery and parts in the whole establishment. It is a pleasure to see a nicely running belt, to go into an engine room and see the great driving belt that is running the whole of a great plant and doing it without apparent effort, the belt running so loose as to give a sag to the upper half, and the lower half running straight as a line. This is a sure sign that the journals are running cool and everything is going along nicely.

I do not wish it understood that everything in this paper is original with me; on the contrary, some of it is borrowed from the best engineering practice in the country. I have been very generously assisted by the several belt manufacturing companies, who gave me good hints on the use of belting. I have also studied such works as Morin's, Cooper's, Nicholson's, Thurston's, and out of these I have taken and adopted several valuable rules and formula.

There are few engineers who have not been frequently in want of information or readily applicable formulæ, upon which they could place reliance, giving the power which, under given conditions and velocity, is transmitted by belts without unusual strain or wear, therefore I believe it is well to study the experiments which are given in the works of the different authors, and acknowledge and adopt formula therefrom, and apply it to daily use. But in doing so we must be careful, because, notwithstanding the existence of this mathematical and experimental information, the numerous tables that have been given by mechanical engineers appear to have had only that kind of a basis which has come from guessing that an engine, or a machine, either the driving or the driven, with a belt of given width, was producing or requiring some quantity of power which might be expressed in foot-pounds generally without any stated arc of pulley contact. For instance, one writer says that a single leather belt one inch wide, running 1000 feet per minute, will transmit .76 horse power; another asserts .93 horse power; another claims one horse power; another makes out 1.33, and still another figures it out to be 1¾, and so on, thus producing conflicting testimony.

The rule which I have acknowledged and adopted may be thus expressed: An ordinary single leather belt one inch wide, with a velocity of 600 feet per minute, will transmit one horse power. After an examination of different text books, I find that General Morin's data gives us the clue to the truth of this rule, and also that it is supported by other good authority. Morin says: "Belts which are designed for continuous service may be made to bear a tension of .551 lbs. per .00155 square inches of section, which enables us to determine the breadth according to the thickness." This is equal to 355 lbs. per square inch of belt leather, and is also equal to about one-tenth of the breaking strength of the same as given by Mr. Rankine and other good authorities. Cooper in his works says if we substitute 330 lbs. for 355 lbs. per square inch, we strike the component part of a horse-power and deduce the following: one square inch of belt leather at a velocity of 100 feet per minute will transmit one horse power with safety, and from these data get the rule: The denomination of the fraction which expresses the thickness of the belt in inches, gives the velocity in hundreds of feet per minute at which each inch of width will transmit one horse-power; and as the ordinary thickness of a single leather belt is generally about ⅙ of an inch, we simply multiply the denominator of this fraction by 100 and get the 600 feet at which a single strap one inch wide should run to transmit one horse power.

No rules can be given that will apply to all cases—circumstances and conditions must and will modify them. Belts, for instance, for machines which are frequently stopped and started, and shifting belts, must be wider to stand the wear and tear and to overcome the starting friction, than belts which run steadily and continuously. The breaking strength per inch width of belts when made from good ox hide, well tanned, has been determined as follows:

In the solid leather	675 lbs.
At the rivet holes of splices	362 "
At the lace holes	210 "

Engineers are often required by their employers to put up new shafting, pulleys and belts for the purpose of doing an additional amount of work which may be stated in horse power, and the matter of proper dimension of same, such as size of shaft, diameter and speed of pulley, width of belt, etc., are left to the judgment of the engineer. I have no doubt that a majority of the members of this association are perfectly competent to oversee such work, but to those whose practice along this line has not been very extended, and who may be called upon at any time to take such matters in hand, I offer the following information, which is taken from standard works and may be relied on for everyday use:

The safe working tension is assumed to be 55 lbs. per inch of width, which is equal to a velocity of about 50 square feet per minute per horse power, which is safe practice.

Now let C = circumference in inches of pulley,
D = diameter in inches of pulley,
R = revolutions per minute,
W = width of belt in inches,
H = horse power that can be transmitted by belt.

Then, to find the horse power that a single belt can transmit, the size and speed of pulley and width being given, the formula would be:

$$\frac{C \times R \times W}{144 \times 50} = H, \text{ or } \frac{C \times R \times W}{7200} = H,$$

or we may still further simplify the process by substituting D for C and divide the constant 7200 by 3.1416, which is the proportion of circumference to diameter. The formula would then be $\frac{D \times R \times W}{2300} = H.$

The transmitting efficiency of double belts of average thickness is to that of single belts as 10 is to 7, therefore for double belts the formula would be $\frac{D \times R \times W}{1575} = H.$

The horse power to be transmitted, and the size and speed of the pulley being given, to find the width of belt required:

$$\text{For single belts} — \frac{H \times 2300}{D \times R} = W.$$

$$\text{For double belts} — \frac{H \times 1575}{D \times R} = W.$$

The horse power, speed of pulley, and width of belt being given, to find the diameter of pulley required:

$$\text{For single belts} — \frac{H \times 2300}{R \times W} = D.$$

$$\text{For double belts} — \frac{H \times 1575}{R \times W} = D.$$

The horse power, diameter of pulley, and width of belt being given, to find the number of revolutions required:

$$\text{For single belts} — \frac{H \times 2300}{D \times W} = R.$$

$$\text{For bouble belts} — \frac{H \times 1575}{D \times W} = R.$$

In the rules I have assumed that the belts are open, the pulleys of equal diameters, and the arc of contact is the semi-circumference. If, however, the pulleys are of different diameters and the arc of contact is less than the semi-circumference, the rules must be modified accordingly. The width of a belt required for any work depends on three conditions: 1st, the tension of the belt; 2nd, the size of the smaller pulley and the proportion of the surface touched by the belt; 3rd, the speed of the belt. The average strain under which leather will break has been found by many experiments to be 33,200 lbs. per square inch of cross section. In use on pulleys, belts should not be subjected to a greater strain than one-tenth their tensile strength, or about 330 lbs. to the square inch of cross section. This will be 55 lbs. average strain for every inch in width of single belt ⅙ of an inch thick. The strain allowed for all widths of belting (single or double) is in direct proportion to the thickness of the belt. This is the safe limit, for if a greater strain is attempted the belt is likely to be overworked, in which case the result will be an undue amount of stretching, tearing out at the lace holes, and damage to the joints.

The working adhesion of a belt to the pulley will be in proportion both to the number of square inches of belt contact with the surface of the smaller pulley, and also to the arc of the circumference of the pulley touched by the belt. This adhesion forms the basis of all right calculation in ascertaining the width of belt necessary to transmit a given horse power. A single belt ⅙ of an inch thick, subjected to the strain which I have given as a safe rule (55 lbs. per inch in width) when touching ½ of the circumference of the pulley, will adhere ½ lb. per square inch of the surface contact; or if the belt touches ¼ the circumference of the pulley, the adhesion will be ¼ lb. per square inch of contact, and so on.

Mr. Evan Leigh, C.E., of Manchester, Eng., gives the following rule for finding the horse power that any given width of double belt is capable of driving: Multiply the number of square inches of belt contact on the smaller pulley by one-half the velocity of the belt in feet per minute and divide the product by 33,000, and the quotient will be the horse power. Mr. Leigh also gives a rule for finding the proper width of double belt for any given horse power: Multiply 33,000 by the horse power required and divide the product, first by the length of contact in inches on the smaller pulley, and again by one-half the speed of the belt, the quotient will be proper width of belt.

Now, if these rules (which the author devised some 20 years ago) can be compared with the single straps as at present used in mills, it will be found that they considerably overshoot the mark; yet single belts, being so much weaker and more liable to stretch than double ones, ought to have less strain upon them. The secret of wide double driving belts running so mysteriously long without attention will at once be seen, when it is considered that single belts are generally made to do two or three times more than they ought to do for their width and speed.

For existing establishments where it is not convenient to alter the speed of shafting or size of drums, in driving machines with single straps, the following rule will come nearer to actual practice: Multiply 33,000 by the horse power required and divide the product, first by the length in inches covered by the belt on the smaller pulley, and again divide by the speed of the belt in feet per minute; the last quotient will be the proper width for a single belt.

This, and more than this, is what single belts are made to do when driving machinery. Comparatively, then, the strong double belts, working as per first rule, have exceedingly light work, which can be done with great ease while running in a slack state. Hence their durability, and the nearer a user of belts can approach the rule given for double belts, the longer his straps will last.

To determine the strength and size of a belt, find first the amount of labor to be performed by it. This labor is its tension with velocity. If a belt passes over a 3 foot pulley which makes 100 revolutions per minute, its velocity will be: $100 \times 3 \times 3.1416 = 942.48$ revolutions per minute. Now, if this belt is to transmit 2 horse power, its tension on the pulling side will be: $\frac{2 \times 33{,}000}{942.48} = 70$ lbs. In this case it is assumed that one side of the belt is slack; if this is not the case (which in the average of practical instances may be depended on), the tension on the following side of the belt is subtracted from the above. We here see of how much more service the horizontal belt is than the vertical one, for it increases the tension by its own weight and also by the arc of contact. In most of these cases we may neglect the width of the pulley in the calculations of friction; for the strength of the belt, if sufficient to stand the tension, makes the belt wide enough for adhesion. In all cases it is advisable to make the belt sufficiently wide. No other loss arises from too wide a belt than that of first cost. If a belt is too narrow or the arc of contact too short, the tension must be increased in order to afford sufficient adhesion to the pulleys.

Short belts are very disadvantageous and so are vertical ones; they always require more tension than either long or horizontal ones. Those which are too narrow will stretch, in consequence of which tension and adhesion are diminished.

The adhesion of leather upon smooth surfaces is greater than upon rough surfaces, and for this reason pulleys ought to be made perfectly sound and smooth. Frequently we see the surface of pulleys convex in order to prevent the running off of the belt, but this convexity must be very small, or it will diminish the adhesion.

It is of great importance that a belt should be of such a length that it will adhere to the pulley enough to prevent it from slipping without the necessity of putting on the belt so tight as to wear the bearings. Every belt, to run easy and well, should be so slack when running that the slack side should run with a wavy, undulating motion, without any tension except on the working side; and when belts will so run without slipping on the pulleys, they wear for a great length of time, for although a belt may be heavily loaded, yet if at every revolution it can have an opportunity for relief from its tension so as to contract back to its natural texture, it will prevent it from breaking by the stress upon it. But if it be kept constantly strained to its greatest extent on both sides of the pulleys it will wear but a short time and will soon be destroyed.

*Paper read before Toronto No. 1, Canadian Association of Stationary Engineers, February 8th, 1895.

McEACHREN'S PATENT DRY KILN.

THE accompanying illustration (Fig. 1) represents a double room progressive dry kiln as manufactured by the McEachren Heating and Ventilating Co., Galt, Ont., driven by independent engine. These kilns can be made of any length and any number of rooms from one to ten. The manufacturers claim that they differ from other kilns in use in the following particulars :

1. They will do from 50 to 100 per cent. more drying with a given amount of heating surface and a corresponding amount of steam.

2. They handle about three times the amount of air handled by any other dry kiln and with about 25 per cent. of the power used by other blast kilns.

3. The air is not only blown through the lumber, but drawn through. There being as much exhaustive product at one end of the kiln as forcing power at the other, the air is worked like a continuous belt.

4. The moisture from the lumber is held in the circulating air until the thickest lumber in the kiln is heated through to the centre ; then moisture is taken off gradually as it evaporates from the centre of every piece of lumber in the kiln. This process, it is claimed, completely secures against checking, warping, etc. The air being driven through the centre of lumber piles with great rapidity, the moisture is taken away as soon as it evaporates from the timber, thus preventing all danger from discoloration.

5. Green lumber may be put into the kiln and dry taken out every day, the same hot air being kept in circulation, and yet the moisture coming from the green lumber at one end of the kiln does not come in contact with the dry at the other end.

6. The great rapidity with which these kilns dry lumber enables the lumberman to season a given quantity per day, thus effecting a saving of about fifty per cent. in space as compared with some other kinds of kilns. To secure even drying of lumber the air must circulate with equal freedom around all parts of every pile of lumber in the kiln, and in case of weather seasoned lumber the circulating air should be kept from the ends as much as possible. These are already too dry to correspond with the centre, and being weather beaten and checked, will season faster than the centre with the same heat and circulation. These are points which the manufacturers claim to have carefully guarded in the kilns under consideration.

It will be observed from the cut that a new system of sliding doors is employed. These are easily handled, and occupy no room above the kiln. They close, and when shut are screwed together by a simple device so that they are absolutely tight.

Fig. 2 illustrates a cabinet-maker's kiln. In this it will be observed any car in the kiln can be taken out and another put in without disturbing other cars, a feature particularly valuable to cabinet-makers, carpenters, carriage makers, manufacturers of musical instruments, etc., as in all these departments of manufacture a large variety of thicknesses are used, and some kinds of lumber require much more time in seasoning than others. The fan in this case is driven from the shafting of the factory, the power in some cases being transmitted by wire or rope cable, but the independent engine is the best, as with it any desired amount of circulation can be given, and if it is required to run the kiln at night the engine and shafting of the factory do not have to be in operation.

These kilns are claimed to be particularly adapted to the use of exhaust steam, and cause no back pressure. Exhaust steam may be used in the whole or any part of the heater, and the balance heated with live steam and charged at will. They are further claimed to be absolutely safe from fire.

The company also manufacture apparatus for drying wool, cotton, yarn, cloth, hair, fruit, etc., and for heating and ventilating factories and public buildings. They state that they will gladly send to persons interested Canadian and American testimonials in proof of the efficiency of their apparatus.

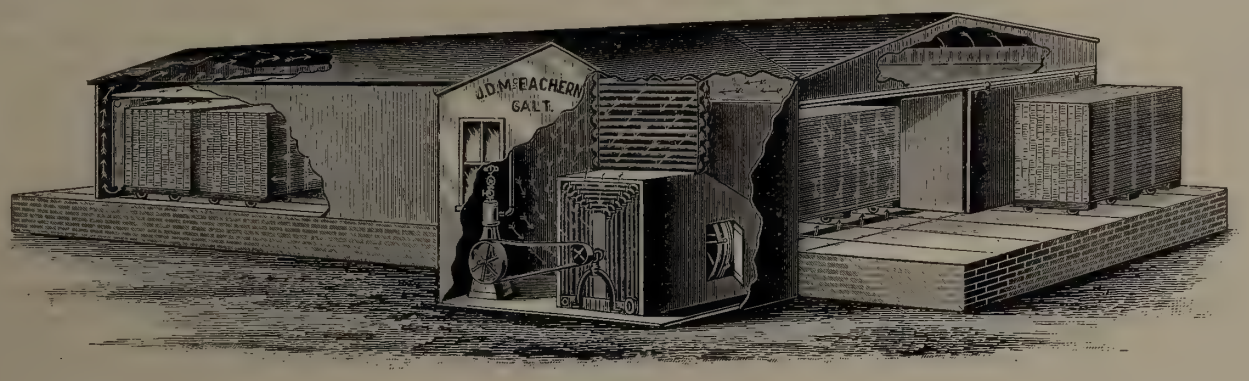

Fig. 1—Progressive Dry Kiln.

THE SPRUCE FORESTS OF NEW BRUNSWICK.

THERE are two if not three kinds of spruce to be found in New Brunswick, writes Edward Jack, of Fredericton, in the Northeastern Lumberman. These are the white, black, and possibly red varieties. Whether the last of these is really a distinct species is yet undetermined. The white spruce (abies alba michaux) is larger and more slender than the black spruce, from which it is distinguished by the lighter color of its bark and leaves. Its cones, which are two inches long, are deciduous, the leaves being needle shaped and sharp pointed. On the Restigouche, upper St. John, and many other places it grows to a great height with but little taper. In 1873 Mr. J. A. McCallum, crown land surveyor, cut down one of these trees on the Restigouche, the diameter of which was 25 feet at the stump, and which made a log 64 feet long, measuring 10 inches in diameter at the top end. They are found growing in valleys, on the shores of rivers and streams and in small bunches on the sides of hills and mountains.

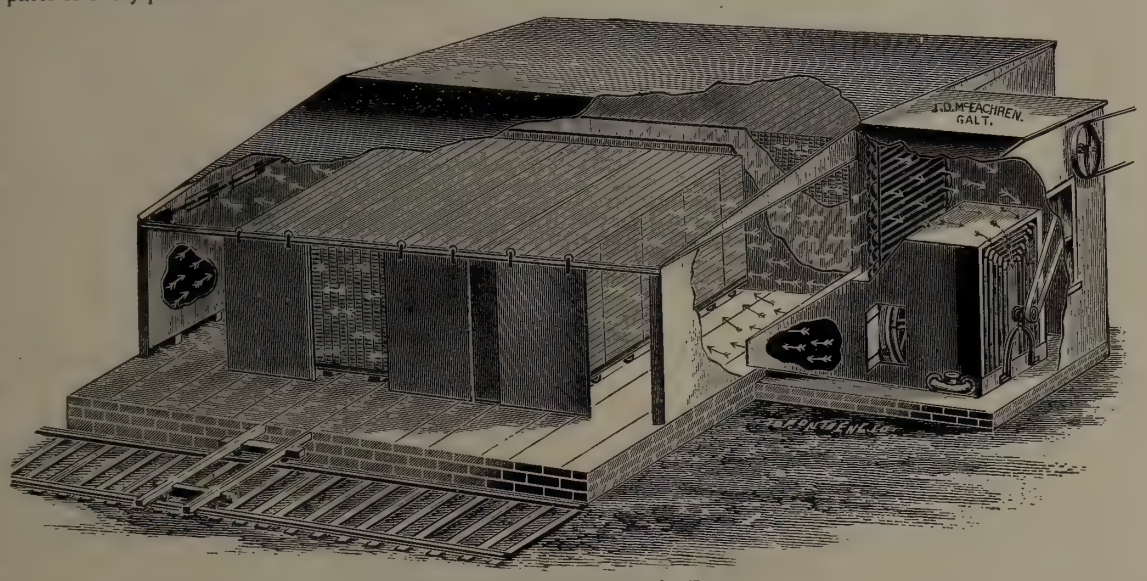

Fig. 2—Cabinet Maker's Kiln.

The yield of white spruce land will not compare with that of black spruce land, as the former tree is much more scattering in its growth than the latter. This very important distinction is one which is unknown to many land owners. The late Mr. McCrillis of Bangor did not know it until a few years before his death. The timber explorer who had been accustomed to the splendid forests of black spruce which once covered parts of New Hampshire, or those which grew not far from the Maine seaboard, would be very apt to place a small value on the white spruce forests of the Upper St. John, and would almost be sure to underestimate the timber growing within their limits.

The wood of the white spruce is white and soft and freer from resin than that of the black spruce, on which account it would probably be better adapted for the manufacture of pulp than that of the latter. In fact, parties who for a long time have been using this wood for that purpose on the shores of the St. Lawrence state that such is the fact. The spruce deals exported from the Bay of Chaleur, as well as in New Brunswick, as in Quebec, are nearly all manufactured from the wood of this tree.

The black spruce (abies nigra michaux) as an article of export is the most valuable of all the trees of New Brunswick. Its leaves are about half an inch long, stiff, somewhat four sided, very dark green or whitish gray. Its cones, which are from one to one and a half inches long, have a color changing from dark purple to dull reddish brown. The bark of the tree is dark brown. The vast forests of this tree, which once covered New Brunswick, have been reduced by the effects of wind, fire and cutting to less than a quarter of their original extent.

This tree was found in greatest abundance in the southern part of New Brunswick. A line drawn from a point a short distance north off the head of the eastern grand lake on the St. Croix, extending thence northeasterly to the dividing ridge between the Southwest Miramichi and Nepisiguit rivers, would show nearly the boundary of the great black spruce forests of New Brunswick. South of this line vast forests of it extended from the St. Croix northeasterly, crossing the Nashwaak and Southwest Miramichi rivers, thence to the Northwest Miramichi. North of this line the forest growth is more generally of hard woods, which are largely mingled with firs.

Such spruce as occur north of this line are usually of the white variety ; to this rule there are certain exceptions in the valleys of the Meduxnakik, Becaguimec, Presquisle, and lower Tobique, part of the Aroostook and certain other branches of the St. John below the Grand Falls. Above the Grand Falls the spruce usually met with is of the white variety, although there areexceptions even there, such as on the head of the Alleguash and certain other streams in the State of Maine and on the northwest and certain other branches of the St. John which take their rise in the Province of Quebec.

In laying out the holes in a belt for the lacing, do not get them too near together, for while this practice makes the finished lacing stronger, it makes the belt weaker on account of the large amount of material cut away in making the holes.

When setting a boiler, pieces of common steam pipe, say about one inch in diameter, should be built into the outside walls in such a way that they will allow the air in the space between the two walls to escape when the heat expands it, and also allows it to enter this space when the boiler cools off.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

CANADA'S TIMBER RESOURCES.

THE reference to Canada as a wooden country has not been without foundation. Our riches in this respect have been great. The pity is that we have not in the past valued these, as to-day we see they deserve to be valued. In a monograph on the "Forest Wealth of Canada," Mr. Geo. Johnson, statistician for the Dominion Government, tells us that commercially lumbering holds one of the first positions in Canada. In the various industries depending for their existence upon the supply of wood there is an invested capital that reaches closely to $100,000,000, carrying with it an annual expenditure for wages of $30,000,000, with an output valued close upon $110,000,000. A number of the more important industries of the country depend for their raw material on the wood supply. Elsewhere we have commented on the possible consumption of wood for railway ties, a feature of strength to the lumber business this season being the amount of lumber that will be consumed in car building. Ship building, though less than in the past, yet consumes large quantities of timber, whilst the tanning and pulp industries are among its largest customers. With all the ingenuity of the present age, and the invention of substitutes for many of nature's supplies, it does not seem likely that a substitute will be found for wood in any of its more important directions.

The forests of Canada must ever rank among her greatest heritage, for, as Mr. Atkinson, the well-known economist has said: "The nations or states in which food, fuel, metal and timber may be produced at the highest relative rates of wages and at the least money-cost per unite of product will thereby be enabled to apply labor-saving machines to other branches of productive industry in the most effective manner." The importance, therefore, of preserving and maintaining our forests is plain.

The ownership of Canadian forests is mainly vested in the provincial governments, except in certain parts of Manitoba, the territories, and the railway belt of British Columbia, where the Dominion Government owns the crown lands and attends to their administration. In Nova Scotia there is no system of timber license, nor yet in Prince Edward Island, the trees being sold with the land, and to-day, are largely out of the hands of the crown and in possession of private parties.

There was originally in eastern Canada one unbroken forest from Nova Scotia to the Lake of the Woods, a distance of 2,000 miles and covering an area of 315 million acres, but these were in the days before the enterprising lumbermen had learned to make the heavy cuts each winter as is the case in the present day. Large proportions of the original forest has suffered from the fire element to an extent that is lamentable.

As an exporter of forest products, Canada holds the fourth place among the nations of the world. She is exceeded only by Sweden and Norway, with a net export of $37,135,000, by Austria, with a net export of $31,000,000, and by Russia with $33,300,000. On a per head basis Canada stands second, her net export in 1891 having been $24,564,869, equal to $5.08 per head against Sweden and Norway's $5.50, Austria's 75c and Russia's 34c per head.

THE CANADIAN MANUFACTURER HANDICAPPED.

IN conversation a short time since with a prominent lumber manufacturer of British Columbia, the information was gleaned that to no inconsiderable extent the machinery in the saw mills and wood-working establishments of the Coast is obtained from the United States. Knowing that the manufacture of this class of machinery in Canada has been developed to a high degree, and that the best in almost everything required for the equipment of saw mills or planing mills could be obtained from the home manufacturer, we were led to make an enquiry as to the causes of these conditions.

First, desiring to learn to what extent the practice prevailed, we placed ourselves in communication with a prominent manufacturer of wood-working machinery. So far as British Columbia was concerned, with excellent means for knowing the real position, the view was expressed that perhaps 25 per cent. of the machinery that came into that Province was of American manufacture. As good machinery, it is claimed, could be obtained at home, but mill men have their whims, and likes and dislikes, as other people, and this was considered to furnish, at least, a partial explanation for trade going abroad.

It has often been said that there is no sentiment in business, and when it is a matter of buying in the cheapest market it is useless to talk patriotism to a business man. But all other things being equal, it does seem that Canadian manufacturers might, with good effect, appeal to the patriotism of those within their own country who buy machinery; and when as good a piece of work can be obtained from the home manufacturer for the same price, there ought to be no question as to how the choice should go. It is poor business policy for Canadians who are looking for trade within their own country to discourage the cultivation of this trade by going outside of the country themselves for their supplies, when there is no business reason for doing so.

It was natural to seek for other causes of the trouble than those which have been here stated and combated, for, as another manufacturer said, the same condition of affairs that exists in British Columbia finds a counterpart, to quite a large extent, in Ontario and Quebec. One reason of this arises from the fact, it is believed, that the timber limits of Canada are falling into the hands of Americans more largely each year, and these parties are accustomed to machinery manufactured in their own country. This feature of the lumber business was discussed at some length in these pages rather more than a year ago, when a valued correspondent pointed out that the changes in the ownership of limits in Ontario would not end with large quantities of logs being towed across the border to be cut in United States saw mills, but that this practice would in a short time be felt by manufacturers of machinery. And it would appear that this prophecy was coming true. Of course, there is another side to the question, especially since the removal of the duty on lumber, viz: that American owners of limits are building saw mills in Canada, and as the Commissioner of Crown Lands points out in his current report, as a result of this policy over 100,000,000 ft. of logs, which, had the duty remained on lumber, would have been exported in the round to the United States, will this year be sawn in Ontario, and largely in such mills as that of the St. Anthony Lumber Co. and others, erected, or in course of erection, by United States lumbermen.

These conditions, however, are only of an incidental character. We believe, even in the case of manufacturers, who have been accustomed to using a particular class of machinery, that they would just as readily buy the outfit for their mills, in the country where they are building these mills if they could secure what they want and on as favorable conditions. Here the greater difficulty shows itself. Within the past few years a very great reduction in the cost of the raw material used in the manufacture of machinery has taken place in the States, making the present rate of duty on machinery practically less than the duty on the raw material. For instance, pig iron at present is delivered on cars in the States at from $6.50 to $7 a ton; the duty on this is $4.48. Let this pig iron be put into the simplest form of castings and it comes into the country on a duty of say from 20 to 30 per cent., as it varies some. This means that the duty on $4.48 a ton, on, say $7, amounts to about 60 per cent., or double, and in some cases more than double, the duty on the manufactured article. The same with bar iron and steel; it is bought in the States on less than $1 per hundred, and the duty coming into Canada is 50c a hundred. This comes in on the finished machines at 25 to 30 per cent. duty. A still greater discrepancy exists among other classes of material. This, of course, is caused by the very great reduction of the raw material, the specific duty being retained makes it a very heavy ad valorem duty. When applied by the government the specific duty then might have been considered a reasonable tariff, not excessive, but it will be readily seen at the present time that it operates seriously against the user of the material. The case affords an illustration of the necessity of existing circumstances being taken into account in the fixing of tariffs. It may be argued that it is impossible to arrange any tariff that would be movable with the changing conditions of the market. This is to be remarked then, that when this cannot be done it becomes a question what useful purpose a tariff fills, for, as in the present case, it really handicaps trade, where it had been intended it should be a protection and a help. A protective tariff that does not protect is surely an anomaly.

AUSTRALIAN TIMBER IN ENGLAND.

FOLLOWING up various efforts that have been made by the people of Australia to secure an enlarged market for their timber in Great Britain, Mr. Gaven Scott, representative of a large firm at Sydney, visited England about a year ago. He has now returned home and has been telling of the result of his business efforts. He spent considerable time in interviewing the principal railway companies, corporations, ship builders, dock companies and leading civil engineers and architects in England, Scotland and various parts of the continent. Particular attention was given to those hardwoods of Australia, that are believed to possess special qualities of durability that are not found in any other wood. These, it is claimed, are serviceable for railway sleepers, ship building, and wherever the timbers are put to severe tests of weather or water. In Great Britain hitherto the Baltic deals have been used to a considerable extent for railway sleepers, being preserved by creosote. Mr. Scott has returned home apparently very confident that for railway and marine work the Australian hardwoods will quickly take precedence over all other woods. Illustrating the consumption of such woods by the railway companies it may be said that the Great Western Railway carry regularly in stock £100,000 worth of sleepers. The timbers specially recommended for export to the United Kingdom are iron bark, black butt, tallow wood, turpentine, red gum and mahogany. Wherever wood blocks are used for street paving those from Australian woods are considered the best. In New South Wales black butt is largely used for street paving purposes, and is said to wear at the rate of only one twenty-sixth of an inch per annum,

where the wear of soft wood under similar conditions is half an inch per annum. The Saw Miller's Association, of Melbourne, recently waited on the Victorian minister of lands to ask him to take certain steps calculated to aid in the development of export of wood blocks for street paving and the suggestion was made that blocks that had been down for a number of years in the streets of Melbourne should be taken up and sent to Europe and America as samples of the durability of this kind of paving. One great difficulty that will meet the Australians in the development of timber trade with Great Britain, wherever there is competition with America, will be the freight. Mr. Scott admits that it will hardly be possible to compete in freight to England with America. On another page we publish an article giving interesting particulars of the nature of Australian hardwoods.

WOOD PAVEMENTS.

WHERE wood paving is growing into large disfavor in Canadian cities the opposite is the case in many parts of Great Britain and on the continent. The methods adopted there in placing the blocks are no doubt of a more careful and scientific character, but the experiments that have been made with wood paving are from almost every standpoint of a satisfactory character. In Berlin investigations have been going on for a period of fifteen years to discover, if possible, the best paving wood for the most frequented streets, and especially those subject to a heavy teaming traffic. Granite blocks and asphalt have both been tried in these cases. Recent reports state that the authorities of Berlin, after these very thorough methods of investigation, have concluded to maintain the wood paving where there are horse car lines, and have already paved with wood 66,600 square metres, using 3,460,000 blocks, or 52 blocks to the square metre. These tests cover 42 streets, squares and bridges, and of the woods used 23,000 square metres were paved with German pine, 15,000 with Swedish pine, 14,700 with beech, 1,000 with American yellow pine, and 3,200 with American cypress. In Paris wood paving has been given the preference over asphalt for the boulevards and pleasure drives, and is also preferred on the streets subject to great waggon traffic. The greater part of the wood used for paving in Paris is spruce from the department of Landes. Some foreign woods have been used, including Jarrah and Karri from Australia. Commenting on these investigations Hardwood remarks: "The great enemy of wood pavements is the combination of owners of the great asphaltum beds in Trinidad and elsewhere, who have used every possible means to discredit the use of wood, for the purpose of advancing their own interests. The European authorities have submitted these questions to thoroughly educated and practical engineers, who, after tests covering a decade of years or more, have decided what is best. Their example might well be followed by the authorities of American cities (what of Canada?), where at present boodle seems to be the only test." City Engineer Keating, in a report presented to the Toronto Board of Works a few days since, has this to say of cedar blocks, in a municipality where the prejudice against this method of paving is strong: "I am aware that there is considerable opposition to cedar block pavements, on the ground that in a few years they become rough and uneven, but it cannot be denied that the existing cedar block pavements have done good service in their day, and that they are the cheapest class of pavement which can be laid in this city at present. If their assessment lifetime is limited to five years on gravel or boards and eight years on concrete, and the surface could be entirely renewed at the expiration of these periods, this class of pavement would probably be more popular with the public than it is to-day."

EDITORIAL NOTES.

LUMBERMEN of the Maritime Provinces are experiencing some trouble, owing to the rapid rising of a number of the streams, and also from ice jams that have taken place in some of the rivers. At Marysville, the home of Alex. Gibson, the water a few days since rose a foot and a half within an hour after the ice started, and the saw mill had to close down consequently. At Bedeque, P. E. I., the heavy freshets produced serious trouble. Bridges and mill dams were washed away in short time. It is not anticipated, however, that the trouble will be at all general or continuous.

THE litigation that has been pending effecting the validity of the charter of the Ontario and Western Lumber Co., of Rat Portage, Ont., has found an ending in the Dominion Government announcing that the fiat that had been issued against the company had been withdrawn. This is considered tantamount to a decision that the charter has been sustained and the proceedings to annul the company's charter will not now be entertained. Large financial interests were at stake in the litigation, and it was feared that if the charter was annulled that it would open up questions far reaching and most serious in their results. For the sake of the lumber industries of this section of the province, the present news will be welcomed.

ONE of the leading hardwood points is Grand Rapids, Mich. Located there are a number of the best equipped and most extensive furniture factories of the States. Where at Saginaw, Bay City, and other points in this state industries for the manufacture of pine flourish, Grand Rapids gives its special attention to hardwoods. All indications point to a busy season this spring and summer. Never before, we are told, was so much hardwood lumber cut as last winter, and a prominent lumber dealer states that 350,000,000 feet would be cut in Grand Rapids before September next. The Grand Rapids Chair Co. has banked 2,500,000 feet; The Grand Rapids Barrel Co., 7,000,000 feet; The Veneer Co., 5,000,000; Harrison Waggon Works, 2,000,000; Widdicomb Furniture Co., 5,000,000, and other firms have hardwood lumber banked to swell the sum to over 25,000,000 feet. The situation finds a measurable parallel at many other points, emphasizing what we have said in these columns before, that the hardwood trades will, more and more in the future, assume improved and larger conditions. Considering that there yet remains a considerable quantity of hardwoods in Canada, and especially in different points in Ontario, lumbermen here are interested in this growth of the hardwood industry.

CERTAIN privileges granted by the Ontario Government at the recent session of the Local Legislature to Edward V. Douglas, of Philadelphia, and Francis H. Clergue, of Bangor, Me., is an indication of the importance that is attached to the pulp industry of the province. These parties represent a syndicate, who have secured control of the large water power at Sault St. Marie, Ont. The proposal is to utilize this power for electric purposes and build up, if possible, a large manufacturing district. Pulp and paper mills will be among the leading industries. The syndicate in this agreement promises to erect a mill at a cost of $200,000, and to expend further sums, which would amount, in addition to what they have already invested in the enterprise, to about $200,000 more. The expectation is that 400 hands will be employed for ten months in the year. In consideration of the establishing of a factory on this basis the syndicate have been granted the privilege of 50 sq. miles of timber for their use, from which they could cut wood as they desired, paying to the government twenty cents a cord for spruce and ten cents for other varieties, for eight years, the price to be thereafter fixed by the Lieutenant-Governor-in-Council. They are also to be allowed to cut elsewhere, if necessary, wood sufficient to keep their mills running for the next twenty-one years, but the amount cut within the fifty-mile reserve in any year in which they cut elsewhere must never be less than one twenty-first part of the entire quantity required for the year. The present price charged by the government for the wood as named, is, spruce twenty-five cents a cord, and for other kinds twelve and one-half cents per cord. This will show the extent of the concession in this particular. The proposition, as explained by the Hon. Mr. Hardy, was favorably received by all parties in the House, though the opportunity was not lost by the Conservative leaders to have a little fun at the expense of a Reform Government ready to grant protection to Canadian industries. The pulp industry is reaching remarkable proportions in Canada. Senator Warner Miller, a prominent American manufacturer, interested in pulp mills, when in Montreal recently, stated that Canadian spruce was about the best material in the world for the manufacture of pulp. Within ten years this industry in Canada has reached a point where nearly $3,000,000 of capital is invested, and the annual output exceeds $1,000,000. United States capitalists are undoubtedly looking to Canada for their supplies of pulp-wood, even almost to a greater extent than are Michigan lumbermen looking here for pine.

THE question whether Cypress is a hard wood or a soft wood has given rise to the larger question, whether hard woods and soft woods are properly classified by lumbermen. The fact is a number of woods as much entitled to be termed soft woods as white pine are always listed as hardwoods. The primary cause of the erroneous classification seems to have arisen from the fact that in the earlier days of lumbering pine was the wood chiefly considered. It was put down as a soft wood, and all other woods were hardwoods, and this classification has remained practically unchanged up to the present time. Even when wrong it is not a simple matter in business to disturb conditions that custom, if not right, has made law. This has been noticed in the changes in methods of weighing and measuring. And yet it is best always to have right prevail. The New York Lumber Trade Journal has taken the initiative in the classification of lumber, and enlisted the services of Mr. B. E. Fernow, chief of the division of forestry, for the United States. The woods are divided into two classes, viz: A, coniferous (non-porous) woods; B, broad leaf (porous) woods; and to make the classification more correct, class B is divided thus: A, hardwoods; B, soft woods. Under this classification red cedar (pencil cedar), red cedar (Pacific arbor vitae), white cedar, southern, (juniper), white pine, basswood, butternut, cottonwood, sycamore, white wood, (same as poplar, yellow poplar and tulip) are classified as soft woods, whilst long leaf pine, short leaf pine, eastern spruce, (black and white), Douglas (same as red and yellow fir), sitka (western spruce), ash, beech, birch, cherry, chestnut, elm, hickory, mahogany, maple, oak and walnut are classified as hardwoods.

WHAT the log supply will be is always a live question from the time the loggers leave the woods until the drives are all down. Necessarily a good deal of speculation is indulged in, for the reason that so many conditions exist to alter the situation before the season is finally over. The possibilities at present are bright enough in some sections, whilst in others there are complaints of low water, and it is not unlikely that considerable quantities of logs may be tied up at some points. Of the actual cut it may be said that in Ontario this will not differ very much from that of a year ago; if anything, it will likely run somewhat less. The big fires of last summer increased the cut in Minneapolis, Wisconsin and Michigan, it being generally stated that one concern alone, the Diamond Match Co., of Otonogan, Mich., has banked 180,000,000 feet of logs, perhaps the largest cut made by a single concern. In the Wisconsin Valley a reduction has been made, but this stands out as the one great exception on the Wisconsin river. Because of the fires the cut in Minneapolis is heavy, though at this point there is some question whether the logs will all come down. Michigan has reached the point where the cut does not figure with as much importance as in former years, and lumbermen from there rest, as has been usual for some time, on Canada for their supply. The Secretary of the Northeastern Lumbermen's Association, of Boston, has been figuring out that there will be a large shortage of spruce logs in New Brunswick and Nova Scotia, but, as will be noticed from our New Brunswick letter, lumbermen in those provinces are disposed to doubt the statement. So far as information comes to us, it would appear as though the cut will by no means be a small one. From some sections, certainly, a good many logs will be brought down the streams. British Columbia lumbermen are just now getting to work logging. The seasons there do not run parallel with those in the east.

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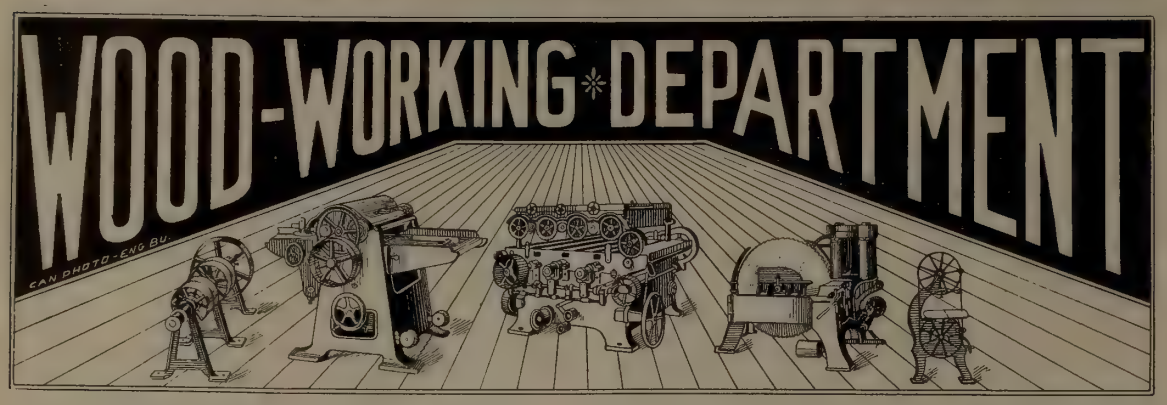


THE COMMERCIAL SIDE OF WOOD-WORKING.

IT is important in running a wood-working establishment that the closest attention should be given to the mechanical departments of the business. If the machinery in use is not the latest and best, the business will be handicapped, and losses will be sustained. The day has gone by when, with an ancient equipment, the owner of shop or mill can keep alongside, much less in front, of his competitors. And it is encouraging to observe that so much attention is given to this side of the business in mechanical and class journals.

We would not want to see any effort withdrawn from this branch of wood-working. Let Mr. J. H. Miner, and the many others who have made a study of these questions, give to their fellow-workmen their best thought and work. But has not too little attention been given to the counting-house? First-class machinery, properly handled, will help to increase the profits, or to hold, at least, a fair margin in days when competition is at its keenest. But what of wise buying of products? What of shrewd business management of details in the counting-house and workshop? What of a wide and intelligent study of the markets where wood-working products are sold, so that the stock turned out shall be of a class that will meet the largest demand of the consuming public? What of giving thought to the lines manufactured, so that trade may be anticipated and specialties manufactured for which a good sale can be secured?

These questions all suggest a wide field of discussion. The matter of wise buying may of itself settle the question of doing a profitable business or not. The axiom, "Goods well bought are half sold," though applied usually to the realm of the retail merchant, has just as fitting an application to the manufacturer. Practically, in the present day when the profits of the manufacturer are whittled down so fine, he cannot expect to do a paying business unless he buys at close figures the raw material used. It is not enough that the owner of the average planing mill shall be a first-class mechanic himself and know when the stock is turned out that no competitor can get ahead of him in point of perfectness of manufacture. He must also be a business man, and have learned the art of buying his stock right, and know where to place it to the best advantage.

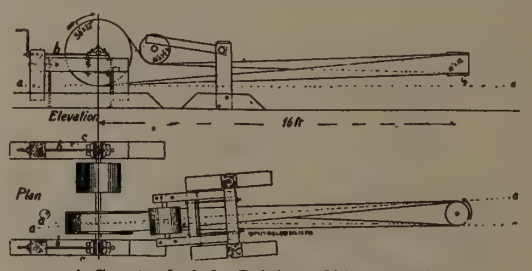
We have simply touched the fringe of the question; said that which is suggestive, rather than discussed any particular point. We are convinced that the business side of wood-working has had too little attention in the past, and the intention is, in this department of the CANADA LUMBERMAN, to deal with various phases of the question. We want to help the men who have capital invested in wood-working plants in Canada to make money by their ventures.

COUNTERSHAFT FOR DRIVING A SHINGLE MACHINE.

THE accompanying drawings illustrate a method of putting in a countershaft for driving a shingle machine with an endless belt, using a "live tightener," and is thus described by a writer in the Wood Worker: One of the hardest places in the mill on a belt is at this place because we are limited to width and weight on account of the quarter-twist and speed, and when the counter and the tightener are not properly put in (which is more often than otherwise) the case is worse.

In the drawings the dotted lines at *a* show where to line from. The two three-quarter inch iron rods *b* have eyes through which the bolts *c* project; the other end is threaded about two feet, and with the crank-nut make it handy to pull the shaft back from the machine to take up the slack in belt while the machine is in motion. The bolts *c* have a shoulder just below the base of the box, which allows the nut to tighten on the eye of the pull-back bolts independent of the fastening of the box to the bridge tree, and makes the bolts rigid, so they will not catch in the slot cut in bridgetree for them to slide in. The two bolts in each box should be connected beneath the bridgetrees with a piece of ¼x2-inch iron, the nuts being run up only so far as not to require loosening in order to use the pull-backs.

My experience is, the best belt for this place is a light double-leather, provided it is not exposed to the weather in the least; in damp places, or where the belts are not



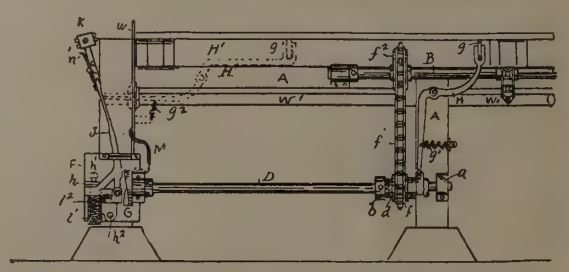
A Countershaft for Driving a Shingle Machine.

cared for properly, four-ply stitched gum or six-ply cotton (Gandy) may be used to better advantage, as with this method of taking up the slack at any time belts which have a tendency to stretch more or less are not such a serious objection.

The countershaft with the pulleys here illustrated should turn 600 revolutions per minute, giving a speed of 1,800 to the saw arbor with a twelve inch pulley, and a belt speed of 5,400 feet per minute, which is about the limit for good results. If it is desired to drive the saw faster, I should advise a smaller driven pulley, so as to not exceed this travel. I know I'm treading on dangerous ground here, but actual results of experiments at this place lead me to this conclusion.

I would recommend a distance of sixteen feet between centers as about the right thing; longer belts than those required for this do not seem to give any better results, while shorter lengths are a positive detriment to the life of the belt.

NEW PATENTS IN WOODWORKING MACHINERY.



LUMBER STAMPING ATTACHMENT.

Patentee: John P. Reedy, Williamport, Pa., patented Ottawa, 6th February, 1895; 6 years.

Claim: 1st. The combination of a lumber sawing or trimming machine with an impact stamp located so as to swing in a plain at right angles to the line of feed of the planks and with mechanism for effecting a rapid vibration of said stamp whereby the marking of the ends of the successive planks can be effected without any stoppage in their forward movement, substantially as specified. 2nd. A controlling device for said mechanism have a portion projecting into the path of the forwardly moving plank. 3rd. With a lever carrying an impact stamp and located so as to swing in a plane at right angles to the line of feed, a cam acting upon said lever so as to carry its stamp away from the plank, a spring acting upon the lever so as to bring the stamp into contact with the end of the plank when said lever is released from the control of the cam and means for rotating said cam. 4th. A spring for bringing the stamp forcibly into contact with the end of the plank on its release and a recoil spring whereby the stamp is slightly retracted after giving its blow. 5th. A driving clutch for the shaft and a clutch controlling lever having a portion projecting into the path of the plank as the latter moves forward. 6th. A clutch controlling lever without a portion projecting into the path of the forwardly moving planks. 7th. Means for operating said cam and a structure carrying said lever and adjustable from and towards the face of the cam, so as to vary the extent of movement imparted by the latter to the stamp lever, all substantially as specified.

RUNNING THIN CIRCULARS.

FOR a number of years, writes a correspondent of the Tradesman, I have been actively experimenting to find out how to run thin circular saws, without diminishing the output of the mill nor lowering the standard of quality. These trials have resulted satisfactorily and the results are worthy of more than passing notice.

In my charge at present are two circulars 76 inches in diameter, 12-gage at periphery, 9-gage at eye; two 11-gage at periphery, 9-gage at eye, 72 inches in diameter, and several 10-gage. These saws were purchased to meet the demand for a reform in the waste of the saw kerf. An experience of a number of years trying to meet this demand has taught me the coming circular for all classes of work is of 11-gage and dressed to cut scant 3.15 inch. If the mill men will give such a saw the proper attention it will surprise them and save them a great amount of money. The several things essential to make a thin saw run nicely are to give the saw plenty of teeth (not less than 90; in fact, for 72-inch saws, I run 100 teeth). The saw should be run not less than 600 revolutions, and should have plenty of power to back it up. It should be well opened close up to the teeth, leaving a rim of not less than four inches. The usual manufacturers' pamphlets should be avoided as far as to the proper manner in which to hammer saws, and as to the proper speed. The saw should be opened more at about 10 or 12 inches from the teeth than any other place, and good results will be obtained. Hammer the saw to the highest speed and do not be afraid to push it. I run a 11-gage saw as fast and crowd it as much as I can possibly do with an 8-gage.

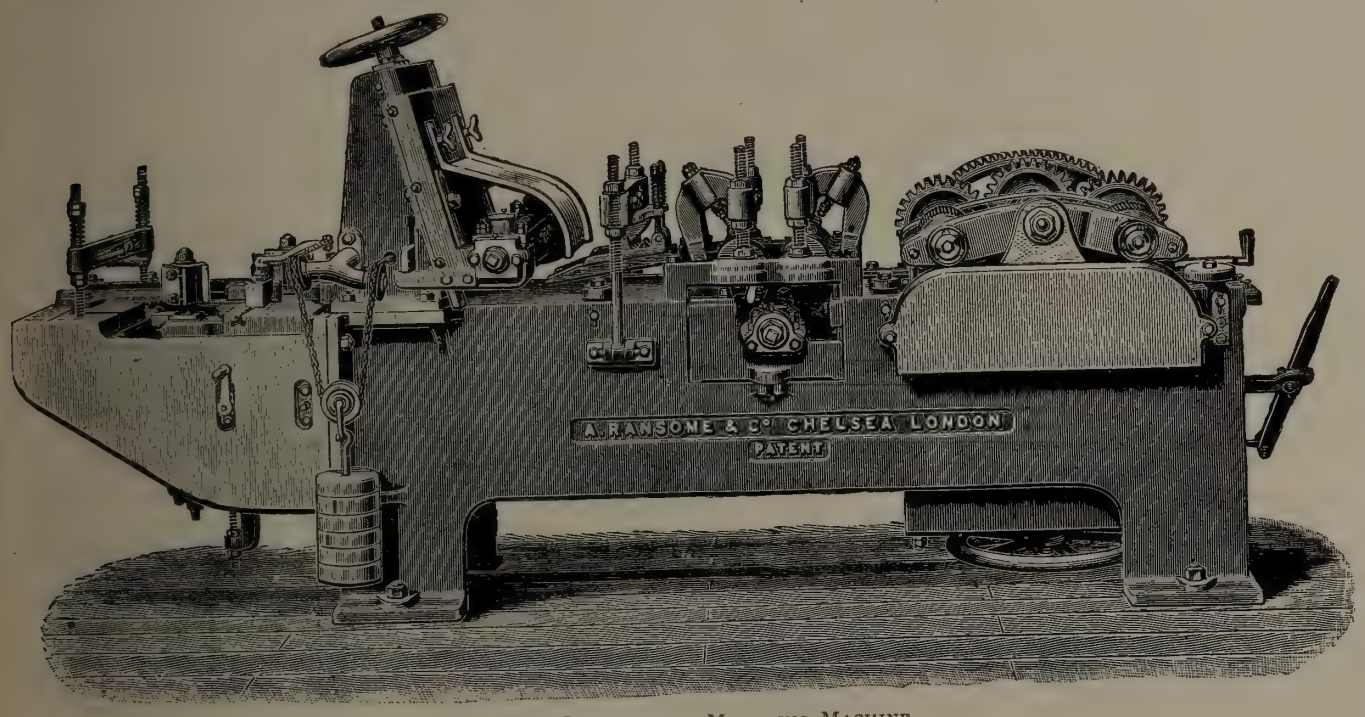
I use the following rules: 100 teeth, with plenty of sawdust room, and line the front of teeth on a line just 10 inches from the collar, or close to it. I use a collar 14 inches diameter, with four lug pins close to the edge, and run the saw to its highest speed—600. I use a sawyer's governor and in hard wood or bad cuts slow the saw down so as to hold it straight. The saw is backed by a 16 x 20 engine, which runs nothing but this saw.

A board sawed properly with a circular will dress on less than band-sawed stock, and a circular will also cut faster than a band mill. To mill men I would suggest that they try a pair of thin circulars, giving them a little attention and experimenting to some extent with them. They will be surprised at the successful results obtained and also the amount of lumber sawed. Use a little judgment and avoid fake instructions given in "Sawyers' Guides," written by men who never operated a saw mill in their lives and who instruct others how to run their special brands of saws. Their ways may be all right in shops, but they do not saw lumber, and that is what saws must do. Recently we sent a saw to a well-known firm to be reground. The firm hammered the saw and returned it, with the instructions that it would not run if another gage was ground off. The saw was 12-gage and we only wanted it smoothed. How did this exalted gentleman (who had never run a saw in his life) get such universal knowledge as to dictate to mill owners what they should run? It only shows how little they know whereof they speak.

COMBINED PLANING AND MOULDING MACHINE.

THE engraving herewith presented represents a planing and moulding machine, in the designing of which special care has been taken to combine every improvement and appliance necessary to produce the most perfect work at as fast a speed as is attainable without the aid of fixed knives. A recent improvement consists in the arrangement of the gear for driving the feed rollers, by which all wheels are placed outside the framing of the machine, thus materially reducing its width, and enabling the man working it to get more readily at the cutters. These machines are all fitted with top, bottom, and two side cutter-blocks, to work simultaneously on all four sides of the wood, thus enabling them to cut single or double mouldings of any pattern, or to plane, groove, tongue, edge, thickness, and bead matchboarding, etc., in one operation.

The adze blocks and their spindles are made in one forging of special steel, and run in improved self-lubricating bearings, thus enabling the cutters to be driven at a very high velocity, producing very perfect work at much higher speed than is generally attainable with machines of this class. The feed motion consists of four rollers, all of which are driven, giving a great propelling power, which carries the largest stuff through the machine without any slip. The rate of feed can be readily varied from 10 to 50 feet a minute, according to the description of work, or quality and condition of the wood.



Combined Planing and Moulding Machine.

The pressure apparatus is arranged so as to hold the stuff down firmly to the table close to all the cutter-blocks, thus preventing any vibration in the piece when under the cutters. An advantage in these machines is the great facility with which the cutters can be adjusted, and as a large proportion of the time of a moulding machine is necessarily lost in setting the cutters, any arrangements which will facilitate this operation are of value. The low cutter-block is fitted into a planed iron drawer, which can be drawn out when it is required to adjust or change the cutters; and the side cutters are provided with a ready means of vertical adjustment.

PACKING.

IT is often the case in planing mill and saw mill practice, says a writer in an exchange, that one has an engine, a pump or steam cylinder of some kind that gives a great deal of trouble, by leaking at the stuffing box or by cutting out the packing. This has been a great deal of trouble to me at times innumerable. I say "has been," because I don't think it is a subject that will bother me any more, and as the remedy is simple and easy of application, it may help out some other mill man who cannot keep his piston from leaking, either for want of good or proper packing, or from a scored rod, or from some cause he can not at once remedy.

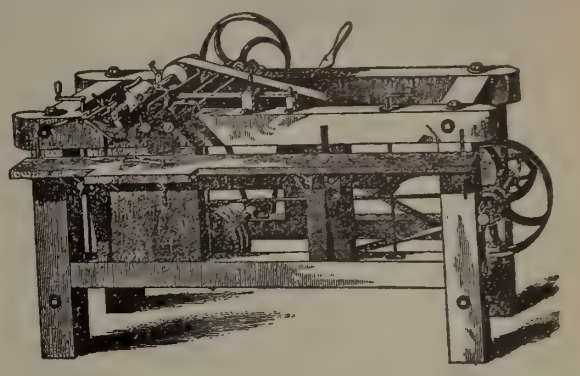
Now, I expect some engineer will rush in to offer some objection, but I have been using this packing for some time and it was in use here long before I saw it, and many a bill of supplies I could have cut down had I known of it before. If any one who has used it found any bad results, let him speak up; but don't theorize about it. I have results to go by and offer them. Save your old rubber belting, and when you want to pack your piston try this method: Cut rings of belting to fit easily on the piston and slip easily in the stuffing-box; cut them to slip over the piston and put them in the box to break joints, using the gland to ram them until the box is full; screw up lightly, so that the packing will leak for a time. As soon as it gets hot, the expansion is considerable and will quickly stop the leak, and you then have a packing that will stay with you, if you keep your cylinder properly lubricated. In cutting the rings you had better use a gasket-cutting tool and make an easy-fitting, smooth job of it, or you run the risk of a hot piston and then kick at my advice, when the fault will be your own. I have used many kinds of packing, but have never gotten any that was any better nor had any to last as long as rubber belting.

There is another advantage about it: You don't have to put "packing" on your supply list. I will never forget the look of dismay I saw on a former employer's face when he saw an item of $9 for packing in one supply bill. It was for nine pounds of packing—and did not last very long, either. I don't buy any more at that price, and am not likely to as long as the old belting holds out. If you conclude to try it, don't forget to make the rings an easy fit, break joints and screw up lightly at first. I heard an engineer say a few days ago that ninety per cent. of the ills that engines suffer from result from improper lubrication.

IMPROVEMENTS IN WOOD-WORKING MACHINERY.

IN an age when the inventive genius is abroad it is to be expected that marked progress would be made in the realm of wood-working machinery since the days of the crude planing machine invented in 1879 by Sir Samuel Bentham. Samuel Bentham was a brother of the famous English political economist, Jeremy Bentham. The latter was interested in the study of industrial prisons in England, and the talents of Sir Samuel were used to devise machines that would enable the government to secure a profit from the labor of convicts. In a treatise on wood-working machinery, of ancient date, the complete list of Benthams's inventions is given as follows:

Machines for planing and forming mouldings, improved planing and moulding machinery (rotary), wedging guard for circular saws, segmental circular saw, conical cutter for dovetail grooves, undulating carriage to form wave mouldings, compound cutter heads to work two or more sides at once, the slide rest, tubular boring implements, crown saws, reciprocating mortise machine, rotary mortising machine, radius arm for sawing segments, tracer guide for sawing irregular forms, bevel and curvilinear sawing, grooving table, vertical adjustment of saws in benches, machine for grinding saw blades, tape gauge for sawing, T rebating machine, sectional cutters, pivoted table for mortising machine, forked or double mortising chisels, gauge lathe with slide rest, rotary cutters for forming screw threads on wooden



Sash and Moulding Machine of 1856.

screws, double grooving saws, and rach feed for planing machines.

From that day forward there has been a steady and continuous improvement in all the various machines that find a place in wood-working establishments. This progress continues, and within the past 50 years it has been most noticeable. Whilst from Bentham, an Englishman, came the incentive to better wood-working machinery, yet the larger developments of later years have doubtlesss been from the inventors of the newer continent. The trend of the age towards machinery that would lessen labor, and would add to a more ready production of stock, manifest in every department of mechanics, has been none the less so in wood-working. The wood-worker of to-day does not find it nearly so necessary to equip himself with a great stack of hand-tools, as did his predecessors. True the chisel and hammer and screw driver are still necessary articles of the carpenter's kit, yet in all our wood-working establishments machinery, driven by steam, or that more recent force of the day, electricity, is fast taking the place of many individual hand tools.

The cut of a sash and moulding machine of 1856, which we have given above, will illustrate, in a measure, as compared with the machinery of the present day, the progress that has been made in wood-working machinery in at least one direction.

PROTECTION FROM ACCIDENTS.

THIS device is an English invention and relates to a guard or cover for preventing accidents from machinery. The invention is shown in Fig. 1 applied to a surfacing and edging wood-working machine with revolving cutters. In Figs. 2 and 3 the guard is shown

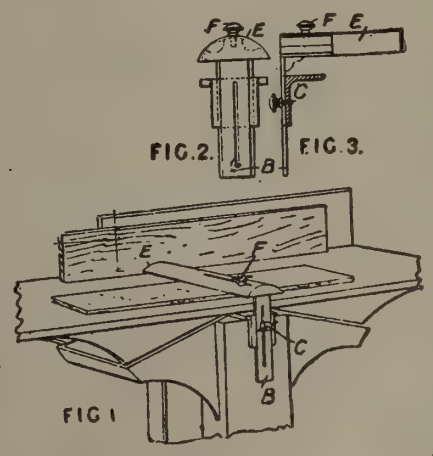
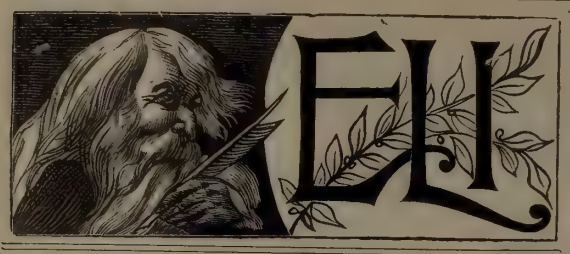


FIG. 2. FIG. 3.

FIG 1

separately. The protecting bar E can be raised or lowered by sliding the slotted bar B up or down and clamping it in position by the set screw C. The bar E may be adjusted horizontally by sliding on the boss E and fixing by the set screw F. When it is desired on occasions to turn the guard aside, the vertical bar B is made circular and fits in a circular socket.



WHEN the millenium is finally ushered in we may expect, possibly, to learn that railroad freight rates are framed on something like an equitable basis, and shippers will no longer have cause to complain. It seems to be one constant fight to come anywhere nearly keeping the railroads up to their printed contracts, much less an unwritten law of fairness and decency that ought to influence business corporations of all kinds, even railroads. Dropping into the office of J. G. Cane & Co., a few days ago, I enquired if there were any disturbing elements in the trade these days, and was glad to learn that, on the whole, peace and quietness reigned. The lumber shark was still abroad, but even he was keeping under cover at present. "But it is hard work for us," said a representative of this concern, "to keep the railways in tow. We have just had to foot a bill of $23, excess in charges of two cars of lumber we shipped a few days ago to a customer. A clause in the lumber freight schedule reads: "Minimum weight 30,000 pounds per car, unless the marked capacity of car be less, in which case the marked capacity, (but not less than 24,000 lbs.) will be charged, and must not be exceeded. Should it be impracticable to load certain descriptions of light lumber up to 30,000 pounds to the car, then the actual weight only will be charged for, but not less than 24,000 pounds." The shipment under complaint was basswood, and we lived up to the strict letter of the words I have quoted, but it did not save us from the excess in charges that I tell of. Of course we made our complaint, but the only satisfaction we could get was a case of play-off by the agent here on some local agent. The blame was shifted from one to another. In the meantime our bank account was $23 less, the profit on that shipment of lumber was $23 short, and I am free to tell you that profits on lumber these days will not stand any such a shaving as that."

× × × ×

When I called upon Mr. J. H. Eyer, lumberman, the other day, I learned that he had returned a short time since from Fenelon Falls and that district. He had been inspecting some of the stock of Howry & Sons, this concern, like mill men generally, being quite ready to find a wholesaler who would help to place their stock this season. Mr. Eyer expressed himself as much pleased with the splendid mill that the Howry people have erected at that point, or rather the substantial improvements that they have made in the plant this year. They have put in some of the very best saw mill machinery and calculate on cutting some 200,000 feet per day. They have also erected and are fitting up in fine style a planing mill, and will not only ship lumber, but also dressed stock. This firm are large operators, and are evidently going to make the most possible out of the timber limits that they control in Canada. It was pleasing to learn of this enterprise, especially the development in the line of the planing mill business. I have been interested in watching how free trade in lumber would effect this department of lumbering. There seemed to be little doubt but that we might expect a growth in saw mill business, for even with lumbermen who own mills in Saginaw, it was apparent that to many of them it would be an advantage to cut their stock on the spot and ship the sawn lumber, rather than the logs. No one was sure, however, just how far the trade in dressed stock would shape. I am free to confess that it has not grown as it seems to me it might grow, and yet this step by Howry & Sons may be a straw showing which way the wind blows. A number of large United States concerns are now operating mills, and it only needs to be demonstrated to them, as probably Howry & Sons may demonstrate, that a well-equipped planing mill will prove a valuable adjunct to a saw mill, to make sure of a number being erected. At any rate, lumbermen, I know, will watch this innovation, if I may so call it.

The other day I came across an item in a local paper telling the story of a Maine man, who had eyes on what might be termed some scrub maple, in York County, N. B. He believed there was money in this rag end of the forest, and it is now stated that inside of two years he got out of that piece of territory 2,000,000 maple last blocks and made $12,000. I hear also of some cute Yankees who have made a fair amount of money out of some discarded hemlock logs. And I think the story has been told before in these columns, of the old lumberman, who bought up a lot of walnut stumps in a section of the United States, converted them into lumber, and with walnut a valuable commodity, he was well rewarded for his foresight and labor. There are lots of such opportunities, I am covinced, all over the country, to the man who uses his eyes, and knows something of the conditions of the lumber market. And the time is coming when we will be glad to place a market value on these remnants of the forest. I am always interested in facts of this kind also, as illustrating the wisdom of being careful of little things. In the primitive days of lumbering, all one had to do was to get into the forest and pick the choice timbers, and money was easily made, but those days have gone by. As I have been going over lately some of the government blue books, telling of the patches of timber that are to be found scattered, and scattered widely I must admit, in various parts of the province, I feel like saying to readers of these pages, keep your eyes skinned. There is money in these corners of the lumber vineyard. Away up in our northern country, and to some extent through some of the counties that to-day are pretty well settled, there is money to be made out of lumber by the man who will go about it in a thrifty, prudent, persistent manner, and is not afraid of work. I am not making any charge for this pointer, save the publisher's one of $1 a year for the LUMBERMAN, weekly and monthly editions at that, but a pointer it is, and worth a good deal to somebody.

× × × ×

So large a quantity of lumber is used in car building it is a matter of importance to learn that in the United States, at least, there is likely to be an active season in that department of manufacture. The National Car and Locomotive Builder, in one item, records an order for 9,100 freight cars, box, platform and tank. And the New York Central has itself given an order for 3,000 box cars. Take the possibilities in Canada. Including sidings and double tracks, there are about 18,590 miles of railway. Mr. Geo. Johnson, government statistician, figures out the possibilities of lumber consumption in this one direction, as follows: At 3,000 ties to the mile, the ties required number 55,770,000. Assuming the life of a tie to be seven years, the number needed every year is about 8,000,000 for renewals, and allowing 300 miles for new roads every year a million more for this purpose, or about 9,000,000 ties a year. Supposing that 50 cubic feet of ties can be obtained from an acre of forest then 3,340,000 acres will be required to supply the consumption of young and thrifty trees needed for the 18,590 miles, and 530,000 acres for each year's demands. With various parts of the country pushing for the particular class of lumber indigenous to their section, it seems likely that woods that have not hitherto been used in car construction, will, in the future, be given a place. Three hundred refrigerator cars are to be built by a Chicago establishment and the statement is made that these will be constructed entirely of Douglas fir and Washington spruce, except the bunkers, draw heads, and break beams. The object of this is said to be because of the lighter weight of these woods for an equal strength. Where cars are pulled a long distance, and over roads where extra motive power is required the matter of weight becomes an important consideration. If Douglas fir should be largely used for car building it will mean a good deal to the lumber interests of British Columbia.

J. R. Booth's mill at the Chaudiere, has commenced work with a full gang of men to operate saws.

The Bronson & Weston Lumber Co., Ottawa, Ont., has voluntarily adopted the ten-hour day for their mills when work is commenced, without reduction of wages, and the other lumber concerns, it is expected, will follow suit.

INTERNATIONAL LUMBER MATTERS.

[Special correspondence CANADA LUMBERMAN.]

IT was quite generally conceded by lumber handlers, both in this country and Canada, that the abolition of the duty on manufactured lumber from the Dominion would almost, if not entirely, do away with the export of logs into the United States. This assumption, however, does not appear to be in keeping with reports recently to hand from different points throughout the State of Michigan. The shipments of lumber to United States ports, especially from the Georgian Bay district of Ontario, since the introduction of the Wilson bill, have not been by any means equal to expectations; and if the information we have on the subject be correct, very large quantities of logs will be rafted the present season from Canadian limits. It is said that Alger, Smith & Co. will raft 50,000,000 feet of logs to Detroit and Ecorse, and probably 20,000,000 feet from Georgian Bay to their Cheboygan mills. Brownlee & Co will take over 3,000,000 feet from Georgian Bay and 2,000,000 feet from Cheboygan to their mills at River Rouge. The Delta Lumber Co. has purchased the Moffatt mill and will raft 4,000,000 feet from Georgian Bay and vicinity and 12,000,000 feet from Manistique.

These are only a few instances of what may be expected in the way of log export across the border, all of which goes to show that free lumber is not sufficient incentive for the Michigan lumber kings, either to keep their mills idle or to remove them to the log, in place of the log to the mill.

Dealers throughout New York State seem to be pretty generally of the opinion that free lumber is to their interest, but much dissatisfaction is expressed with that section of the Wilson bill which permits planed and grooved lumber to be admitted free. In both Buffalo and Tonawanda, for instance, the trade of the planing mills is stagnant, and several mills are shut down entirely. While this state of affairs would appear to open a field for Canadian lumbermen to put in planing machinery and ship their stocks dressed, the uncertainty as to how long the present privileges will be granted them would, of necessity, make the expenditure a risky one. It looks very much as if the next Presidental election will place the reins of power in other hands, and in such an event it is pretty safe to conjecture that a duty will again be placed on lumber in a manufactured state.

The National Wholesale Lumber Dealers' Association is the title of a new organization, with headquarters in New York. The object of this Association is to endeavor to carry into effect an organized effort to keep each department or branch of the lumber trade in its proper channel. It is contended that to properly, legitimately and profitably pass lumber from the log into the hands of the consumer, there should be but four divisions of the trade—manufacturer, wholesaler, retailer and consumer. Best results are experienced by all when trade is kept in its proper channels, and this condition is accomplished only in the ratio in which each division of trade recognizes and protects the rights and legitimate markets of the divisions other than its own. The wholesale trade, which seems to be honorably striving to protect the retailer, has the right to ask of all manufacturers that they refrain from selling to or soliciting the trade of any retail dealer or consumer. It is contended, and justly so, that the manufacturers' legitimate trade is with the wholesaler. When they sell to the retailer they are disturbing the natural conditions of trade and taking away from the wholesaler that much trade which is legitimately his.

That both the manufacturer in the United States and Canada has been too often guilty of doing business in the manner referred to is a well-known fact and the wholesale trade has been aroused to concerted action to do away with an evil which they claim is jeopardizing their business interests.

Brief interviews with representative lumbermen in Buffalo seem to indicate a steadily improving state of trade. Building operations in business localities will be on a more extensive scale than for years past.

In reply to an enquiry touching the hardwood market, the President of the Buffalo Hardwood Lumber Co. made the statement that their volume of business for the month of March this year exceeded that of any one month during eight years. There was an apparent shortage of red oak and quartered white oak, and the demand for these woods was on the increase. Canadian manufacturers holding such stocks will find it to their interest to note the fact.

A.

Place Bros., Stoney Creek, Ont., are building a new sash, blind and door factory at that place.

Ward & Steele, contractors, of Prescott, Ont., contemplate building a new planing mill this spring.

The Ontario Steam Logger Co., Toronto, Ont., are applying for incorporation with a capital stock of $250,000 to manufacture snow traction engines for the hauling of sawlogs, etc.

CANADA LUMBERMAN

WEEKLY EDITION

The Lumberman Monthly Edition, 20 pages } $1.00 PER YEAR { The Lumberman Weekly Edition, every Wednesday

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Weekly Lumberman, published every Wednesday Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

Lumberman, Monthly. A 20-page journal, discussing fully and impartially subjects pertinent to the lumber and wood-working industries. Contains interviews with prominent members of the trade, and character sketches and portraits of leading lumbermen. Its special articles on technical and mechanical subjects are especially valuable to saw mill and planing mill men and manufacturers of lumber products.

☞ Subscription price for the two editions for one year, $1.00.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type, and no display is allowed beyond the head line. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue.

FOR SALE OR EXCHANGE.—50 H. P. Engine and boiler, with smokestack—cheap.
BOX 50, CANADA LUMBERMAN.

WANTED.

1½ AND 2 INCH DRY BASSWOOD AND 2, 2¼ and 2½ inch Dry Maple. Reply to Manufacturer.
BOX 100, CANADA LUMBERMAN.

FOR SALE.

DOUBLE FRICTION FEED, CONSISTING of spools, cable shafting, &c., complete, made by Wm. Hamilton Mfg. Co., of Peterborough; used part of one season, good as new. Write for particulars.
J. W. HOWRY & SONS, Fenelon Falls.

NOTICE.

TENDERS WILL BE RECEIVED AT THIS Department up to and including the 4th day of June next for the right to cut pine trees over seven inches in diameter on the stump, on that part of the township of Vankoughnet, in the District of Algoma, lying outside the boundaries of the Batchewaung Indian Reserve, except the following part sections S E 1-4 of section 11, S W 1-4, section 12, S W 1-4, section 14 and the S E 1-4 of section 25.

Parties making tender will state the amount they are prepared to pay as bonus, or for the right to receive a license to cut the pine trees over seven inches in diameter on the stump, which, when cut, will be subject to the following rates of dues: on square or waney timber $25 per thousand feet cubic, on sawlogs $1.25 per thousand feet, board measure.

No pine trees of a less diameter than seven inches on the stump shall be cut.

The department reserves all timber except the pine together with the right to dispose of such other timber at any time, and purchasers of the other timber will have the right to make roads and to do whatever may be necessary in the premises to cut and remove the same.

Terms of payment 1-2 cash, balance in 3 and 6 months.

Notes for balance to be endorsed by parties satisfactory to the department. A marked cheque for 5% of the offer must accompany each tender.

For further particulars and conditions of sale apply to P. C. Campbell, Esq., Crown Timber Agent, Sault Ste. Marie, or to the Department of Crown Lands, Toronto.

A. S. HARDY,
Commissioner of Crown Lands.

Department of Crown Lands }
Toronto, April 25th, 1895. }

WANTED.

10 CARS OF 2 INCH NO. 1 AND 2 ROCK Elm, 7, 8, 14 and 16 feet long. 10 cars of 2 inch No. 1 and 2 Maple, Hard, 7, 8, 14 and 16ft. long. BUFFALO HARDWOOD LUMBER CO., 940 Elk St., Buffalo, N. Y.

FOR SALE.

FEW CARS EACH OF HEMLOCK AND NO. 2 Pine Lath, 8 inch Pine Stocks, Pine Sidings 10 to 14 feet, 1¼ Spruce Flooring, Dry. Write for particulars. CRAIG & AUSTIN, Kinmount.

WANTED.

BEST SPRUCE PLANED ON THE FOUR sides—42x3x3, 48x3x3, 48x4½x3, 43½x3x2, 43½x4x2, 43½x4½x1. Quote lowest price per 1000 delivered to the HILLIER ORGAN CO., 228 York Road, Kings Cross, London, Eng.

SALE OF PLANING MILL

IN THE

CITY OF HAMILTON.

UNDER AND BY VIRTUE OF THE POWERS contained in a certain mortgage, which will be produced at the time of sale, there will be offered for sale by Public Auction, on

Friday, the 10th Day of May, 1895,

at the hour of 12 o'clock noon, by Alexander Hunter, Auctioneer, at his auction rooms, No. 28 Merrick street, in the City of Hamilton, the following property, viz:—

Firstly—Lot No. 49 on the south side of Jackson street, between Catharine and Walnut streets, in Geo. Hamilton's survey, in the City of Hamilton.

Secondly—Lot No. 47 on the north side of Jackson street, in said survey.

Thirdly—The west half of lot No. 1 on the south side of Jackson street, between Catharine and Walnut street, in O. T. Springer's survey.

On the said premises are erected a brick planing mill, containing engine and boiler, and fitted with new and complete machinery for the manufacture of doors, sashes, blinds and boxes, all of which machinery is in excellent condition.

The said premises may be inspected at any time.

TERMS—Ten per cent. of the purchase money to be paid down at the time of sale, balance to be paid in 30 days from date of sale.

For further particulars and conditions of sale apply to

TEETZEL, HARRISON & McBRYANE,
Vendor's Solicitors.

Dated at Hamilton the 20th day of April, 1895.

The case of Frank Stafford against the estate of the late James McCready, was argued before Mr. Justice Taschereau, in the Superior Court, at Montreal, a few days ago. In 1888 the late Mr. McCready purchased two timber limits, and Mr. Stafford alleges that he was to have half the profits from one of these limits. This claim the executors of the estate refuse to recognize, hence the action. This limit was advertised to be sold in Toronto about a year ago, when Mr. Stafford applied for a writ of injunction to prevent the sale taking place, which was granted, and he subsequently took the present proceedings.

A lumber company that will handle American logs at some point on the Lake of the Woods, Minnesota, is being organized with a capital of $1,000,000. The organizers are William Deary, Kohl & Deary; Geo. A. Baird, Ottawa; Timothy Crowell, Boston; H. Howard, Montreal, and M. A. Ferguson, Duluth. The new concern expect to be in shape to commence business August 1st. Edward Buckley, president of the Manistee and Northeastern Railroad, and other Michigan men are interested. Mr. Ferguson, promoter of the company, will spend some time in Ottawa and Montreal and other points in the interest of the enterprise.

CURRENT TRADE CONDITIONS.

ONTARIO.

IT is the general belief of the lumber trade that business is mending, but at a markedly cautious pace. In volume it is not running into large figures, nor does it seem at all likely that it will partake of the nature of a boom this summer, whatever may be the outcome later. Reports have reached us from several sources in western Ontario, and these point to more activity during the past fortnight. Travellers say that they are able to pick up orders at nearly all points of call, though these are not of a large size. The business that had been expected from the United States by this time in the year has not materialized. Some shipments are going out, and these will increase, now that navigation is opened, but seldom have United States lumbermen bought with greater care than this season. In a number of the larger cities, building operations will be more active this season than a year ago, but in most cases the buildings projected are of a business character, and will not call for any large consumption of lumber, though the lumber trade will, probably, indirectly, be benefited as a result of the general revival of business indicated by the permits granted. At some points the stocks of lumber carried by mill men are not particularly heavy, yet there are those who would like to see the old stock disposed of before they commence adding to it from the new cut. Whatever the future will bring forth touching prices no decline, as yet, is manifest, though some contend that there will be a shrinkage in values in some grades, at least, later in the season. If the lumber situation is to be measured by the value set on timber limits, no one need have occasion to be discouraged. There is a good enquiry for limits, and a strong confidence in the future of values. Careful enquiry would lead to the conclusion that the cut this season will be about equal to that of a year ago, if the logs all come down with promptness.

QUEBEC AND NEW BRUNSWICK.

Lumber business is commencing to take on a seasonable-like activity in Quebec. The booms are in good shape, the river is clear of ice, and the expectation is, that shipments to the United Kingdom will be made almost right away. McArthur Bros. anticipate the arrival of vessels for loading any day. There is an increased demand from the United States, but trade there is not developing as the lumbermen of New Brunswick had anticipated some months ago. The general quietness of business in that country affords the explanation. Prices, whilst firm, are not advancing as some had hoped would be the case. There is some improvement in cedar shingles, which is welcomed by the trade.

BRITISH COLUMBIA AND MANITOBA.

Without any special cause for rejoicing, lumbermen of British Columbia have reason to be gratified at the condition of trade. The mills are finding a good demand for their weekly output, both at home and export points. Shipments to the United States continue active, and the increase in charters indicates a reasonable export business to foreign countries. Recent information would leave the impression that conditions are so shaping in South Africa, that a larger share of lumber from the Pacific coast will go there than formerly. Hitherto Sweden has furnished the greater part of the timber consumed in that country, but this trade, it is expected, will be more and more directed in the future toward the Pacific coast.

In Manitoba there is a better call for lumber, though the trade is not very active yet. Says the Commercial: "The cut of logs for the Winnipeg mill (about 6,000,000 feet), is larger than usual, about 3,000,000 feet having been the cut of this mill in previous years. The logs will come down the Rosseau river, from west of the Lake of the Woods river. The very low water this spring is causing some anxiety about getting logs safely down. Nothing has been done at the Lake of the Woods mills yet, navigation not being opened on the lake. The cut of these mills will be light this year, as the quantity of logs taken out is the smallest for many years, and stocks of lumber carried over are large."

UNITED STATES.

As a whole, remarks a contemporary, the market condition of trade has not greatly changed during the week, and this would seem to be the conclusion to be reached from a study of conditions generally throughout the United States At certain points, trade is better than at others. The St. Louis district is named as the most energetic in lumber lines. But, generally, business is slow. It seems hard to say what will be the outcome of the season's trade in white pine. With navigation opened, the complexion of the white pine business will change somewhat, but how far this condition will effect the general trade is a question. For rail shipment the tendency has been for months to buy in careful lots, and it is doubtful if any other method of transportation will encourage a more liberal buying. Dealers are sorting up their stocks, but they are not stocking up with an over generous hand. Supplies are sufficient to meet all

present requirements. The Northwestern Lumberman says that at Saginaw, Tonawanda and farther east, the wholesale market is quiet for the spring season when demand should be good. It will not be long now before the green lumber will be on the market, and lumbermen are conjecturing what will be the effect of this development on market conditions as a whole.

FOREIGN.

Though the improvement does not amount to a great deal, reports from the United Kingdom tell of a better lumber market. An altogether improved tone is recorded of the Glasgow trade, and transactions of fair size and profitable character are taking place. Saw mills are busy, and retail trade is assuming satisfactory activity. The season points to a good demand for Quebec timbers from the shipbuilders of Glasgow. The new orders booked by Clyde shipbuilders, during the last month, amounted to 24,000 tons, and the work on hand, altogether, is estimated at about 300,000 tons, which exceeds the amount at corresponding date for a number of years past ; the launches for the first three months of the year total 53,000 tons. Prices for pine deals are held firm. At Liverpool business is not as healthy. No large sales are reported, though small parcels have changed hands, and prices keep firm all round. The Timber Trades Journal says of this market : "An average business has been done in pine deal goods to arrive, the low freight rates assisting to bring this about. We understand some engagements for freight by liners from Montreal to Liverpool, have been made at 37s 6d per standard, but some shippers are not at present eager to charter at even 2s 6d per standard less than this figure." The London market is the least active of any of the leading markets of the United Kingdom. Reports from South America say that trade there is improving, though little is being done as yet with Cuba, the insurrection troubles still proving a hindrance to business.

HARDWOODS.

The week's trade in hardwoods has been of fair size. Basswood continues in good demand, especially 1sts and 2nds, required for United States shipment. Birch holds a firm position, and stocks are none too plentiful.

STOCKS AND PRICES.

CANADA.

The Royal City Mills, New Westminster, B. C., sent out a week ago ten car loads of ties for the C. P. R.

Richard & Gunter, spool wood mill, Boiestown, N. B., are turning out an average of 35 cords of spool wood per day.

S. Gillies & Sons, of Ailsa Craig, Ont., have shipped this season to the United Kingdom over $15,000 worth of square timber.

The American schooner R. W. Bartlett, has sailed from New Westminster, B. C., for San Francisco, carrying a cargo of 600,000 feet of lumber and 175,000 of laths.

Last week there were exported from St. John, N. B. 2,500,000 feet of long lumber, 4,000,000 lath, 2,000,000 shingles, a cargo of piling and two of cord wood to the United States, and nearly 2,000,000 feet of deals, etc., to Dublin and Sligo, Ireland.

The Central Lumber Co., of Saginaw, Mich., through Col. A. T. Bliss, have purchased 60,000,000 feet of standing pine timber on the Blind river, Ont. The logs will be towed to the company's mill, and will stock it up for about three years. The consideration is said to be represented by rather less than $3 stumpage.

An order is being filled at the Hastings Mill, Vancouver, B. C., for 100 ship spars for Sydney, N. S. W. They will be used in ship building, and will be carried around the Horn in a sailing vessel, due to leave next month. The spars must not be broader that 65 feet nor exceed 95 feet, and at the center must have a diameter of from 14 to 23 inches. Each spar will be of clean fir timber, and free from cracks, knots or other defections.

UNITED STATES.

Log run at Saginaw, Mich., is quoted from $14 for coarse to $18 for good. Box is $10 to $10.50, and bill stuff remains unchanged at from $8 to $8.50.

W. D. Young & Co., are shipping into Bay City, Mich., hardwood logs at an average of 4 to 6 train loads each week. The timber is elm, basswood, ash, birch, hemlock and maple.

One of the largest transactions in lumber on record in Philadelphia was satisfactorily completed a week ago, when Chas. Estey, of that city, contracted to deliver, to the Standard Oil Co., 55,000,000 feet of boxing, putting up a bond of $200,000 for the favorable performance and fulfilment of the contract. The lumber is to be delivered within two years.

A report from Boston, Mass., tells of one sale of stepping amounting to about 70,000 feet, made at a price below $26, and of sales of 1x6 heartface made at less than $16. A sale of logs amounting to 4,000,000 feet, is reported as being made at Bangor, Me., during the week, at $12.50. Readers can judge from this of the condition of the hard pine market in certain districts.

The Northeastern Lumberman says that Boston dealers need not expect much cheap spruce from Bangor, Me. this spring, with logs selling at $12.50 below the booms there, and with Sound orders for small spruce quick at $14 to $14.50 per thousand feet, and New York orders for yard stock at $13.50 to $16.50. The same journal says that most of the Associations spruce mills are full to over flowing with orders for frame and yard random. Some manufacturers predict a $16 market for May and June.

CANADIAN COMMISSIONER LARKE ON THE AUSTRALIAN TIMBER TRADE.

The commercial agent of Canada, Mr. J. S. Larke, with headquarters at Sydney, N. S. W., has furnished the following notes regarding the lumber trade of Australia. In dressed timber the trade was :

	1893.	1894.
Canada	£ 330	£ 1,786
United States	2,605	2,170
In rough lumber :		
Canada	16,373	18,213
United States	50,915	45,729

The Canadian advance in dressed timber was largely in butter boxes, and unfortunately the refusal of the butter makers to use boxes made from spruce, may destroy that trade in the future unless some means of thoroughly deoderizing it can be found.

A few months ago it was hoped a large trade would develop in the production of butter boxes from spruce, for the Australian trade. It is claimed here that spurce, although appearing to be entirely free from odor, develops a taint in shipment, and the use of these boxes has been discontinued by all the leading exporters, and only second class butter or butter for British Columbia market is packed in them. This is to be regretted and tests should be made by your lumbermen to ascertain whether this defect cannot be obviated, as the trade is an important one.

Spruce boxes that have been made on the market for some time were sold a few days ago to exporters, owing to their happening to be no supply of New Zealand white pine at hand. I propose to try to follow the course of these boxes, and if they turn out all right and the price of white pine can be met, it may lead to a restoration of the B. C. butter box trade.

The market for timber is dull and there is a story that Oregon has been offered at $7. There has lately been some trouble over claims for damages owing to timber not being up to quality and shippers have incurred serious losses thereby. I am to meet the leading people engaged in the Oregon trade, to ascertain whether anything cannot be done to bring about a better state of affairs.

THE SITUATION.

REFLECTED THROUGH CORRESPONDENCE OF "WEEKLY LUMBERMAN."

S. Gillies & Sons, Ailsa Craig, Ont.: "Have just completed a shipment of oak and elm, principally rock elm, over 100 car loads, to Messrs. Dobell, Beckett & Co., Quebec. We have about 300,000 feet of basswood for sale, balance long run. Have also a quantity of soft elm, rock elm, oak and maple. We anticipate good prices this season."

Estate, James McLaren, Buckingham, Que.: "Stocks are commencing to move actively ; there seems to be a general demand for all classes of lumber here. Sales, however, are chiefly of moderate size ; no very large transactions to speak of. The tendency of prices is firm and upwards."

J. & T. Scott, Allans Mills, Ont.: "Stocks are not moving actively, and chief among those in demand are ash, basswood and maple. No large sales have taken place in this district recently."

S. Fraser, Amherstburg, Ont.: "Hardwoods are in fair demand in this district. There is a large stock of logs at the mills, mostly elm. Pine is at a standstill ; local trade is very dull."

Correspondent, St. John, N. B.: "The exceptionally favorable winter for logging, while it tended to reduce the comparative cost of getting out lumber in this province, as well tended to a larger output, which must be marketed, and this will have a tendency to keep prices from advancing very much. As yet, trade remains quiet, and holders are waiting, and watching the movements in outside markets."

S. B. Wilson & Sons, Lousie, Ont.: "Stocks of hardwood lumber here, are lighter than a year ago--probably 50 per cent. We find prices becoming firmer, and in most lines a fair advance is being made. Many enquiries for stock. We have contracted for about 200,000 feet of hardwood for the coming season at fair prices, and expect a good season's business. Shingles are slow, except for the retail trade, which is very good."

SHIPPING MATTERS.

Vessel rates from St. John, N. B., to New York are down to $2.25.

The sch. Peerless, has sailed from Vancouver, B. C., for San Pedro with a cargo of lumber.

Five schooners from Saguneay, two laden with lumber, consigned to Messrs. Price Bros. & Co., Quebec, and the other three in ballast, have reached port.

Not one vessel in a dozen at Buffalo has a load in sight, and but two or three are prepared to make a trip when navigation opens. The market for tonnage is indeed slow.

The Collin's Bay Rafting Co., have the steamer City of Owen Sound and Orion with their consorts already fitted out at Kingston, and these vessels will leave for the Upper Lakes immediately to go into the lumber business.

Robt. Kerr, general freight and passenger agent for the the C. P. R., at Winnipeg, in his evidence before the Freight Rates Commission at Montreal a few days ago, said that the C. P. R. rates on lumber from Rat Portage were almost one-third less than the rates from eleven different points specified in the line of the Northern Pacific.

The following charters are reported at St. John, N. B.: Ship Abba S. Heart, Pensacola, to three ports United Kingdom, sawn timber, 90s ; barques, N. B. Morris, Pascagoula to the continent, deals and boards, 92s 6d ; Credo, Mirmachi to Llanley, deals ; Argentina, Bridgewater, N. S., to Beunos Ayres, lumber $6.50, Rosario $7.50 ; Africa, Bridgewater, N. S., to Beunos Ayres, lumber $6.50, Rosario $7.50.

BUSINESS DIFFICULTIES AND CHANGES.

Hughes, Atkinson & Co., lumber, coal and wood, Souris, Hartney and Brandon, Man., have dissolved.

The Hardwood Manufacturing Co., at Bay City, Mich., has been incorporated with a capital stock of $30,000.

Schedules of the affairs of Geo. Hagemeyer & Sons, New York, the insolvent hardwood men, show total liabilities of $446,929, of which $191,668 are actual, and $255,261 contingent ; nominal assets $245,500, actual assets $145,813.

Application has been made to parliament for the incorporation of a company to be called Gilmour & Hughson Co., Ltd., for the purpose of purchasing the estate of Gilmour & Hughson, Ottawa, and to carry on the manufacture of lumber, wood-pulp, paper, bricks of every material ; also to carry on the business of shipping, mines, smelting ores, and producing and selling electricity for power and heating purposes.

LUMBER FREIGHT RATES.

LUMBER freight rates for pine on the Grand Trunk Railway have been made a fixture, as below. Of any intended change due notice will be given lumbermen.

General instructions in shipping by Grand Trunk are embodied in these words in the tariff schedule: On lumber in carloads, minimum weight, 30,000 lbs. per car, unless the marked capacity of the car be less, in which case the marked capacity (but not less than 24,000 lbs.) will be charged, and must not be exceeded. Should it be impracticable to load certain descriptions of light lumber up to 30,000 lbs. to the car, then the actual weight only will be charged for, but not less than 24,000 lbs. The rates on lumber in the tariff will not be higher from an intermediate point on the straight run than from the first named point beyond, to the same destination. For instance, the rates from Tara or Hepworth to Guelph, Brampton, Weston or Toronto, would not be higher than the specific rates named from Wiarton to the same points. The rates from Cargill and Southampton to points east of Listowel and south and west of Stratford will be the same as from Kincardine, but in no case are higher rates to be charged than as per mileage table published on page 9 of tariff.

Rates from leading lumber points on pine and other softwood lumber, shingles, etc., are as follows : From Glencairn, Creemore, Aurora, Barrie and other points in group B to Toronto, 6½c.; Collingwood, Penetang, Coldwater, Waubaushene, Sturgeon Bay, Victoria Harbor, Midland, Fenelon Falls, Longford, Gravenhurst and other points in group C, to Toronto, 6½c.; Bracebridge to Toronto 7c.; Utterson, Huntsville, Navor, Emsdale, Katrine to Toronto, 7½c.; Burk's Falls, Berriedale and Sundridge, to Toronto, 8c.; South River, Powassen and Callender to Toronto, 9c.; Nipissing Junction and North Bay, 10c. Rate from Goderich, Kincardine and Wiarton to Toronto, 6½c. These rates are per 100 lbs. Rates from Toronto east to Belleville are 7½c. per 100 lbs.; to Deseronto, 9c.; to Brockville and Prescott, 10c.; to Montreal and Ottawa, 11c. The

rates on hardwoods average about from 1c. to 2c. per 100 lbs. higher than on softwoods. For rates on railway ties, mahogany, rosewood, walnut, cherry, and other valuable woods, application must be made to the district freight agent.

On the Canadian Pacific the rates on pine and softwoods may be illustrated as follows: Cache Bay, North Bay, Sturgeon Falls and Warren, to Toronto, 10c; Algoma, Cook's Mills, Massey, Spanish River and Whitefish to Toronto, 13c.; Ottawa to Toronto, 10c From Ottawa, Hull, Aylmer and Duchesne Mills to station on the Lake Erie and Detroit River, Erie and Huron, Toronto, Hamilton and Buffalo, and Michigan Central Railways, the rate is 14½c. per 100 lbs. Regulations apply as to minimum size of carload of 30,000 lbs., and an advanced rate is charged for hardwoods.

Lumber freight rates on the Canada Atlantic Railway are as follows: Ottawa to Toronto, 10 cents per 100 lbs.; Ottawa to Oswego, $1.90 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Montreal, $1.00 per M ft., (3,000 lbs. and under per M ft.); Arnprior to Montreal, $1.50 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Quebec, $2.00 per M ft.; Arnprior to Quebec, $2.50 per M ft.; Ottawa to Buffalo, 12 cents per 100 lbs.; Ottawa to Port Huron and Detroit, 14 cents per 100 lbs. Ottawa to New York, five carloads or over $3.00 per M ft.; Arnprior to New York, $3.50 per M ft.; Ottawa to Boston, Portland and common points, local 15 cents; exports 13c. per 100 lbs.; Arnprior to Boston, Portland and common points, local 17 cents; export 15 cents per 100 lbs.; Ottawa to Burlington, 6 cents per 100 lbs.; Ottawa to Albany, 10 cents per 100 lbs.; Arnprior to Albany, 12 cents per 100 lbs.; Ottawa to St. John, N. B. and common points, 20 cents per 100 lbs.; Ottawa to Halifax, N. S. and common points, 22½ cents per 100 lbs. Minimum carload weight for shipment of lumber, lath, shingles, etc., is 30,000 lbs., and rates quoted above are in cents per 100 lbs., except when quoted per M ft. the minimum carload charged is 10 M ft., lumber not exceeding 300 lbs. to the M feet. Ottawa rates apply on shipments from Rockland and Hawkesbury.

MODIFICATION OF HARDWOOD RATES.

THE Grand Trunk Railway and Canadian Pacific have made the rates on hardwoods from certain points to Toronto and Hamilton as follows. The regulations are over the signature of Mr. John Earls, W.D.F.A., of the G. T. R., and given in reply to a letter from Toronto hardwood men:

"After careful consideration we have come to the conclusion that, on and after Jan. 1st, 1895, a modification will be made in the present arrangements for hardwood lumber, to the effect that the rate will be 7½c. per 100 lbs. from our Northern and Northwestern branches to Toronto and Hamilton. This rate, however, will not apply from main line points and the straight run between Toronto, Sarnia and Windsor; also that so far as rates on common lumber to points like Guelph, Galt, London, Woodstock, Ingersoll, etc., from all lumber shipping stations the rate will be the same on hardwood as on pine." On the old principle, we suppose, that half the loaf is better than none, hardwood men have something, possibly, to be thankful for, though there is no good reason why the rates generally on hardwood should not be as low as on pine. It is understood that the C. P. R. rate will be made uniform at 7½c. from same points.

CEDAR—ORDERS PROMPTLY FILLED FOR telegraph, telephone or electric poles, ties, posts, cedar shingles and cedar light wood; also hemlock dimension lumber—J. E. MURPHY, Hepworth Station.

MILLS

Having Brown Ash 12, 14 and 16 ft. firsts and seconds, inch Bass firsts and seconds 12 feet, or any other Hardwood Lumber, can sell same for cash by addressing

H. D. WIGGIN,
No 89 State St., BOSTON, MASS.
Inspection at mill.

CANADIAN EXPORTERS AND WHOLESALERS

ROBERT THOMSON & CO.
....MANUFACTURERS OF....
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WHOLESALE LUMBER
OFFICE:
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HARDWOOD a Specialty
TORONTO

DONOGH & OLIVER
Wholesale Dealers in Lumber, Lath and Shingles
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Geo. Cormack
Wholesale Dealer in all kinds of
LUMBER, LATH AND SHINGLES
Bills cut to order.
Lumber shipped to all parts by rail or vessel.
Excellent quality of 18 inch Pine Shingles for sale. | WHITBY, ONTARIO

JAS. PLAYFAIR & CO.
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LUMBER • LATH • SHINGLES
Contractors for Railway Supplies
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The Georgian Bay Lumber Co.
MANUFACTURERS OF
LUMBER : AND : LATH
Mills at Waubaushene and Port Severn • WAUBAUSHENE, ONT.

Huntsville Lumber Co., Ltd.
—: HUNTSVILLE, ONT. :—
MANUFACTURERS OF LUMBER LATH AND SHINGLES
HAVE for sale a large quantity of nice Mill Cull Stocks, mixed, 10 and 12 inches wide, at $8 per M. Also a quantity of Mill Cull Sidings at $7. In stock, quantities of 1¼, 1½, and 2 cuts and better. Also 1 x 6, 8, 10 and 12 inch Stocks. Correspondence solicited.

H. G. WATTERS & CO. LUMBER BROKERS . . . ST. JOHN, N. B., CANADA
Wanted for the American Market,
Correspondence Solicited
Spruce Lath, Spruce Shingles, Spruce and Pine Clapboards, Birch Flooring, Pine and Spruce Lumber, also Hemlock Bark.

Ottawa Lumber Co. Ottawa Canada
WHOLESALE LUMBER, LATH, SHINGLES, ETC.
Write for Stock List

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Will secure for you a Buyer or Seller, as the case may be. Address,
The Canada Lumberman
Toronto, Canada.

FOREIGN EXPORTERS AND IMPORTERS

WE want to buy FOR CASH the following kinds of Lumber : : : : :
1, 1¼, 1½ and 2in. Plain RED OAK
1¼ and 2 inch SOFT ELM
1 inch and thicker BIRCH
EMPIRE LUMBER CO. - BUFFALO, N. Y.
Write us, stating what you have for immediate shipment, with full description of stock, etc.

OTTAWA & NEW YORK LUMBER LINE
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Business Wisdom: "While imitation is the sincerest flattery, intelligent adaptation of business methods is a sure means of wealth."—Viator.

The Price Lists that here follow will be revised each week up to the hour of going to press, and in connection with these we would draw attention to the week's trade review under the heading of "Current Trade Conditions" on the first page, immediately followed with matter marked "Stocks and Prices," which presents the lumber situation of the week, together with a record of the week's sales and transactions.

PRICES CURRENT.

TORONTO, ONT.

TORONTO, May 1, 1895.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 0
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		2 30
XX shingles 16 inch		1 40
Lath, No. 1		2 00
Lath No. 2	1 80	1 85

HARDWOODS—PER M. FEET CAR LOTS.

Quality, 1s and 2s unless otherwise specified.

Ash, white, 1 to 2 in	$26 00	$28 00	Cherry	1 " 1½	50 00 60 00
" " 2½ to 4	30 00	32 00	" "	2 " 4	60 00 65 00
Ash, black, 1sts and 2nds, 1 to 1½ in	21 00	23 00	Elm, soft	1 to 1½	$14 00 $15 00
Ash, black, 1sts and 2nds, 2 to 4 in	23 00	25 00	" "	2 " 3	15 00 16 00
Ash, M. R., 1 " 1½	18 00	20 00	" rock	1 " 1¼	16 00 18 00
" " 2 " 4	20 00	24 00	" "	1½ " 3	20 00 22 00
Birch, 1 " 1½	24 00	26 00	Hickory	1½ " 2	28 00 30 00
" 2 " 4	26 00	29 00	Maple	1 " 1½	16 00 18 00
" sqrs. 4x4 " 8x8	28 00	32 00	"	2 " 4	18 00 20 00
Basswood 1 " 1¼	16 00	18 00	Oak, red, p'n	1 " 1½	28 00 30 00
" 1½ " 2	19 00	19 00	" "	2 " 4	30 00 32 00
" m. r. 1 " 1¼	14 00	16 00	" white	1 " 1½	28 00 30 00
Butternut 1 " 1½	23 00	25 00	" " "	2 " 4	30 00 35 00
" 2 " 3	25 00	28 00	" quart'd	1 " 2	48 00 52 00
Chestnut 1 " 2	22 00	25 00	Walnut	1 " 3	85 00 100 00
			Whitewood	1 " 2	32 00 36 00

OTTAWA, ONT.

OTTAWA, May 1, 1895.

Pine, good sidings, per M feet, b.m	$30 00	37 00
Pine, good strips, " " "	26 00	31 00
Pine, good shorts, " " "	19 00	25 00
Pine, No. 1 dressing sidings, per M feet, b.m	19 00	24 00
Pine, " " strips, " " "	17 00	20 00
Pine, " " shorts, " " "	15 00	17 00
Pine, 10 s.c. and better stock, " " "	16 00	18 00
Pine, 8 s.c. " " " " "	13 00	15 00
Pine, " sidings " " "	13 00	15 00
Pine, " strips " " "	11 00	13 00
Pine, " shorts " " "	9 00	11 00
Pine, box culls " " "	9 00	12 00
Pine, mill culls " " "	8 00	10 00
Lath, per M	1 40	1 75

QUEBEC, QUE.

QUEBEC, May 1, 1895.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	16 @	22
For fair average quality, according to average, etc., measured off.	20	26
For good and good fair average, " " " " "	25	30
For superior " " " " "	32	40
In shipping order " " " " "	36	42
Waney board, 18 to 19 inch " " " " "	36	42
Waney board, 19 to 21 inch " " " " "	38	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	45	51

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	28	32

BIRCH.

16 inch average, according to average and quality	21	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $40 to $43 for 3rd quality.
Bright spruce, according to mill specification, $40 to $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality. F.O.B. batteau.

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N. Y., May 1, 1895.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in	$47 00	50 00	Shelving, No. 1, 13 in and up, 1 in	31 00	@33 00
2½ and 3 in	50 00	53 00	Dressing, 1¼ in	25 00	26 00
4 in	54 00	56 00	1¼x10 and 12		26 00
Selects, 1 in.	38 00	39 00	1½ in	24 00	25 00
1¼ to 2 in	40 00	42 00	2 in	26 50	28 00
2½ and 3 in	47 00	50 00	Mold st'ps, 1 to 2 in	33 00	35 00
4 in		52 00	Barn, No. 1, 10 and 12 in	21 00	23 00
Fine common, 1 in	35 00	37 00	6 and 8 in	20 50	22 00
1¼ and 1½ in	37 00	38 00	No. 2, 10 and 12 in.	17 00	18 00
2 in	34 00	35 00	No. 3, 10 and 12 in.	14 00	16 00
3 in		45 00	6 and 8 in	16 50	18 00
4 in		45 00	6 and 8 in	13 50	15 50
Cut'g up, No. 1, 1 in.	26 00	27 00	Common, 1 in	16 00	18 00
1¼ to 2 in	32 00	33 00	1¼ and 1½ in	18 00	20 00
No. 2, 1 in	16 00	17 00	2 in	19 00	22 00
No. 2, 1¼ to 2 in	22 00	23 00			
No. 3, 1¼ to 2 in	18 00	19 00			

ALBANY, N.Y.

ALBANY, N. Y., May 1, 1895.

PINE.

Uppers, 3 in. up	$50	$52	Dressing boards, narrow	$19	$21
2½ in.	50	52	West India shipping boards.	16	17
1 to 2 in.	45	48	Box boards	12	14
4 inch uppers	50	52	10-in. dressing and better	26	30
Selects, 2½ in. up	40	42	10-in. common	14	15
1 to 2 in	36	40	12-in. dressing and better	25	32
Fine common, 2½ in. and up	38	40	Common, 1x11	14	16
1 to 2 in	34	38	No. 1 barn, 1x12		20
No. 1 cut, 1 to 2 inch	25	35	1x10	18	21
No. 2	18	25	1x8	16	18
No. 3	17	20	No. 2 barn, 1x12	17	19
No. 1 molding, 1 to 2 in	33	36	1x10	17	19
No. 2 molding, 1 to 2 in	25	28	1x8	17	19
Stained saps		20	Shaky or star clear, 1 to 2 in.	19	21
Bracket plank	30	35	Dressing	16	18
Shelving boards, 12-in. up	28	30	Common	11	15

LATH.

Pine	$2 25		Spruce	$2 00	

SHINGLES.

Sawed Pine, ex. XXXX	$4 25	$4 30	Bound butts, 6x18	$6 00	$6 15
Clear butts	3 25	3 35	Hemlock	2 15	2 30
Smooth, 6x18	5 40	5 50	Spruce	2 20	2 30

BOSTON, MASS.

BOSTON, May 1, 1895.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$12 00	12 50	¾ inch	$ 9 25	9 75
Coarse No. 5	15 00	16 00	11-16 inch	8 50	9 00
Refuse	12 00	13 00	⅝ inch	8 00	8 50
Outs	9 00		Clapboards, sap ext.	48 00	50 00
Boxboards, 1 inch	10 75	11 00	Sap clear	44 00	45 00
⅞ inch	9 75	10 00	Sap, 2nd clear	38 00	42 00
			No. 1	23 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in	$50 00	@51 00	Fine com., 3 and 4 in	43 00	45 00
1¼, 1½ and 2 in	52 00	53 00	No. 2, 1 in. Fine com.	28 00	30 00
3 and 4 in	58 00	63 00	1¼, 1½ and 2 in	29 00	31 00
Selects, 1 in	43 00	45 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in	45 00	47 00	No. 2	36 00	37 00
3 and 4 in	55 00	57 00	No. 3	28 00	30 00
Moulding boards, 7 to 11 in. clear	35 00	37 00	Cut ups, 1 to 2 in	24 00	32 00
60 per cent. clear	34 00	36 00	Coffin boards	19 00	20 00
Fine common, 1 in	38 00	40 00	Common all widths	22 00	26 00
1¼, 1½ and 2 in	40 00	41 00	Shipping culls, 1 in	15 00	15 50
			do 1¼ in.	15 50	16 50

SHINGLES.

Spruce	1 30	1 50	Second Clear	1 25	2 00
Cedar, extra	2 75	3 00	Extra No. 1	1 50	1 75
Clear	2 25	2 50			

HEMLOCK.

Boards, rough	9 00	@10 00	No. 2	7 00	@ 9 50
Planed	11 50	12 50			

LATH.

Spruce			By cargo	1 80	@ 1 90
By car	1 80	@ 2 00			

NEW YORK CITY.

NEW YORK, N. Y., May 1, 1895.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply, rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$28 00	@ 40 00	Building orders	$26 00	@ 35 00
Decking	44 00	50 00			

SPRUCE.

6 to 9 in	13 00	13 50	10 to 12 in	15 00	16 00
6 to 12 in	14 00	15 00	Lath	1 85	2 00
9 to 12 in	15 00	15 00			

SAGINAW, MICH.

SAGINAW, Mich., May 1, 1895.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$45 00		Selects, 1 in., 8 in. and up wide	$38 00	
1¼, 1½ and 2 in.	45 00		1¼, 1½ and 2 in.	40 00	
2½ and 3 in.	50 00		2½ and 3 in.	45 00	
4 in	55 00		4 in	50 00	

FINE COMMON.

1 in., 8 in. and up wide	33 00		2½ and 3 in., 8 in. and up wide	40 00	
1¼, 1½ and 2 in	34 00		4 in	45 00	

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	25 00		2½ and 3 in., 7 in. and up wide	35 00	
1¼, 1½ and 2 in	30 00		4 in	38 00	

STRIPS. A AND B (CLEAR AND SELECTS).

1¼ in., 4, 5 and 7 in. wide	34 00		1 in., 4, 5 and 7 in. wide	32 00	
6 in. wide	36 00		6 in. wide	36 00	

FINE COMMON OR C.

1¼ in., 4, 5, 6 in. wide	30 00		1 in., 6 in. wide	32 00	
1 in., 4, 5 in. wide	28 00				

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24 00		1 in., 4, 5, 6 in. wide	23 00	

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in	17 00		1 in., 4, 5 and 7 in.	17 00	
1 in., 6 in	18 00		1 in., 6 in.	18 00	

NO. 2 FENCING OR NO. 4 FLOORING.

1 in., 4, 5 and 7 in	14 00		1¼ in., 4 to n	14 00	
1 in., 6 in	15 00		No. 3 fencing, 1 in., 6 in.	13 00	

SHELVING.

No. 1, 1 in., 10 in. stocks	25 00		No. 2, 1 in., 7 and 8 in. stocks	19 00	
1 in., 10 in. and up wide	26 00		1 in., 10 in. stocks	21 00	
1 in., 12 in. stocks	29 00		1 in., 12 in. stocks	23 00	
1 in., 12 in. and up wide	30 00		1 in., 10 in. and up wide	22 00	
1¼ in. 1½ and 2 in., 8 in. and up wide	29 00		1 in., 13 in. and up wide	25 00	

BARN BOARDS OR STOCKS.

No. 1, 12 in	19 50		No. 2, 9 in	14 00	
10 in	17 50		8 and 7 in	14 00	
9 in	17 50		No. 3, 12 in	13 00	
8 and 7 in	17 50		10 in	12 00	
No. 2, 12 in	16 00		9 in	12 50	
10 in	14 00		8 in	12 50	

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$10 00		1 in., 13 in. and up wide	$12 00	
1 in., 6 in. wide	11 00		1¼, 1½ and 2 in., 7 in. and up wide	12 00	
1 in., 7 in. wide and up	11 00				

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9 in. wide	17 00		1 in., 10 in. and up wide	17 00	
1 in., 6 in. wide	17 00		1¼, 1½ and 2 in., 8 in. and up wide	17 00	

COFFIN BOARDS.

No. 1, 1 in., 13 in. and up	20 00		No. 1, mill culls	9 00	
No. 2	17 00		No. 2, or red horse	7 00	

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23 50		No. 2	19 5	
No. 1 (nearly clear)	22 50		No. 3	16 0	

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16 ft.	$ 8 50		Hemlock, 2x4 to 10, 12 to 16 feet	8 00	
18 ft	10 50		2x12	8 50	
20 ft	11 50		Add $1 to each additional 2ft. in length.		
22 and 24 ft	12 50				

SHINGLES, 18-IN.

Fancy brands, XXXX	3 25		Standard brands. river made, XXXX	2 90	
Clear Butts	2 00		Clear Butts	1 90	

WHITE PINE LATH.

No. 1	1 85		No. 2	1 35	
			Hemlock	1 25	

OSWEGO, N.Y.

OSWEGO, N. Y., May 1, 1895.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$45 00	@46 00			
Pickings, " "	36 00	38 00			
No. 1, cutting up, " "	31 00	33 00			
No. 2, cutting up, " "	24 00	25 00			
In strips, 4 to 8 wide, selected for moulding trips, 14 to 16 ft.	30 00	32 00			

SIDING

1in siding, cutting up ricks and uppers	32 00	@39 00	1¼ in selected	38 00	@43 00
1in dressing	19 00	21 00	1¼ in dressing	20 00	22 00
1in No. 1 culls	14 00	15 00	1¼ in No. 1 culls	15 00	17 00
1in No. 2 culls	13 00	14 00	1¼ in No. 2 culls	14 00	15 00
1in No. 2 culls			1 in. No 3 culls	11 00	12 00

1X12 INCH.

12 and 16 feet, mill run	21 00		24 00		
12 and 16 feet, No. 1 and 2, barn boards	19 00		20 00		
12 and 16 feet, dressing and better	27 00		31 00		
12 and 16 feet, No. 2 culls	15 00		16 00		

1¼X10 INCHES.

Mill run, mill culls out	$22 00	@25 00	No. 1 culls	17 00	18 00
Dressing and better	27 00	35 00	No. 2 culls	14 00	15 00

1X4 INCHES.

Mill run, mill culls out	17 00	21 00	No. 1 culls	14 00	15 00
Dressing and better	24 00	30 00	No. 2 culls	12 00	13 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20 00	25 00	6, 7 or 8, No. 1 culls	16 00	17 00
6, 7 or 8, drsg and better	25 00	30 00	6, 7 or 8, No. 2 culls	14 00	15 00

SHINGLES.

XXX, 18 in pine	3 60	3 75	XXX, 18 in. cedar	3 40	3 65
Clear butts, pine, 18 in.	2 60	2 75	Clear butt, 18 in. cedar	2 40	2 65
XXX, 16 in. pine	2 90	3 10	XX, 18 in. cedar	1 75	2 00
Stock cedars, 5 or 6 in.	4 50	5 00			

LATH.

No. 1, 1¼	1 85		No. 2, 1¼	1 75	
No. 1, 1 in.	1 50				

THE NEWS.

—Mr. Barker, of Burford, Ont., has commenced the erection of a saw mill.

—C. Anderson has purchased a new engine and boiler for his saw mill at Little Current, Ont.

—Mickle, Dyment & Co. are putting a new lumber carriage in their mill at Severn Bridge, Ont.

—Mr. Rees' new stave mill at South Wodslee, Ont., is nearing completion, and will shortly commence operations.

—Mr. Avory, of Sharbot Lake, Ont., states that his two mills will turn out 50,000 pieces of timber this summer.

—In lieu of a bonus of $500 from the town, Mr. Babcock, of Odessa, offers to build a saw and grist mill at Bath, Ont.

—Jas. I. Armstrong is opening up in the lumber business at Belmont, Man., and will handle only United States lumber.

—Detective Malo, of the Canadian Secret Service, recently arrested three Indians at Caughnawaga, Que., for cutting Government timber.

—J. M. Taylor, of Portage la Prairie, has started his planing factory for the season. He had the machinery overhauled before starting the season's work.

—Mr. Whitney, President of the St. Anthony Lumber Co., intends to erect about 400 houses at Whitney, Ont., to accommodate the men working in his large saw mill.

—Nash's new sawmill at South Edmonton, Man., has been completed and put in operation. Walters & Humberstone's mill at the same place will be finished at an early date.

—The Disney & Delvin Mfg. Co., Hanover, Ont., are applying for incorporation, with a capital stock of $24,000, to operate a planing mill and sash and door factory at that place.

—Hammond Bros'. steam saw mill at Gorrie, Ont., was completely wrecked by the overflowing of the Maitland river on the 8th ultimo. Lumber and logs were swept away in large quantities.

—The Collins Bay Rafting Co., Collins Bay, Ont., have built a marine railway to enable them to haul their boats out of the water to be repaired. They will also erect a sawmill to manufacture lumber, etc.

—Marks & Co., of Thessalon, Ont., have taken out for the Perry Lumber Co. during the past winter 16,000 cords of pulpwood, which piled in a continuous line 4 feet high, would extend a distance of 24 miles.

—A petition is in circulation in East Kent asking the Legislative Assembly of the Province of Ontario to appoint a special committee to inquire into the destruction of 150,000 feet of mercantile timber being cut under the authority of the Commissioner of Crown Lands by his agent at Rondeau Park.

CASUALTIES.

—Robert Carruthers, of Carling, had one of his legs broken a fortnight ago, while chopping down a tree.

—P. Bilodeau, recently fell from a lumber pile in Archer's yard, Quebec, and received injuries from which he died.

—A few days ago Hubert Villeneuve, a settler at St. Prime, Que., was accidentally killed by the fall of a tree at Mistassini.

—B. L. Larne had his arm broken above and below the elbow while working in a stave mill at Mountain Station, Ont., a few days ago.

—George Dufresne, aged 27 years, while felling a tree recently in woods at Deschambault, Que., was killed by the tree falling upon him.

—At the Brunette saw mills, New Westminster, B. C., a sawyer named Dickson was injured by the falling of a pile of lumber. His face was cut and one of his legs badly bruised.

—A young man who was engaged in cutting cordwood with a buzz saw at St. Francois de Beauce, Que., recently had his arm cut off while attempting to remove an obstacle from the saw.

—John Webb, while working in Lewis & Williams' mill, near Cottam, Ont., was struck by a chain on a shaft and had his face battered up in a terrible manner. He was taken to the hospital.

—A young man named Eugene Lacroix, of St. Raphael, Que., accidentally stumbled against a circular saw in the mill of Mr. Morin, at St. Valier, and had his leg instantly cut off. He died shortly after.

—A boy named Frederick Rowe had his left arm caught in the machinery of Ackland's planing mill at Point Douglas, Man., and received injuries which necessitated the amputation of the arm above the wrist.

—On the 12th of April, George Betts, proprietor of a saw mill at the lake, about two miles from Chatham, Ont., committed suicide by shooting himself. Financial trouble is supposed to be the cause of the deed.

—George Salsbury, of Huntingdon, who was operating a portable saw mill near Sheffield Station, on the 11th ultimo, had his leg caught between two logs, breaking it above the ankle and otherwise badly bruising it.

—While attempting to throw off a belt from a revolving wheel, John Odrieve, who runs a saw mill at Glencoe, Ont., was caught by the belt and thrown over the shaft. One arm was broken, which had to be amputated.

—A fatal accident occurred on the 16th April, in Lockwood's sawmill at Enterprise, Ont., whereby Hector Wagar was almost instantly killed. A board, coming in contact with a circular saw, was thrown with terrible force, striking him on the neck, resulting in his death within two hours.

—The first saw mill accident of the season at J. R. Booth's mill at the Chaudiere, occurred on the 16th inst. Robert Hughes was struck by a slab flying from an edger, from which he received a blow in the side and severe internal injury. An operation was performed at the hospital and he is recovering.

AN IMPROVED SHINGLE MACHINE.

THE accompanying illustration represents an improved patent shingle machine manufactured by the Small & Fisher Co., Ltd., Woodstock, N. B. The makers lay claim to the following points of superiority in this machine :

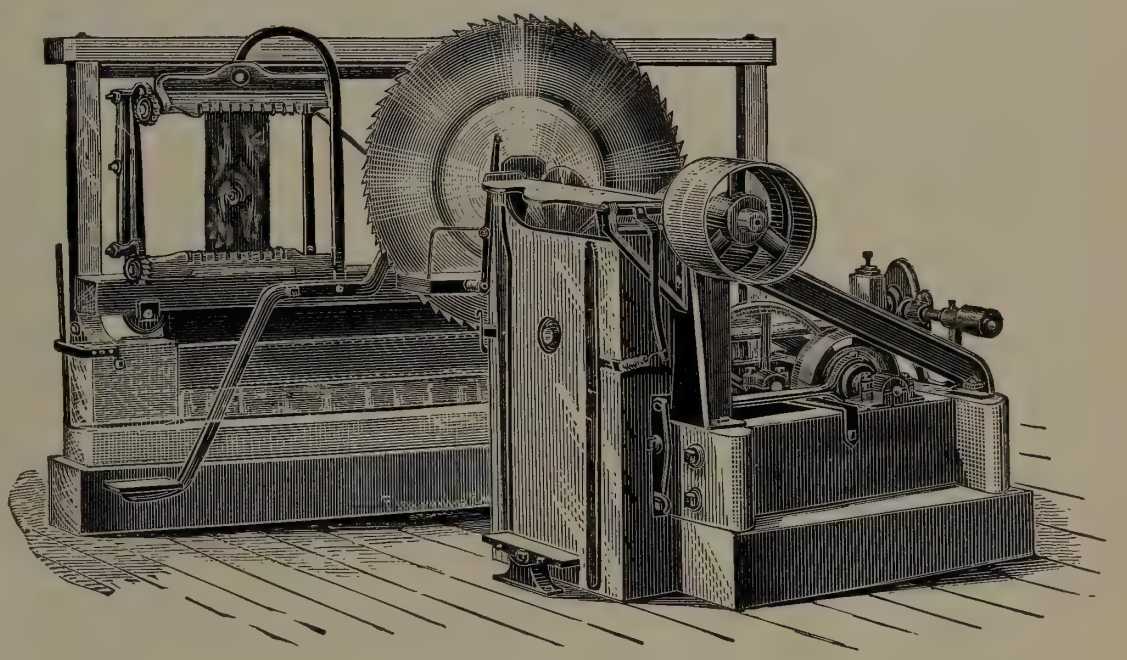
1. That it will make better and more even shingles than any other, for the reason that the belt is set forward while the carriage is advancing slowly towards the saw, consequently there is no jar while the bolt is being set.

2. The bolt being set after the quick return stroke is completed, there is no friction, or pressing of the bolt against the saw, as is the case in machines that set the bolt during the return stroke.

3. The carriage carrying the block passes the saw opposite to the side on which the arbor is attached, by so doing a larger shingle can be cut with a smaller saw than can be done when the carriage runs on the same side as the arbor.

4. The machine is self contained, no extra counter shaft being required to drive the jointer.

In their advertisement appearing in the present number of the LUMBERMAN, the Small & Fisher Co. print strong testimonials, (one from a well-known Ontario firm), in support of their claims for the efficiency of this shingle machine.



AN IMPROVED SHINGLE MACHINE.

EXPERIMENTS WITH SUPER-HEATED STEAM.

IN giving the results of their protracted experiments with saturated and super-heated steam, the Alsace Union of Boiler Owners say that, theoretically, it has never been denied that super-heated steam should give a higher efficiency than saturated, yet no experiments were undertaken with super-heated steam. Subsequently, however, after numerous trials, the oldest engine even was found capable of being safely used with super-heated steam, and not only without injury, but more economically than with saturated. It is also declared by the union that in installing a super-heater care is essential that the advantages gained are not lost either by less perfect combustion or by greater radiation losses—the cost of the super-heater not to exceed, of course, the saving obtained in coal consumption ; the super-heater to be connected with the boiler, so that both can be fired from the same furnace ; and after leaving the super-heater, the gases should come in contact with the heating surface of the boiler, and, lastly, with the heating surface of the economizer. Further, these experiments showed that the use of super-heated steam does not exclude the use of steam jacket. Though both super-heating and steam jackets were used, yet condensation in the high-pressure cylinder occurred. The use of low-pressure, seven and one-half atmospheres, did not give such good results as the use of high pressure, eleven and one-half atmospheres.

A GERMAN COUNTERFEIT WOOD.

AMERICAN inventors have devised a method of "woodizing" glass, and now the Germans are turning still other substances into counterfeit presentments of wood. A peculiar material named "Kuntsfournier," or artificial veneer, is made in Germany, under the patents of Herr Karl Koester, of Cologne. This material is composed principally of infusorial earth, which is fixed with various binding and coloring materials and spread in layers over a wooden core. When the mass is dry, it is cut into sheets or blocks, and if the layers have been differently colored, their irregular section prevents an effect resembling that of figured wood.

In the manufactory a machine is arranged by which two wooden posts, 13 feet high and set about five feet apart, are made to revolve about a vertical axis. Each post has 24 horizontal branches radiating from it, and the branches as well as the posts revolve around their own axes. In the process of manufacture, the horizontal branches are first covered with paper, to prevent the composition from sticking to them, and then painted with a mixture of infusorial earth, coloring matter and gum. The branches attached to one of the posts are painted with one coat, and the machine is then revolved so as to bring the other post near the operator. By the time the branches of the second post are coated, these of the first are dry and ready to be revolved into position for a second coat. In this way the painting goes on continuously, until the branches are loaded with a coat of composition nine or ten inches thick. The color of the coats is made alternately dark and light, and the thicknesss of the stratum is varied, so as to imitate the varying thicknesses of the annual rings in a tree. When all is thoroughly dry, the cylinders of composition are slipped off their wooden cores and sawed or cut into veneers, which are said to bear a deceptive resemblance to those of real wood.

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

IF the future of trade in the Ottawa district is to be gauged by the shipments of lumber from this point during the winter and spring, the season would rank as one of the dullest in ten years. Old members of the trade, however, who have studied the situation carefully, believe that a good season's business will yet be done. It has not always been the case that when business went off with a boom in the months of March and April that the greatest business was done. Prices are fairly maintained, and this is an indication of strength.

The building formerly occupied by the Ottawa Canning factory will be started shortly as a planing mill and sash factory by Mr. Lariviere.

Gilmour & Hughson will increase their cut considerably over what was intended, having been losers of a large quantity of lumber by fire at Ironsides.

Bronson's saw mill has started up. The big mill will be started in a few days. Both mills will be run ten hours per day. By the first of the month it may be expected that all mills will be well running.

The Ontario Government will be about $140,000 richer by the entering for probate of the will of the late Col. Allan Gilmour, the well-known lumberman. The total value of the estate in Ontario is placed at $1,452,834. The stamps amount to $2,144. This is the largest estate ever probated in Ottawa.

It is stated that the Government has decided not to force the sawdust legislation, leaving the matter to be settled by Parliament, which was convened on the 18th inst. This position, however, does not preclude others from taking action against the mill men, and, as intimated in former correspondence, there is talk of private parties moving at once in the matter.

W. C. Edwards & Co., Ltd., have a large force of men repairing and making improvements to their mills. The old water works pump house has been torn down and a more imposing structure is now being built. A large addition is also being built at the shipping docks at mill No. 2, upon which ties and rails are to be laid for the purpose of backing cars on to load.

Mr. William O'Brien was in town a few days ago from the construction of the O. A. & P. S. Railway near Whitney. He says there is a big boom in that district. The American lumber camps are just now breaking up, but the American firms are making a big push. The new saw mill of the St. Anthony Co. is rapidly drawing to completion. The mill will make a very large cut when once in full running order, and employ a large staff of men.

Important improvements are being made to the mill of William Mason & Son, and when finished it will be one of the most complete in Canada, for its size. Over $10,000 worth of new machinery has been put in. The output will be about 75,000 feet a day. The old circular saws have been taken out and replaced with large band saws. New "live feeds" have been put in; new steam "butting off" saws and other new machinery placed in position. The fire protection has been made very complete.

OTTAWA, CAN., April 20, 1895.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN].

THE St. John river is rapidly becoming free of ice, and already schooners loaded with lumber have come down part of the way.

Hamilton Bros. mill on the Straight Shore is being rebuilt.

John C. McAuley, of Mill Stream, is doing good work with his portable saw mill.

The export of lumber from St. John in March was $20,000 less in value than in March of last year.

The Calais Times says that there will be an average cut in that district, where Secretary James talks of a shortage.

Turner & McClean's crew are at work getting the steam mill ready for sawing. About 1,000,000 feet of logs are at the tail of the mill.

Coun. Carson, of St. Martin's, has his winter's lumber all sawn and hauled to the bank, and is making preparations for loading schooners.

It is stated by a local correspondent that there are 30 shingle mills of various sizes, though the majority small, running in Restigouche county.

The Norwegian barque Attila, which carries deals to the United Kingdom, has met with another accident. She has been an unfortunate vessel.

Rhodes, Curry & Co., of Amherst, N. S., owners of the car works, are importing large quantities of oak via St. John. Shipments so far aggregate 400,000 feet.

Heavy rains a week ago have done considerable damage. At Upham Mr. Chas. Titus, mill owner, was a heavy loser, the ice clearing away part of his booms, dam and wharf.

Samuel Darling, formerly customs officer at Milltown, and at one time an active lumber manufacturer in the province, died a week since at the home of his son, at Somerville, Mass.

The output of O'Neil & Lowe, on the Middle Road, will be in the vicinity of 2,000,000 ft. Patterson Bros., H. A. McPhee and others in this district are getting ready for a good season's work.

McLeod Bros., Gasperaux Station, have a larger quantity of logs and railroad ties than usual. Robert M. Graham's mill, same district, has commenced sawing, and a busier season than last year is anticipated.

Robt. Convey, foreman for Geo. B. Vaughan at Point Wolfe, when in town a few days since, stated that a good winter's logging had been completed and they are now awaiting the drivers to get them to the mills.

Several St. John Lumber mills are putting in planers so they can cut dimension stuff for the American market. As a result of the new tariff lumber shipments with the New England and Middle States are looking up.

The mill of S. K. King & Sons, at Kingsville, will be put in operation again in July. New boilers will be put in, the plate for which has been ordered from England. This is the mill where the terrible boiler explosion occurred.

The season's cut of lumber in the vicinity of Andover has been unusually large. The contract for driving from the Forks to the mouth has been sold to Mr. McNair at 23c. per thousand for the 61 miles, and about same rate on chartered distance.

Chas. Miller and A. Cushing & Co. have been reported by Harbor Inspector O'Brien for throwing sawdust and edgings into the river, and Stetler, Cutler & Co. have been reported for throwing lime into the river. These will make test cases on the sawdust question.

Lumbering looks lively at Ten Mile Creek. Large quantities of lumber are there and already some shipments have been made. It is estimated that 5,000,000 of sawn lumber will be shipped from that port this season, besides several cargoes of piling, kiln wood, etc.

J. B. Benson, representing the Muskoka Timber Co., and owning timber lands covering a territory of 300 miles along the Restigouche and Kedgewick rivers, and about 100 miles along Green river, says that the former territory will produce 200,000,000 of lumber or about 10,000,000 per year.

Lumbermen here are not disposed to accept the statement of the secretary of the Northeastern Lumbermen's Association, of Boston, as regards his estimate of shortage of spruce. He has estimated a shortage of 80,000,000 at St. John and 25,000,000 in Nova Scotia. Lumbermen here say that these figures will not hold good, as will be shown a ltttle later on.

The destruction by fire of A. Cushing & Co.'s mill at Union Point, ten days since, was an event that has brought much disaster. It is a serious blow to the people of Fairville, as it gave employment to 225 men and boys. The machinery consisted of two gangs, one band saw, three planers, three lath machines, six box machines, one black-board machine and three double edgers, which are all badly burnt and twisted, and will probably be unfit for further use. The entire stock of lumber was saved, with the exception of a few hemlock boards, which were scorched on the end, but not seriously. The loss is estimated between $50,000 and $60,000. The mill has been running steadily for nearly four years, when almost entirely new machinery was put in. The firm are undecided whether to rebuild or not. This has given rise to the suggestion that possibly Stetson, Cutler & Co. will start their mill at Indiantown. They had not intended running this year unless the American trade looked up a good deal.

ST. JOHN, N. B., April 18, 1895.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

BUSINESS is active around the British Columbia cooperage works at Vancouver, these running over time lately in order to cover the large orders received for spruce barrels, etc. Butter makers in the territories are among the larger purchasers of the cooperage products, as also are oriental exporters of molasses. British Columbia spruce seems specially adapted for the manufacture of these packages.

A saw mill will likely be erected on Boundary Falls this spring.

The Brunette Saw Mills are running over time to keep up with orders. About 150 men are now employed.

The Brunette Saw Mill Co. are asking the City Council for better water facilities for fire protection at their mill.

The Royal City Mills logging camp, at Mud Bay, is being closed, and a new camp will be opened at once at Bear River, on the northern coast. The first batch of men have already gone north to open the camp, build bunk houses and prepare the way generally for logging, which will commence in about a month. About 50 men will comprise the crew.

One of the richest timber sections of the interior in the vicinity of Spallumcheen river, near Mabel lake, is likely soon to be opened out by H. W. Wright and others. Mr. Wright has had a good deal of experience in the lumbering business in Maine and on the Sound, and is quite enthusiastic over the prospects in this territory. He considers the territory rich in fine cedar, hemlock and pine.

Robert Ward & Co., Ltd., large lumbermen, have had rendered against them a decision that is said to be without precedent in Canadian courts. Some time ago they had a ship builder, John Clark, imprisoned for debt due them, which he could not pay. Civil action was afterwards taken against Clark and his partner Harrington for $8,000. Defence raised the unique point that by seizing the person of the debtor plaintiffs had taken the last recourse of the law, and all liabilities on defendant's part had thereby been discharged. The court held the point well taken and ordered Clark's release, purged of all responsibility for the debt.

NEW WESTMINSTER, B.C., April 16, 1895.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE time has arrived when there ought to be a good deal of stir in lumber at this point. But business is opening slowly. Appearances would seem to indicate that there are large stocks of lumber on hand, but it is believed that most of it is simply waiting for shipment, and now that navigation is about opened it will be quickly removed. At Bay City it is said there is still a good deal of unsold lumber on the docks. Mills are pretty well at work, and it is believed, despite the dullness of trade in some respects, that a good season's business will be done. The shingle market continues as dull as ever.

The Saginaw Lumber & Salt Co. will not start its mills until about May 1st.

James Norn will erect a new saw mill at Standish, on the site of the one recently destroyed by fire.

Hemlock bark is quoted at Grand Rapids lower than at the opening of last season, the prevailing price being $7.25.

Charters for the delivery of 600,000 feet of lumber have been made by Maltby & Co., of Detroit, to come from Tawas City.

A crew of 30 men are now at work on the Menominee and tributaries getting things ready for the drives of the Menominee River Boom Co.

A sale of 14 car loads of lumber has been made by W. W. Sutherland & Co. to Herberger & Schwander, piano manufacturers, Paris, France. A number of other sales of hardwood for piano manufacture have been made in this district.

The mills of A. T. Bliss, Central Lumber Co., and Bliss & Van Auken have started up for the season. There seems to be no difficulty in securing labor this year, as more men are applying than there is work for them to do. Wall & Weber's mill will start at once, and others.

R. A. Loveland, R. H. Roys, D. L. White, Jr., and Ralph Loveland, have organized themselves into a company with a view of engaging in certain lumber operations. This is the syndicate who recently purchased two berths from the Parry Sound Lumber Co., of Toronto.

A number of firms are establishing branches at different points in Michigan, which is good evidence of its position as a distributing point. A recent firm to establish a yard here is that of Crosby & Beckley, of New Haven, Conn., who have leased the Kimball & Merriman property, west side, which they will utilize as a distributing point for hardwood lumber.

Vessel men are not anxious to see navigation get into good swing too soon, as they say that a late opening will more certainly ensure them better prices. There has not been much profit in connection with vessel business lately. It is believed that freights from Bay City to Buffalo will open as low as $1.25. There will be a considerable addition to the tonnage of the Saginaw river this season, as ten boats are now being built at Bay City. The two ship yards are employing 1,000 men.

SAGINAW, MICH., April 19, 1895.

The J. C. McLaren Belting Company, of Montreal, is applying for incorporation. The incorporators are David W. McLaren, Mrs. A. Cummins Walker, Alexander Walker, B. S. Sharing, Joseph Ryan, and G. W. McDougall, all of Montreal. The capital stock is $99,000.

THE HAWAIIAN TIMBER TRADE.

THE lumber trade in the Hawaiian Islands is monopolized by a few large dealers of Honolulu, on the Island of Oahu. A strong combination exists among the lumber dealers for the purpose of opposing any attempt to disturb their trade or prices. Each firm has its customers, most of whom are owners of sugar plantations, wherein the lumber dealer usually has some interest. No competitor ever tries to sell to the customers of another firm. As grades and prices are the same in each yard, no customer feels inclined to change, except when he cannot find the material wanted at the yard which he usually patronizes.

Redwood is used very little, as a beetle about 1 in. long and ½ in. diameter, with its two horns, very easily bores into the redwood, and so quickly, that it is soon rendered useless for anything but fuel. Douglas fir seems to offer no gustatory attraction to this lumber eater, and therefore, and for other good reasons, the fir is mainly used. It stands the best of all woods, the many differences in climate peculiar to the Hawaiian Islands, where one side of the mountain may get 150 to 180 inches of rain during the year, while the opposite slope may get hardly four inches.

The forests of the Islands still occupy large areas of land, but the valuable woods were for the most part exported during the early part of this century. Mr. Astor, of New York, is said to have made a substantial part of his fortune at the Islands, when he bought for a drink of liquor, the finest sannal-wood trees, and he kept up this trade untill the last tree was exported by him to India and elsewhere.

Among the few woods worth exporting is the Coa, but there are only a few trees left, and they are in places on the mountains, whence it would require more expense to transport them to a shipping point than ever could be made at the highest possible prices for the veneers cut from them.

There grows in the forest of Hawaii one more hardwood worthy of mentiom, named by the natives Ohia (pronounced o-bee-ah), but it is hardly to be considered a lumber tree, as when it begins to grow it divides itself into three trunks on the same stumps, and none of these divisions, or trees, are found measuring more that 10 in. in diameter. These triplets, however, are solidly connected up to 50 or 60 ft. from the ground, but each of them has its own heart, rarely, if ever, running in a straight line. The wood is very hard, and its color changes from olive, near the bark, to pink, near the heart. For small dimension stock, balusters, parquetry strips, narrow veneers for fine cabinet work, &c., it would be valuable. The ohia wood takes a very good finish.

The bark of the ohia tree is very similar to that of the scaly-bark hickory. It surrounds the tree in a loose manner, growing tighter from the first branch upwards. The color of the bark is a little brighter than that of the scaly-bark hickory. A devoted friendship for lifetime is formed between the ohia tree and a beautiful vine that is worthy to be exemplified to humanity. This vine grows up with the ohia tree, envelopes trunk and sometimes part of its crown with its tendrils, foliage and magnificent blossoms, which are of the size and similar in colour to the pine-apple plant in sprouting season. When this vine is severed from its roots and dies, its friend, the ohia tree, sheds its dressy leaves and follows its lifelong companion in the road to decomposition, from where is no return to former beauty.

It is safe to say that nine-tenths of the area covered by forests on the Island of Hawaii is occupied by banana, guva and other shrubs, that propagate themselves so densely that it is impossible to enter their strongholds without chopping a trail. But even with this difficulty, the visit to such a jungle is very gratifying. No reptile or beast of prey has, ever since the Islands were known, made its appearance. Some cattle, donkeys, turkeys and other domestic animals have for many years wandered from their herds or flocks and inhabit the ridges of the forests, while birds of beautiful plumage enliven the denser parts. To rest upon a banana leaf under the gorgeous domes of the fern trees, inhaling the balsamic air, purified and seasoned by millions of fragrant blossoms of magnificent colouring and peculiar shapes, enables us to separate our profane thoughts from the higher spirits, to whom we in such surroundings gladly surrender in worship. The mere reminiscence of an excursion undertaken with the assistance of two wood choppers, into an Hawaiian forest, recalls this happy feeling so vividly that one cannot refrain from dwelling in a few words upon the blessed sensation it affords, and principally for the purpose of having companions among those readers, whose hearts and souls are not petrified by the profane dust accumulated during the monotonus daily hunt for business.

Coffee planting is a new venture for the Hawaiian Islands, and the influx of planters from the eastern shores of the Pacific ocean has increased the demands for lumber and timber to be used in the construction of buildings But lumbermen should be cautioned not to ship any lumber or timber to Hawaii before it is sold, less they should meet with the same experience over which a concern on Puget Sound has occasion to mourn. This concern last summer sent a vessel load of fine fir timber and lumber in charge of a manager to Honolulu, in an effort to break the combination of lumber dealers there and open that market for the general trade. After lying in Honolulu harbour with his unsold cargo for some weeks, the dealers of Honolulu took pity upon the "skirmisher" and relieved him of his burden at $5 per 1,000 ft., which was less than the freight amounted to from Puget Sound. Freight rates range from $5 to $6 per 1,000 ft., the fluctuation depending upon the back freight, which is mainly sugar. This again lessens the chances of any new commer, as one firm controls all the sugar shipments, most of which the lumber dealers of Honolulu secure in time for their own vessels.

Except in Honolulu, where several business blocks, Government buildings and private dwellings, are built of brick or stone, lumber is the material for all construction. Few houses are covered with shingles, most of the roofs being of corrugated iron. This has proved to be the best material for roofs in tropical countries. A swift conductor of temperature, the iron exhales quickly, after the solar rays disappear, the heat that accumulates during day in it and under it in the building. The rain-water from corrugated iron roofs is also preferred for its cleanness, and because in large districts the inhabitants are dependent on rain water for drinking and cooking.

This fact reduces the demand for shingles to a minimum, while on the other hand a large demand for water tanks is created. Tanks are a prior necessity to any other construction on a plantation, and are usually provided before the buildings are commenced. Some of the tanks are imported from San Francisco, especially redwood tanks, which, when filled with water, are not attracted by the beetle. But most of the tanks come from Puget Sound. Their sizes, 5 to 8 ft. in diameter, 6 to 12 ft. high, vary according to the sizes of the buildings. The staves are from 2½ to 3 in. thick. Each tank or cistern rests upon a trestle of 6×6 or thicker fir timber, sufficiently high that water may flow by its gravity through pipes into the building.

Large quantities of fir timber are also used in the Hawaiian Islands in the construction of water "flows," some of them many miles long, connecting sugar factories with their cane fields. Where a streamlet coming from the mountains permits of it, the water is led into a gutter or "flow" as they call it, made of fir boards tightly jointed to widths of from 4 ft. to 6 ft., resting upon a strong trestle of fir timber and under a grade of from 10 to 30 degrees. After it is cut, the cane is thrown into the "flow," carried swiftly down the incline to this aqueduct, and not only delivered at the rollers of the mill without further handling but at the same time with the water necessary for steam and other purposes in the factory. Several such aqueducts employ millions of feet of lumber, and consequently a capital in themselves.

Dwellings on the Islands are built with large verandas, for there everybody spends most of his time when at home. Rooms are considered abodes for the night's rest only, and many prefer to sleep, even at night on the verandas. These are usually of large size, 9 ft. to 16 ft. wide, and all around the house, which contains in its single story from six to twelve rooms. Thus the veranda requires about as much lumber as the house proper.

In the construction of walks very little lumber is used. The trunks of fern trees furnish a material for this purpose which is far superior to lumber as it is unique. Of a spongy texture, similar to the trunk of a date palm, the trunk of a fern tree permits of working it into any shape by little labor, while for many years the walks afford the comfort like that of walking over a Damascus rug. In rainy districts, these fern walks offer also the benefit of absorbing rapidly the rain water and to be comparatively dry, even if they are on a level with the fields or gardens.

Owing to the lack of docks or other facilities for discharging freights in other ports of the Islands, besides Honolulu, the unloading of lumber is done primitively. These boards or timbers are hoisted overboard from the vessel in lots of about 1,500 ft. tied with a rope and dumped into the sea, where a crew in a row boat takes the raft in tow and out to shore. In Honolulu are docks to which the largest boats can go and discharge their cargoes.

ENGINEERING NOTES.

IT is of course necessary to have a set of heavy fire tools in every boiler room for the purpose of handling heavy fires, but there should also be a set of light tools there, for in many places the latter may be used to advantage during a large portion of the time, thus saving much labor on the part of the fireman. Do not compel him to use a hoe that weighs 75 pounds, more or less, to draw the ashes out of the ash pits, when a much lighter one will answer every purpose.

When buying gaskets with which to pack man-hole or handhole covers on steam boilers, be careful to select those that are soft and tough, and not too thin, for the inside of the heads where these are to be used, and also the covers themselves are frequently anything but smooth and true, and the gaskets must "fill the gaps" as it were.

It is a good idea to have extra man-hole cover guards on hand, so that if one is broken on Sunday or some holiday when it may be difficult to procure another, no loss of time will be necessary. Especially should this be attended to in plants that are located at a distance from foundries and machine shops.

In case of accident to the feed pump, or any part of the boiler which makes it necessary to reduce the temperature at once, it is much better to cover the fire with damp ashes or fresh coal, rather than to attempt to draw it, for when a fire is disturbed it gives out an intense heat for a few minutes.

It is a good idea to be as economical as possible in the use of oil, but it does not pay to attempt to run an engine with an insufficient quantity of cylinder oil, for not only will the cylinder be ruined, but you will use extra oil enough to much more than pay for all the cylinder oil needed.

Always have a sight feed oiler located where it will drop oil on the piston rod as it travels back and forth, for it lessens friction, saves wear on the rod, and makes the packing last much longer. This applies to both fibrous and metallic piston rod packing.

After cleaning boilers do not screw up the nuts on the man-hole and hand-hole covers any tighter than is necessary, for you may break the guards or dogs that hold the covers in place, and cause yourself much trouble.

When wiping up the engine be constantly on the watch for loose set-screws, keys, nuts and pins, for by attending to this simple matter, many an expensive shut down has been avoided.

When fitting grate bars to a furnace do not make them too tight a fit, for expansion by heat must be provided for, or else the bars or furnace will be ruined.

Try gauge cocks often and keep them in perfect order, for you cannot tell how soon the gauge glass will leave you in the lurch, unless you have them to fall back on.

Asbestos packing for valve stems and similar purposes is much improved for use by oiling it well with cylinder oil before putting it into place.—Power and Transmission.

Maitland, Rixon & Co., and John Harrison, of Owen Sound, Ont., have been given a contract to furnish about one million feet of timber and plank for the new dock now being built at that place. The former firm have also secured the contract to supply the timber required for harbor improvements at Thessalon.

ZINC WILL PREVENT SCALE.

IT is a well-known fact that zinc slabs suspended in steam boilers prevent the formation of scale, and large quantities are used annually for this purpose. The following directions will enable one to use it successfully. The proportions necessary to insure complete protection are one square foot of zinc to fifty square feet of heating surface in new boilers, which may be diminished after a time to one in seventy-five or even one in one hundred square feet.

Merely placing the zinc in trays, hangers or strips will not insure metallic contact, and the action of zinc to prevent corosion under such circumstances will be weak and limited. The best method of fixing the zinc is to place a number of studs in the sides of the furnaces and combustion chambers, and to bolt on to these studs the zinc plates, which should be about 10x6x1 inches. It is importantto see that the contact surfaces are clean and bright and the nut screwed close to the zinc to exclude the water and deposits from the contact surfaces, thus comparatively insulating them and preventing the galvanic action. Otherwise the zinc is acted upon as a solvent that renders the water innocuous or non-exciting.

LONG DRIVING BELTS.

A VERY bad habit in mills where there are large driving belts, is shifting belts with a square stick, no regular shifters being used. The result of this is the belts are more or less injured on the edges. All heavy machines should be shifters to act so that they shift the belt over steadily, not putting too much strain on the driving belt too suddenly. Two pieces of gas pipe just large enough to revolve on round iron supports for shifters will lessen the friction on the edges of heavy belts, as these pipes revolve while the belt is being shifted. It effects a great saving in long driving belts, in fact any belt at all, leather or rubber.

While engaged in felling a tree at Midland, Ont., Charles Taylor, aged 20, met with an accident which resulted in his death. In falling the tree bounded back, the butt pinning him against a fallen log. He lived only two hours.

LUMBERMEN'S SUPPLIES

H. P. Eckardt & Co.

WHOLESALE GROCERS - TORONTO.

A call from buyers when in the city solicited.
Letter orders have careful and prompt attention.

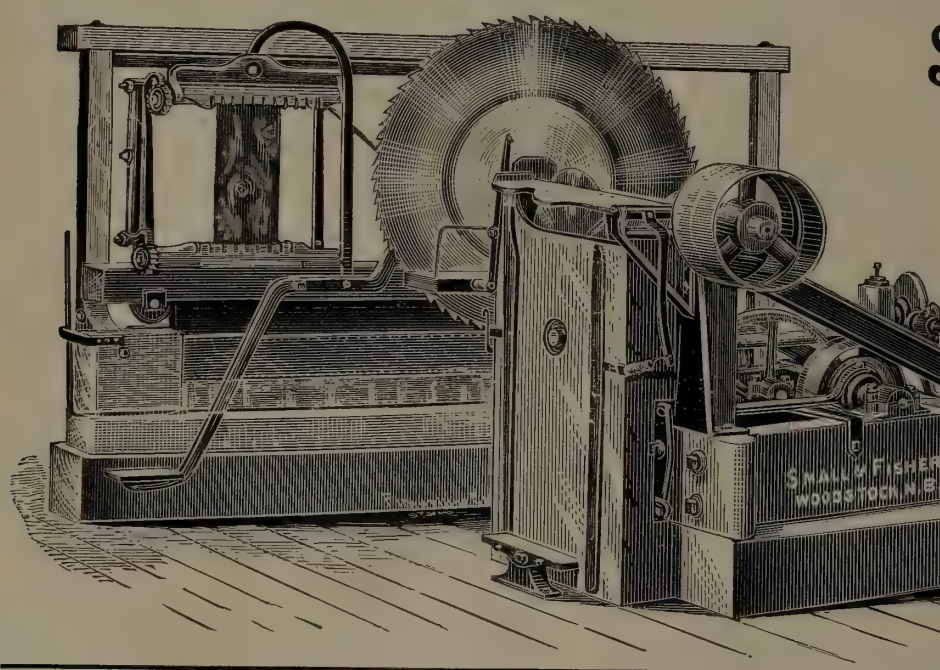
CAMP SUPPLIES

Being extensive operators in the lumber business, as well as Wholesale Grocers, we are exceptionally well qualified to fill orders for Lumbermen's Supplies.

MAIL ORDERS GIVEN PROMPT ATTENTION.

DAVIDSON & HAY

Wholesale Grocers TORONTO



SMALL & FISHER CO., Ltd.

Woodstock, N. B.

Patent Shingle Machine

DRUMMOND, N. B., February 21st, 1895.

SMALL & FISHER Co., Woodstock, N. B.

Gentlemen: Your favor of the 19th received, and in reply would say we have been using your Shingle Machines for the last three seasons and like them very much, and think they are the best machines made, as they are an easy machine for the sawyer to operate and the principle is first-class.

Yours truly, STEVENS LUMBER CO.

ALEXANDRIA, ONT., February 22nd, 1895.

MESSRS. SMALL & FISHER Co., Woodstock, N. B.

Dear Sirs: We have six Small & Fisher machines and have pleasure in saying that they are very satisfactory to us. We are using at present five different makes of Shingle Machines, and none are superior to yours, as you may judge, when we have six of one kind in operation.

Yours truly, McPHERSON & SCHELL.

See description in reading pages of this number of The Lumberman.

Pumps & HYDRAULIC MACHINERY

DUPLEX AND SINGLE STEAM AND POWER

THE NORTHEY MFG. CO., Ltd.

TORONTO

PERSONAL.

Mr. James McReary, lumberman, of Arnprior, Ont., recently lost a valise containing $1,500 on the road between Renfrew and Shamrock.

Mr. Thos. Southworth, editor of the Recorder, Brockville, Ont., has been appointed to the position of Clerk of Forestry, vacated by the death of Hon. C. F. Fraser.

Mr. R. A. Stark, saw miller, of Owen Sound, Ont., died on the 19th of April. He was one of the pioneers of Grey County, was for years reeve of Derby township, and lately resigned the candidature of the Patrons for the House of Commons.

The death is announced of Mr. A. H. Baldwin, one of the pioneer lumbermen of Ottawa, who has been closely identified with the growth of this leading industry during the past forty years. He owned one of the first saw mills on the valuable site now occupied by the McKay Milling Co.'s grist mill.

Subscribe for the CANADA LUMBERMAN, $1 per year.

HOME MADE TESTING MACHINES.

THERE is not a shop or mill in Canada which is engaged in manufacturing pursuits, which would not find a profitable use for a testing machine, were such a tool once placed in them. The tensile and transverse breaking strength of various material is an important factor in many cases, especially where lightness in design and weight must be considered. Improvised testing machines may be cheaply rigged up, an ordinary platform scale being used for the registering mechanism and a stout screw supplying the power. A hydraulic ram of the variety used in many English machine shops will also answer well for certain kinds of work. This little ram is about six inches in external diameter and six or eight inches high. The plunger has a movement of about one or two inches, and is capable of raising from two hundred to five hundred tons; an ordinary grocer scale and a large letter press have been successfully adapted to the testing of iron, steel and aluminum, test pieces being a few inches in length and one-fourth of an inch square.

ANCIENT TREES.

THE African baobab is the patriarch of living organizations; one specimen, by its circles, is estimated to be 5,700 years old by Adamson and Humboldt. The trunk is about 15 feet to the branches and 75 feet round. A cypress in Mexico is 120 feet round and is estimated by De Candolle to be older than Adamson's baobab. Strabo wrote of a cypress in Persia as being 2,500 years old. The largest tree in Mexico is 127 feet round, 120 feet high, with branches 30 feet. According to De Candolle, there are oaks in France 1,500 years old; yew trees at Fountains Abbey about 1,200 years old; at Fortingal 2,000; at Braburn from 2,000 to 3,000. The ivy and the larch reach an age of about 600 years; the lime about 700 years.

THE DOMINION LEATHER BOARD COMPANY

MONTREAL

MANUFACTURERS OF

Friction Pulley Board

. . AND . .

ROOFING, SHEATHING AND FLOORING FELTS

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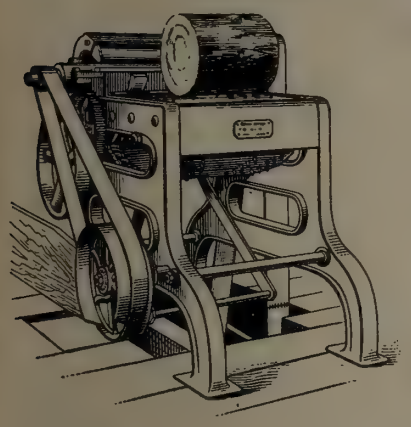
Patent Rossing Machine



Why you should use this Rosser. . . . .

It will do double the work of any other.
It is the only machine made that will peel Cedar Shingle Blocks.
It will peel dirty blocks without taking the edge off the knives as they cut from the clean bark or block out.
It is a self-feeder, and very easy to operate.
It requires less power than a face wheel.
All iron and steel, very simple and durable.
It will ross knotty and uneven timber without waste.
It occupies about the same space as an ordinary planer.
You can have a chance to try a machine before buying it.

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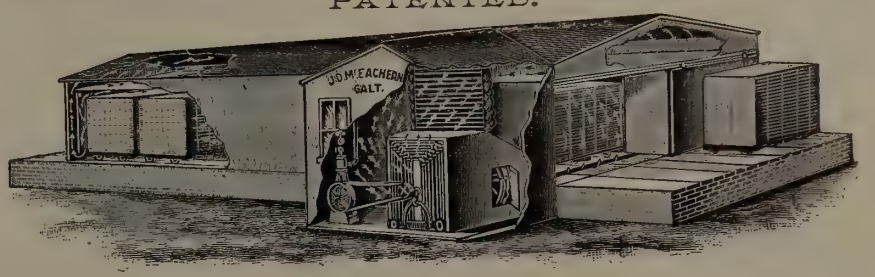
PATENTED.



COST of erecting, running and maintaining the lowest and results the highest of any dry kiln and drying system in the market. Green Elm, Ash, Whitewood, &c., for furniture dried in six days; only exhaust steam 10 hours per day used.

NO CHECKING, WARPING OR CASE-HARDENING.

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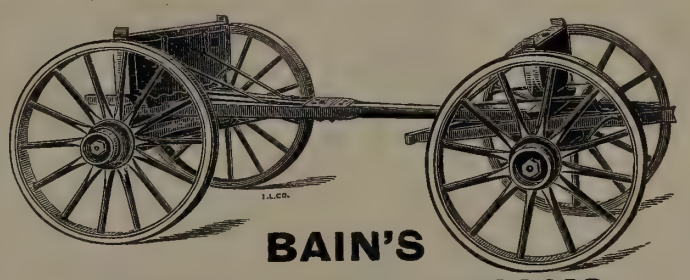
STEEL or CAST SKEIN 3¾, 4, or 4¼ Inches.



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REPAIRING PROMPTLY AND CAREFULLY EXECUTED

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The "BOSS" Shingle Machine

Manufactured by us is acknowledged by practical men to be

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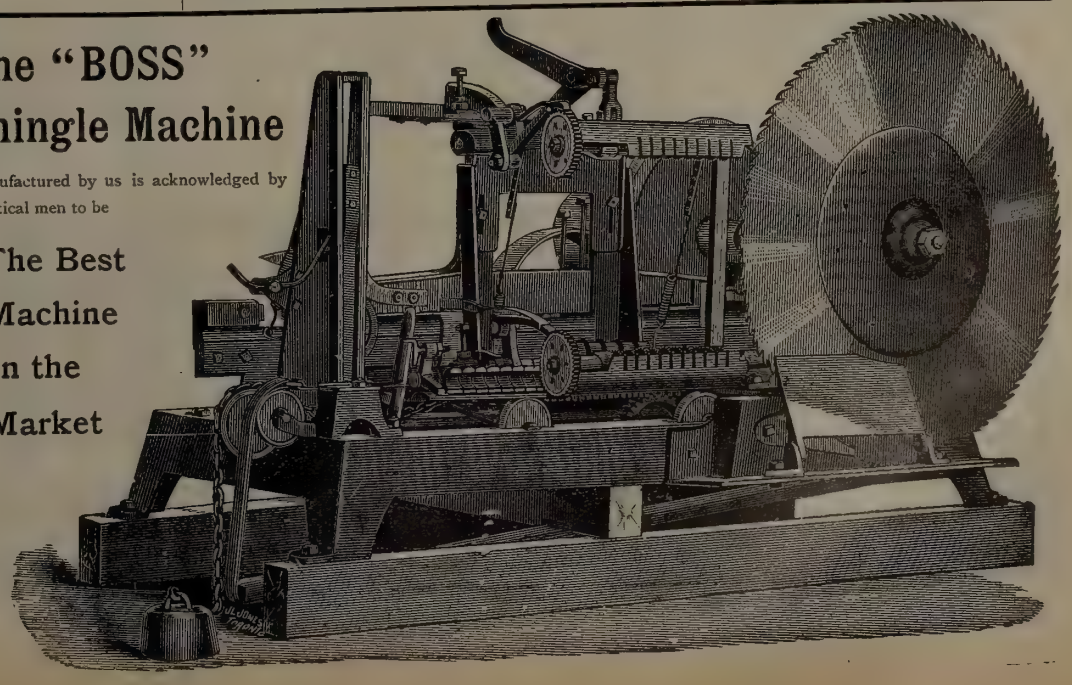

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DON'T.

DON'T go working around shafting with anything that can possibly catch in the pulleys, belts, or couplings. If you wear an apron, take it off when at this business, as it is a trap, for if the material does not give way you are liable to go sailing around the shaft, not a very pleasant journey to contemplate. Don't wear a jacket or shirt with ragged sleeves, or, in fact, any projections that could tempt the revolving set-screw or key-way. Of course no such things should be around a shaft, the day for that is past, but do not be careless even if there are no such traps around the shop.

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If you are not satisfied with your present site, or if you are not doing quite as well as you would like to, why not consider the advantages of a location on the Illinois Central R. R. or the Yazoo & Mississippi Valley R. R.? These roads run through South Dakota, Minnesota, Iowa, Wisconsin, Illinois, Indiana, Kentucky, Tennessee, Mississippi and Louisiana, and possess

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This will give you the population, city and county debt, death rate, assessed valuation of property, tax rate, annual shipments, raw materials, industries desired, etc.

To sound industries, which will bear investigation, substantial inducements will be given by many of the places on the lines of the Illinois Central R. R. which is the only road under one management running through from the North-Western States to the Gulf of Mexico. GEO. C. POWER Industrial Commissioner I.C.R.R. Co., 506 Central Station, Chicago.

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Handle all kinds of Pine and Hardwood Lumber

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Boiler Improvement

Any person using a Steam Boiler can save 50 per cent. of their fuel and get 50 per cent. more power out of their boiler by having

CALCUTT'S WATER-TUBE IMPROVEMENT

attached. The expense is only a trifle compared to the saving derived. Send for Circular, Box 55, Peterborough, Ont.

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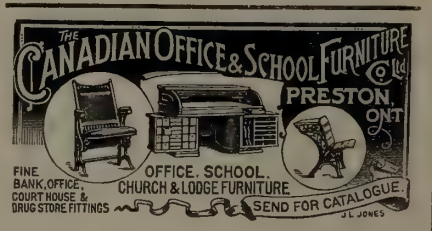

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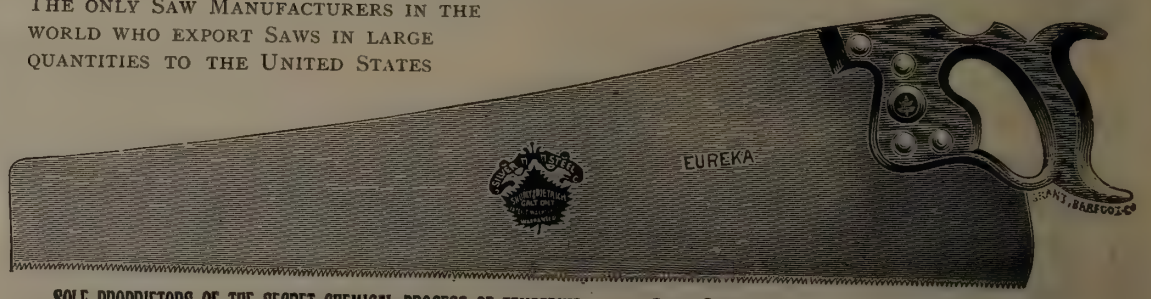

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Being instructions to filers on the care of large band saw blades used in the manufacture of lumber.

A book filled with valuable information on the care of band saws. Giving the reasons for breaking; analyzing each reason; giving instructions to dispense with the causes as laid down in each reason; and full details on filing and brazing. The proper styles of hammers to use are illustrated and described, and views of blades showing the blows of the different styles of hammers form an important part of the illustrations. Improper and unequal tension are then treated, and the manner of properly setting irregular teeth is described. In connection with the treatise is a history of the invention, manufacture and use of the saw from its origin to the present time. The work in whole makes an accumulation of information such as has never before been published.

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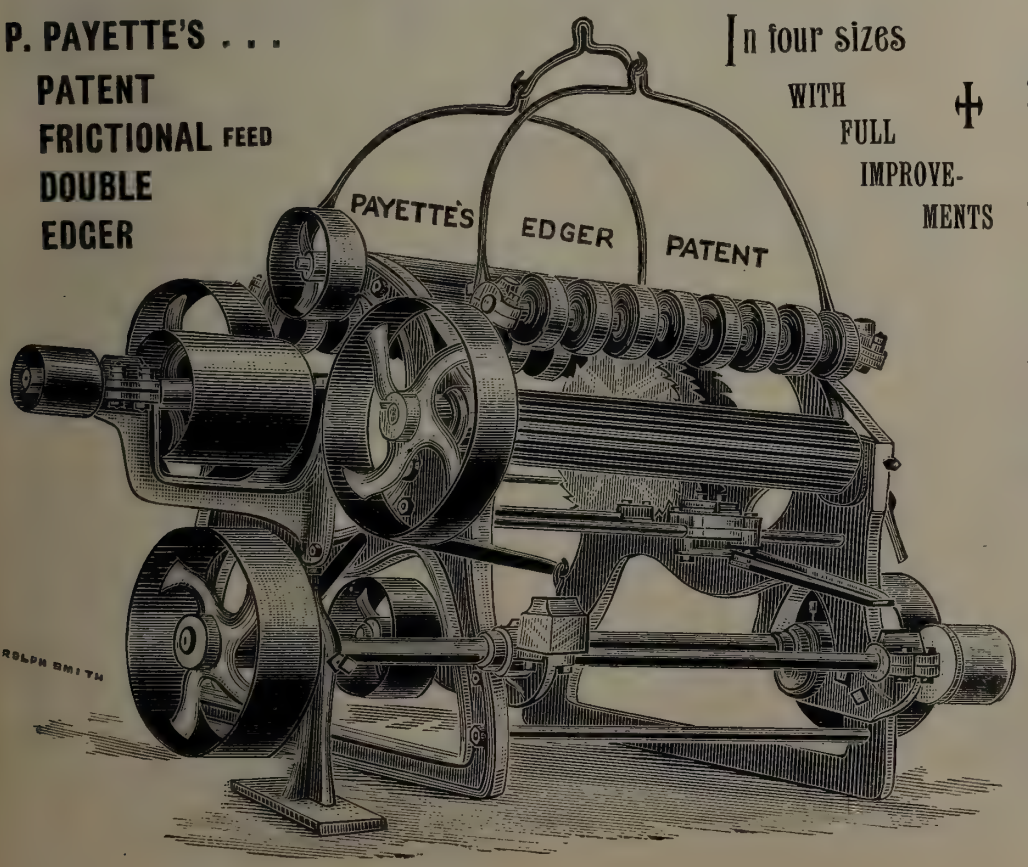

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(Centres of the vast lumber interests of Michigan)

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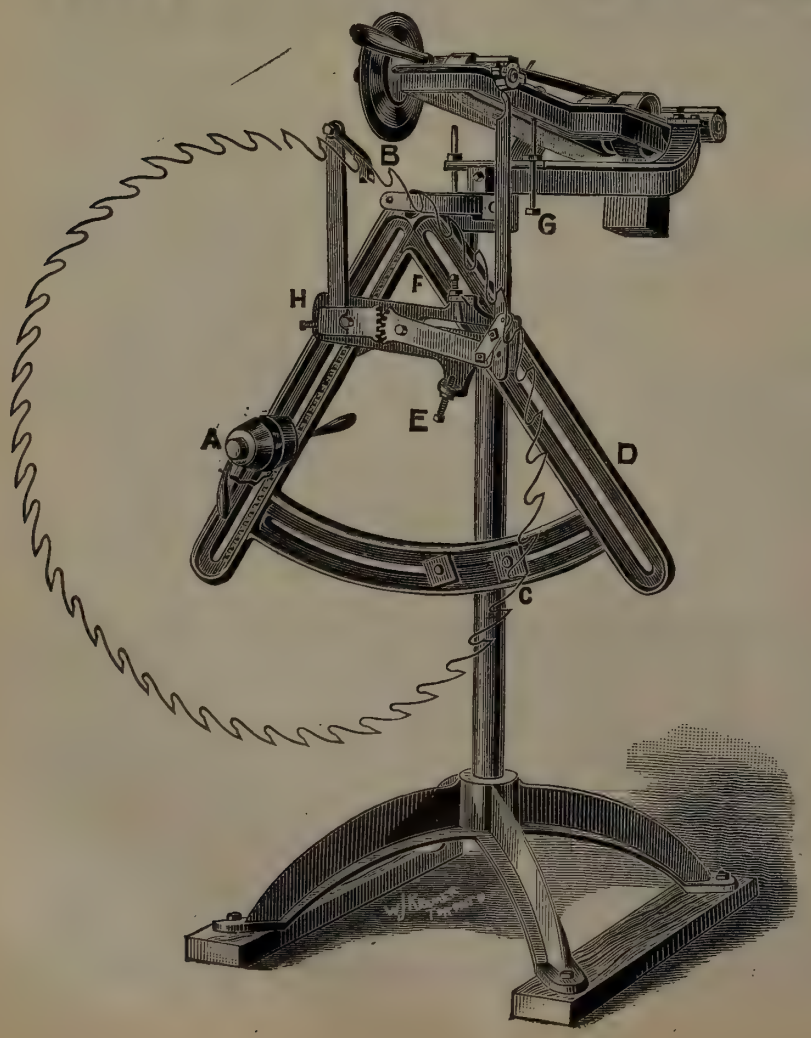
P. S.—The opening of the Ottawa, Arnprior and Parry Sound Railway, Ottawa to the Georgian Bay, offers to the manufacturer and purchaser a new district not heretofore reached by any other line.

The XXX Saw Gummer and Sharpener



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SIMPLICITY, DURABILITY, CHEAPNESS

Will take saws from 6 inches to 6 feet diameter; sets the saw forward one tooth at a time automatically; sharpens any saw (rip or crosscut) perfectly, giving the teeth any desired pitch or bevel, and making all the teeth exactly alike. Will sharpen 20 teeth in an ordinary saw mill in one minute, or 100 teeth in a shingle saw in four or five minutes. The cut shows outline of mill saw 54-inch diameter.

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Yours truly,

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Unrivalled

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Weight
Symmetrical
Proportion
AND
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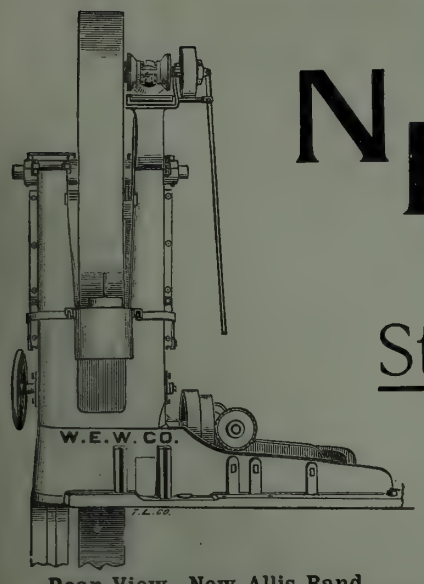
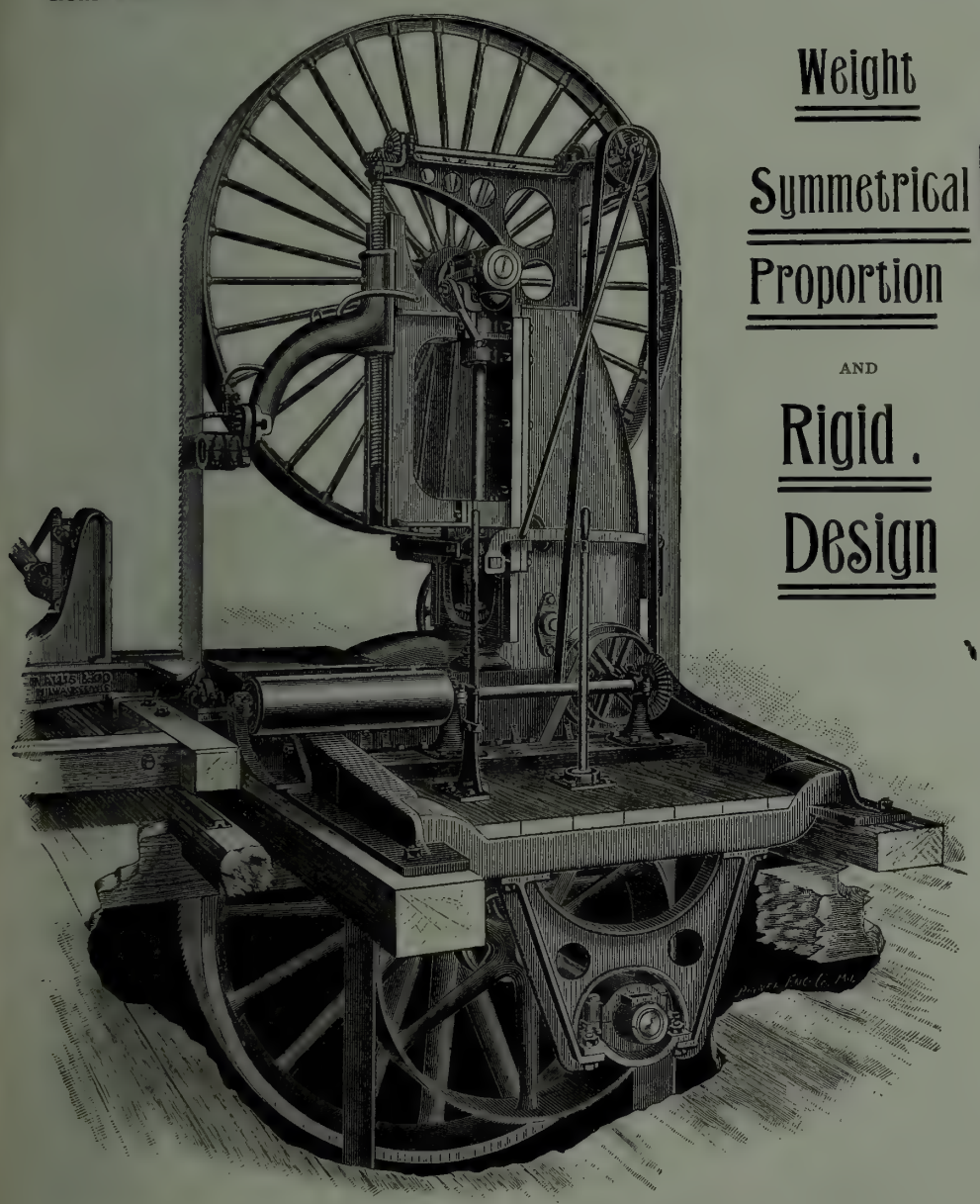
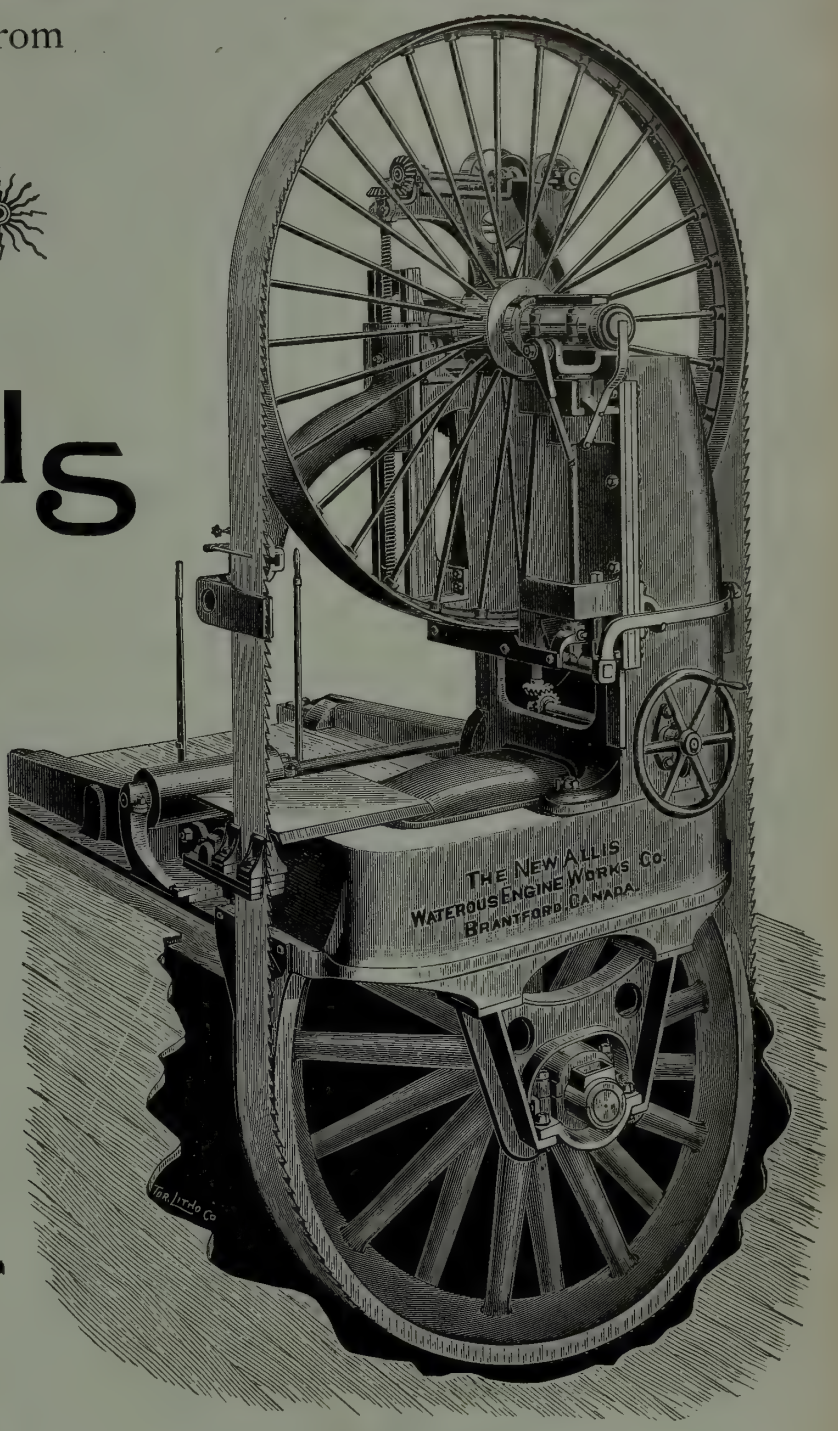


Rear View—New Allis Band.



Back View—New Allis Band.



Front View—New Allis Band.

Only Band with upper wheel in center of shaft and column.

Only Band with both wheels hung inside of frame.

Patent safety lower wheel removes all casting strain on wheel.

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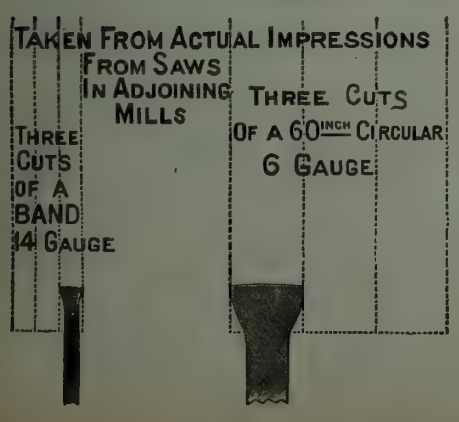

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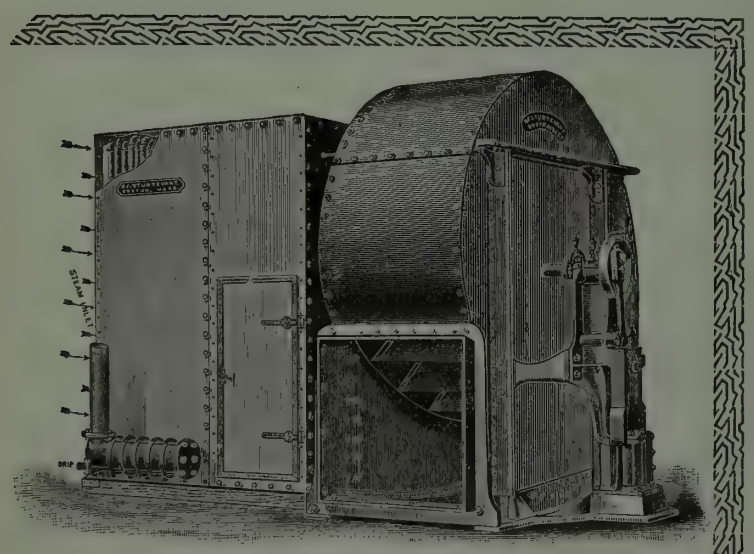

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WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

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3,000 MACHINES IN USE.

Valve Reseating Outfit.

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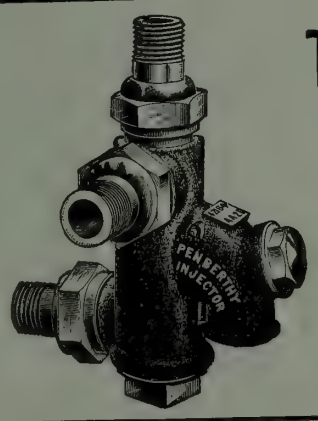
... SOLE MANUFACTURERS ...

"Reliance Works," - MONTREAL.



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Should be in every Lumber Mill

PENBERTHY JET PUMPS.. WATER GAGES OIL CUPS.. ARE THE BEST

85,000 Engineers have used it, and declare it unequalled as a Boiler Feeder.

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Any one desiring a good Second-Hand Tool, should write us for prices. Have several we will dispose of at a bargain.

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Why, Solder them, of course

We supply a tough quality of silver solder rolled thin for this work. Price, $1.00 per oz. Troy.

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THE "BURNS" CROSS-CUT SAW HANDLE

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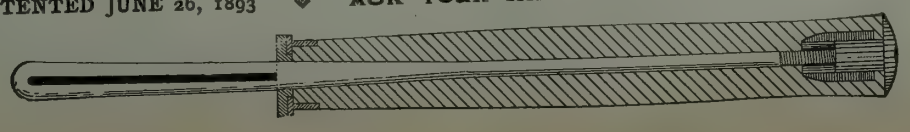

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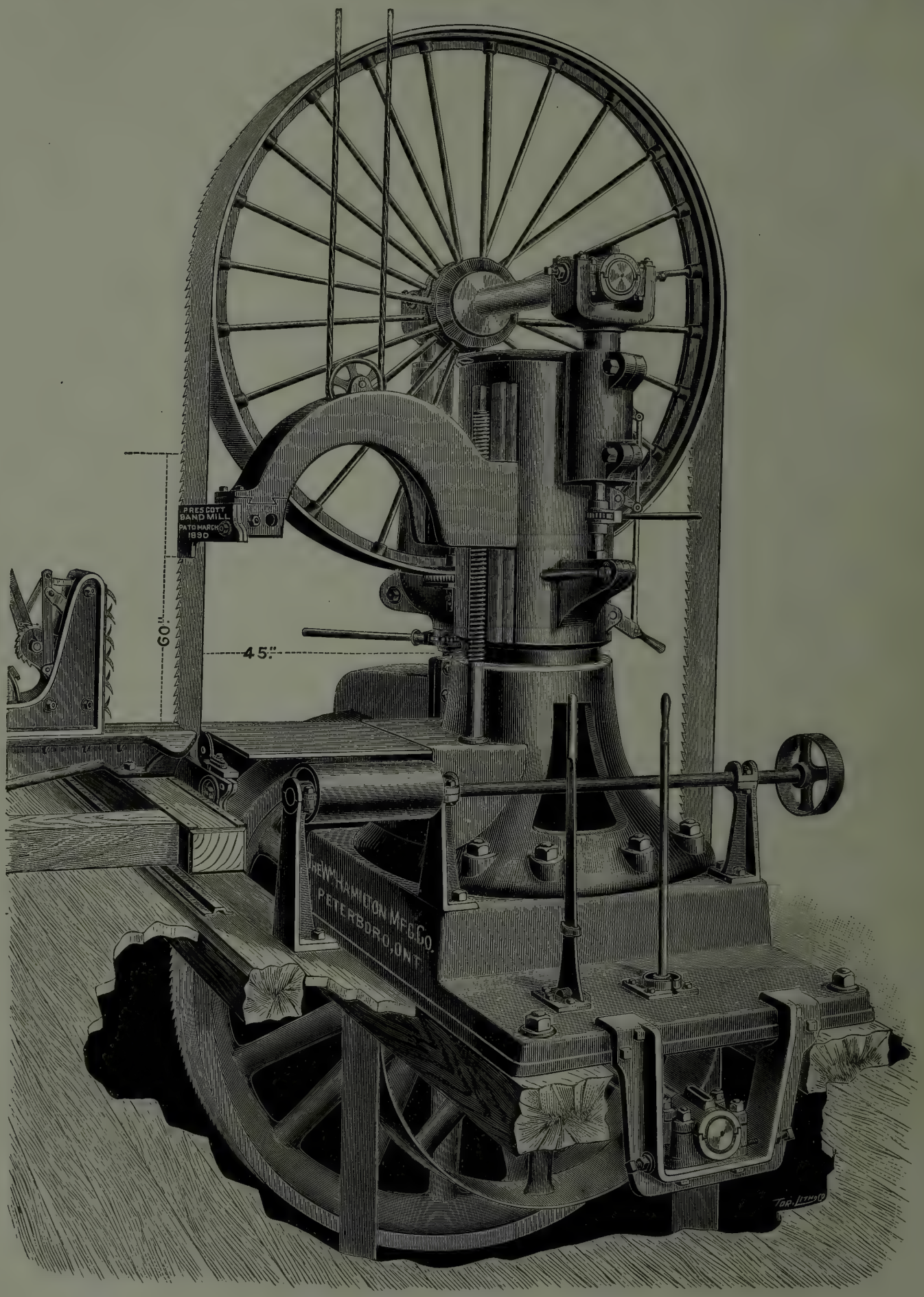

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THE CANADA LUMBERMAN

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CHARACTER SKETCH.

J. R. BOOTH.

"The Truest Wisdom is a Resolute determination."—Napoleon.

FEW pages of history are more fascinating than those which tell of the achievements of men born in humble circumstances and against whom there would seem to have been arrayed insurmountable difficulties. In the story of such lives is found easy demonstration of the old saying, that truth is stranger than fiction. No romance is half so romantic as a memoir of these world's conquerors.

One finds in the life of Mr. J. R. Booth, of Ottawa, who is credited with having been the owner and operator of the largest saw mill in the world, few incidents that can be weaved into a biographical sketch. His biography is written in deeds, not words. With one of old he might say, "It is not what I am, but what I have done—that is my kingdom;" or as one of the world's greatest poets has observed:

"It is not in mortals to command success;
We will do more—deserve it."

Mr. Booth was born in humble circumstances. At one time he was owner of a very small piece of land. To-day he is believed to be the largest property holder in the city of Ottawa, outside of the Government. His larger holdings, however, and those which have brought him wealth and fame, are his great timber interests, and the extensive saw mills he has owned and operated in the Ottawa district.

Mr. Booth's big mill, which the record has declared was the largest saw mill in the world, was, as is well known to LUMBERMAN readers, destroyed by fire about twelve months since. It was a property of which the owner had good reason to be proud. The mill was most perfectly equipped, with modern machinery, containing alone 14 large band saws, and capable of cutting over 1,000,000 feet per day. Not alone did the destruction of this mill by fire prove a serious loss to Mr. Booth, but in some respects the loss to the city of Ottawa, and its commercial interests was even greater, for how completely is the prosperity of a community associated with the success and individual effort of its most enterprising citizens. Whether Mr. Booth will at some future time rebuild his mill, no one can at this time say. The water by which it was driven is derived from the Chaudiere Falls, in which is found a most valuable asset, that will before long, no doubt, be utilized for commercial purposes, either by its owner or some one else.

Some two or three years ago Mr. Booth purchased the well-known Perley & Pattee mill, and shortly after remodelled it, and made it one of the most completely equipped mills on the Chaudiere. The two mills together were estimated to cut 165,000,000 feet per year. Operations for the season on the present mill were commenced about a fortnight ago, employment being given to fully one thousand men. As we have taken occasion to note in our editorial pages, a commendable step was taken by Mr. Booth this season in fixing the day's labor at ten hours in place of eleven, as in former years, the same wages being paid for the shorter day.

The activities of Mr. Booth have been developed in late years in the building of the Canada Atlantic Railway, of which he is one of the largest shareholders. This road has proven of immeasurable help to lumber exporters in the Ottawa district. A valuable adjunct to the Canada Atlantic is the Ottawa and Parry Sound Railway, which is now nearly completed, connecting Ottawa with important lumber districts in the interior, the construction of which is due to Mr. Booth's enterprise, and has been carried through with his well-recognized business ability and energy.

The subject of our sketch is without ambitions in the direction of public office. One of the wealthiest and most esteemed citizens of the Capital, responsibilities and honors in a public way would be willingly placed upon his shoulders, but to all such suggestions he has ever given a decided "No." Modest and retiring in disposition, he prefers to stick closely to his business, erecting there a monument that will carry with it personal gain to himself, but likewise a still greater gain to the community that has been fortunate enough to enlist his citizenship and generous good-will.

WASTE OF FILES.

THOUSANDS of dollars' worth of files are annually used among wood-working shops, and nineteen-twentieths of this amount are lost or thrown away, after the teeth become dull. There are several ways of utilizing worn-out files by recutting or partially recutting the

MR. J. R. BOOTH.

teeth. The acid process pops up periodically. It consists merely of treating the files to a solution of soda or potash to remove the pitch, grease, etc., from the teeth. After this treatment they are immersed in diluted sulphuric acid, laid on one side for a few hours, then cleaned of the acid, thoroughly washed and oiled; the action of the acid sharpens the teeth, so that there is quite a little cut to the file thus treated, but it does not last long; the file gets dull again very quickly, showing that the acid process gives only temporary benefit. Files may be returned to the maker, the teeth ground off, and recut, at a cost of about fifty per cent. of the original price of the file. A worn-out file may be cleaned of grease, dirt, &c., between the teeth, then laid one side several weeks, when it will be found much sharper than when laid away. This result is due to the action of the atmosphere, which seems to dissolve in a manner similar to, but much less, than the acid process, the points of the teeth. Like the acid process, the benefits derived are not lasting.

The machinery for Messrs. Mason & Sons' mill, of which mention was made in the LUMBERMAN for May, was furnished by the Waterous Co., of Brantford.

BY THE WAY.

IN response to a letter from the CANADA LUMBERMAN, Mr. J. Arthur Maguire, Consul-General in Canada, for the Argentine Republic, and who is at present in South America, writes as follows from Buenos Ayres, giving important information, touching the changes recently made in the lumber tariff of that country. He says: "The duties on the different classes of lumber now stand as follows:

Pitch pine, $4.65 Argentine gold, per 100 cubic meters.
White pine, $5.43.
Spruce, $3.88.

"One hundred cubic meters equal 929 sup. feet, B. M. The reduction of about $5 per 1,000 feet on pitch pine will have a bad effect on spruce shipments, as first named wood can be bought as cheaply, if not more so, than spruce, and, at the same time, is preferred for almost all purposes. The duty on spruce has been slightly decreased, and I fear that a great falling off in the use of white pine, will be the result. The market here, is very largely stocked with last year's shipments of white pine from Montreal, nearly all of which remains in store. I may add that the difference between Canadian and Argentine gold is, roughly speaking, 3⅓ per cent., that is to say, the Argentine dollar is worth about 96⅔ cents Canadian."

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THE approach of the summer season creates in the breasts of lumbermen fear of losses by fire. Indeed, forest fires have already shown themselves in some quarters, more particularly for the moment in certain parts of Quebec. The situation suggests the necessity for the utmost precaution on the part of individual lumbermen themselves, who are so vitally interested, and the government. The view has been expressed by Mr. W. C. Edwards, the large Ottawa lumberman, that ten times more lumber has been destroyed by fire than has ever been cut by the lumberman's axe. When we remember what the cut of lumber in this country has amounted to, the thought is a terrible one to entertain. The direct financial loss is something enormous. Mr. Peter White, Speaker of the House of Commons, and one of the oldest lumbermen of the country, has observed that forest fires along the Upper Ottawa occur between May and August, and he has made the suggestion to prohibit the starting of fires for clearing or other purposes within those four months. Out of thirty years' experience he has come to the conclusion that most of the bush fires have been the work of fishermen and hunters, who not only destroy valuable timber, property of the public, but also the shanty and material of the lumbermen. These are reasons, good and sufficient, strong in the strongest sense of the term, for governments taking the most vigorous measures to prevent forest fires. The Ontario government is farther ahead in this respect than the governments of any other province in the Dominion, and a long way ahead of the United States. But what Ontario has accomplished by its system of fire rangers, simply furnishes argument for further strengthening that department of crown lands management. Other local governments, and the government at Ottawa, should not allow any time to be lost in placing regulations on the statutes that will work to this same preservative end. The destruction of the forests by fire works back on the lumber industry in many different ways. To take the case of Minnesota, of last year. The trouble has not ended with the direct losses sustained at that time. But when the standing timber is destroyed, in order that what remains burned may not be a total loss, it must be cut at once to save it from destruction by worms. This means, as it does with Minnesota, an abnormal cut of lumber, which is sure to effect the lumber situation in some of its branches.

TIMBER OF CANADA.

INTERESTING ADDRESS BY HON. J. K. WARD, OF MONTREAL, QUE.

BEFORE the Natural History Society, of Montreal, a fortnight since, Hon. J. K. Ward, one of the veteran lumbermen of Canada, delivered an exceedingly instructive address. Business-like he launched into his subject as follows: "I do not purpose on this occasion to take up much of your time with preliminary remarks, other than to say that, having received my education, in the work shop and the woods, on the drive and in the saw mill, I will flatter myself that you will think with me that this is sufficient reason why I should not attempt to address the learned, but if I can succeed in imparting a few practical ideas in regard to economizing our supply of commercial timber, I will feel that my effort has not been in vain. My aim will be to speak only of what it has been my fortune to learn in the rough school of experience.

I will proceed with my paper on the lumber industry of the Dominion in the following order:

First, the quantity of lumber manufactured, and the extent of territory on which it is made, and whence our future supply is to be derived.

Secondly, the importance of this trade in a commercial and economic point of view. Next, some points in its history, and a short notice of some of those men who have taken a prominent part in developing the trade.

The figures as to area and quantities are given approximately, as I consider it is extremely difficult to estimate the quantity of good timber on such a vast territory as Canada. I have never seen two lumbermen agree as to what a single limit of 50 miles contains. In my experience of 50 years I have known men who could find nothing on a limit worth going after, while others have worked and done well on the same territory. There are about 6,000 sawmills in the Dominion, employing during the season of, say, 150 days, not less than 15,000 men in and around the mills, sawing, piling, shipping, etc. In the woods during winter, getting out the logs and timber, and river driving, there are about the same number. Six thousand mills, averaging 400,000 ft. per season, makes up the apparent output of all the mills. This quantity is sawed in a single day by some of the larger mills, while many of the smaller mills do not turn out 200,000 in the season. The difference in the apparent output of the mills—that is, 2,500 million—and that returned as cut on public lands is made up as taken off private lands and the Crown Lands of Nova Scotia, of which we have no returns.

The area under license in the different provinces is about 100,000 square miles, yielding annually (1893) about 2,500 million feet b. m. of sawed lumber, pine and spruce principally, and hewn timber divided as follows among the different provinces:

Ontario—7,140,000 logs, producing 728,000,000 feet b. m., principally pine; 40,000 pieces white and red pine, 42,000,000 feet b. m.; 133,000 pcs boom timber, 2,000,000 feet b. m.; average size of pine and spruce logs, 90 feet; ordinary revenue, $939,000.00; ex bonus, $958,000.00; area under license, 21,500 miles; area unoccupied, 17,000 miles.

Quebec—Area under license, 48,000 miles, producing spruce and pine logs, 6,170,000, equalling 683,000,000 feet b. m.; producing pine, spruce and birch timber, 18,500,000 feet b. m.; railroad ties and other wood, 22,500 pieces, 12,000,000 feet b. m.; pulp cedar, etc., 10,000 cords; revenue, $892,000.

New Brunswick—Area under license, 6,000 miles, producing pine and spruce logs, 87,000,000 b. m.; hemlock logs, 7,000,000 b. m.; cedar, 14 000,000 b. m.; tamarac, 1,400,000 b. m.; 14,700 cubic feet pine and hardwood timber, 176,400 b. m.; 12,000 boom sticks, 240,000 b. m.; revenue and bonus, 102,000.

British Columbia—Area under lease, 1,200 miles, producing 80,000,000 b. m. fir and cedar; 10,000,000 cedar shingles. The timber produced in British Columbia being so much larger than is found in the east requires a very different equipment to handle it than is used in this part of the country.

Manitoba and territories—Area under license, 2,200 miles, producing pine and spruce logs, 24,000,000 feet b. m.; 10,000 railroad ties, 320,000 feet b. m.; 2,000,000 shingles; 5,000,000 laths; revenue, $70,000.

Large as the foregoing is, it only forms one-quarter of the sawn lumber received in Great Britain, and one-sixteenth of the timber, the great proportion being the product of the north of Europe and Southern States. While not an alarmist as to our supply of pine timber, I cannot but consider the wanton waste of it a sin, when so much good lumber has been and is being thrown away. A mistake is made by our mill men in not having more sawing capacity than the fast mills now in use possess, sawing, as they do, in 12 hours 40,000 or 50,000 feet with one circular saw. Too much haste is required to do this, when more money might be got out of the same logs, by employing two sets of saws, with the necessary trimming machinery, and doing the work with less speed. It does seem as if the lumbermen of the past, as well as many of the present day, entertained the idea that the supply of pine in Canada was inexhaustible and were anxious to get rid of it as quickly as possible.

With our vast amount of hardwood, which is fast coming into use, with the facilities of getting it to market, as well as the modern machinery for manipulating it, along with the great quantity of wood supply, said to be in British Columbia, all this, with the natural increase, if fire can be kept at bay, we can reasonably conclude that the end of our forest supply is a good way off. When that time comes I hope a substitute will be found.

The carrying trade and commerce is largely indebted to the forest. There is more tonnage employed on the St. Lawrence and canals in conveying lumber and timber to market than on any other commodity. Quebec was once the greatest timber and ship building port in the world. Forty years ago as many as forty to fifty ships were built in a single year. Now there is not one. In years gone by as many as 600 sailing ships visited the port in the spring and fall, taking away 300,000,000 feet b. m. of timber and lumber, as much as 18,000,000 cubic feet of square timber were shipped in a season. Last season about 3,000,000. Its once famous coves and wharves are deserted and falling to pieces, most of the pine deal business being done at Montreal that was formerly transacted at Quebec."

SUGGESTIONS FOR FOREST PRESERVATION.

Mr. Ward emphasized the necessity of preserving the forests from fire, quoting at length from Hon. Peter White on the question. Continuing the lecturer said: "In selling lands to settlers, I would make it a condition of sale that 20 acres in every 100 should be given free and that it should be forever kept as woodland. To the uninitiated, travelling through the woods after the shantymen have taken all they think worth taking, he would hardly notice that the chopper had been there, except for seeing an occasional stump, a few chips, or a top of a tree, the great bulk of the timber remaining to hold back the water in its natural beds, and to prevent sudden rises and falls in the rivers, which oftentimes cause serious damage by overflowing the banks or becoming so low that they refuse to do the work they once performed with ease. To avoid these troubles and have our country remain well wooded for many years, it is but necessary to give the trees indigenous to it, leave to grow, and there will be no necessity to plant. I have no doubt but that much of the land that has been denuded of its timber would in a very few years be covered with a spontaneous growth of wood, and so prevent our country from becoming an arid waste, by utilizing only that portion of it which can be profitably worked.

To an inexperienced eye there may be hardly an evidence at first glance of the disappearance of the pine. The hardwoods with which the pine is interspersed are usually left standing to a considerable extent, and so are the smaller pine, so that even a well cut country will still look splendidly wooded. No doubt the time will come when it will be carefully re-cropped. But the commercial value is largely gone, and with it the natural desirability, for the cutting of the pine greatly lessens the value of the woods as vast reservoirs, holding the snows in spring and the rains of summer, so as to feed steadily the innumerable streams of the water sheds. Consequently, spring floods and summer droughts for the cleared lands in the valleys follow close on the lumberman's axe. A certain amount of attention has been aroused by the rapid retirement of the pine. Some political action has been taken. Bad as the axe is, fire is worse. The Ontario Government has recently attempted to enforce strict precautions against fire, and it has also appropriated as a provincial park an enormous reserve near Lake Nipissing, thirteen hundred square miles, of which nine hundred are pine timber, situated on one of the chief natural watersheds of the province. But a great deal more than this is necessary if the Canadian pine forests are not soon to disappear like the tracts of Maine. We cannot urge too strongly on the government to set apart all lands not suitable for making a decent home for the settler. Much of the land that they are tempted to go on is not worth the trouble of clearing; it is only the presence of the lumberman, in many cases, that enables him to exist. The question of revenue is of importance, as well as other considerations in not destroying the forests and the country of its principal source of wealth.

The product of the forest is disposed of about as follows:

Exported sawn lumber and timber.....	$24.000,000
260 million feet b m sawlogs.....	208,000
Railroad ties, pulpwood, bark.....	27,000,000

The first timber shipped to Europe from Canada was sent from Quebec to Larocelle by Talon in 1667. Lieut. Hocquart shipped timber and boards to Rochefort in 1735. In 1823, 300 cargoes were shipped from Quebec.

REMINISCENCES OF THE LUMBER TRADE.

In the early part of the present century the Montmorency mills were established by a Mr. Usboirne. Mr. Peter Patterson, a ship carpenter by trade, who had spent some time in Russia, became an employe of Mr. Usboirne's, and finally proprietor of the property, and became one of the largest manufacturers of lumber in Canada. Sir John Caldwell established mills at Riviere-du-Loup en Bas and at Etchemin. The late William Price, father of the Hon. J. Price, of Quebec, established large mills at Chicoutimi, St. Alexis, L'Anse-St. Jean, St. Etienne, Batiscan, Matane and many other places, leaving an immense business to his sons, which is now conducted by the son before named. The late Allan Gilmour, and relations of the same name, carried on for many years a large business on the North Nation, the Gatineau and Mississippi (Canada), and at Trenton, Ont., the younger branches of the family continuing the business.

Philomene Wright, one of the first lumbermen on the Ottawa river, came from Woburn, Mass., in the United States, arriving at the Chaudiere Falls—or the Asticou, as called by the Indians—as early as the year 1796. It was not till 1797 that he finally decided to make his home in Canada, and on the 20th of October 1799, he and two companions pitched upon the site of the future city of Hull. He finally quitted Woburn for Canada on the 2nd of February, 1800. He was accompanied by five families, and had in his train fourteen horses, eight oxen and seven sleighs. The first tree was felled on the site of the homestead on the 7th of March, of the same year. He brought the first square timber from the Ottawa to Quebec in the year 1807. He built the first slide on the Hull side of the river in 1829. He was elected the first member to represent the County of Ottawa in 1830. He died in 1839, and sleeps, an honored memory, in the little cemetery on the Aylmer road. Philomene Wright built his first saw and grist mills in 1808; they were, unfortunately, burned down, but were rebuilt in 60 days.

About eighteen years prior to this the first saw mill on the Ottawa had been built at Point Fortune, by a Mr. Story. It boasted one upright saw, and it is recorded that when the man in charge gigged back the carriage for a fresh cut, he would sit down on the log to take his dinner, and was about through by the time the cut was finished. With our present saws the same can be done in four seconds.

Among our successful lumbermen have been the late James McLaren, of Buckingham; Peter McLaren, of Perth; Bronson, Weston & Co., Perley & Patee, J. R. Booth, Alex. Fraser, of Westmeath; W. Mackey, and the late firm of Hamilton Bros., whose father was one of the first in the trade at Hawkesbury, Ont. Many others have taken an active part in the business, with more or less success.

West of the Rocky Mountains, Canada, contains vast

quantities of valuable timber, the manufacture of which is rapidly increasing, to meet the wants of the Pacific coast and islands. Much of this lumber will find its way east to the treeless prairies.

As to Canadian's method of lumbering, when circumstances will permit, we pile or skid before the snow becomes too deep. When the snow is deep we draw direct from the stump to the lake or river. Our style of living in the shanty, and, in fact, the building itself differs in the various parts of the country. Until very recently, particularly in the lower St. Lawrence, the fare of the shantyman was very primitive, the commonest tea being quite a luxury, and the only variety in the bill of fare was that it consisted of pea soup, bread, pork and beans for dinner, the same, with the addition of tea for supper, and either, less the pea soup, for breakfast. On the St. Maurice, for many years, the living has been good and substantial, with comfortable shanties provided with stove, tables and bunks, the cooking being usually done in an outside compartment. The shantyman's condition, however, is improving with the times.

Our shantymen, whether English or French, as a rule, are as good axemen, and expert drivers and canoemen, as can be found in any country. Our people are well up in dam building, as well as in making slides and clearing away the rivers to facilitate driving. Our rivers, as a general thing, being very precipitous and rapid, require extensive improvements, especially for the running of square timber.

Mr. Hale, of Sherbrooke, gave an amusing history of a stick at the Forestry Congress in this city in 1882: "As an example of the far-reaching benefit of arboriculture, I will give the history of probably the first importation of any new variety of tree ever made into the eastern townships. Many years ago a solitary horseman might have been seen wending his way from the central part of Vermont, bearing in his hand a riding stick broken from a tree as he left his home. His destination was Lennoxville, and in due course of time he arrived, and taking up his abode at a farmhouse about one mile east of the village, stuck his now useless switch in the ground. Like Aaron's rod, in due time it budded and grew apace—a scion of the the then unknown white willow. From this little stranger have come all the original magnificent trees, for which Lennoxville and the surrounding country, have been so long and so justly famous, and which have done so much towards clothing the country sides for miles around, with its rich and luxuriant foliage; into many other towns and villages have they spread, until the offspring of this embryotic willow might be numbered by the thousands."

TWO CANADIAN WOODS.

I can hardly let the occasion pass without a reference to two of our woods, the first because of its usefulness to the poor aborigine, whose heritage we possess; it served to cover his wigwam, and was the material for his canoe, to aid locomotion; the latter, the great wood of commerce.

The white birch, or boleau, has within a few years become of some value when found within easy reach, having been turned to account for the manufacture of spools and spool wood for thread makers, the white part of the wood only being used. It is made into squares, varying from one inch, in eighths, to say, two inches, and three or four feet long. Many shiploads have been shipped to England and Scotland the past few years, principally from the lower St. Lawrence. The red, or heart, being worthless to the spoolmakers, either used as fire wood or left to rot. There are vast quantities of this wood in the interior too far from navigation or rail to be of any value. It is mostly found on poor soil, mixed with balsam, small spruce and cedar. It makes good firewood when dry. The bark is useful to the Indian for the making of his canoe; the vessel for retaining the sap of the maple; his drinking cup and the cover of his wigwam. The yellow birch provides a cough remedy by boiling the sap down to a syrup; and, lastly, though not least, it furnishes the proverbial birch-rod, which, though almost obsolete, sometimes does good service, even in these days of advanced ideas. Vast quantities of the dwarf or black birch have been used as withes in rafting logs, some concerns using as many as thirty or forty thousand in a season, each of them representing a young tree; but little of this is done at present.

We now come to what every lumberman considers the king of the forest, in grandeur, usefullness and value, the white or cork pine, or pinus strobus of the scientists, the tree of all others that serves more purposes than we can enumerate. Among them the tiny match, the mast for the great ship, the frame of the sweet sounding piano, and wherever a soft, easy-working wood is wanted, either in the arts, the workshop, or the factory, there it is to be found. As an article of commerce, it far surpasses in value and quantity that of any other wood, if not of all sorts put together. It supplies more freight for vessels coming into the St. Lawrence than any other commodity; it gives more employment to wage-earning men than any industry in our country, except agriculture. It employs more capital in manipulating it from the time the men leave for the woods in the fall, to make, haul and drive the logs and timber to the mills—the building of mills for sawing, the construction of barges and steamboats to convey it to market, as well as the large amount of freight furnished to railroads, the erection of factories to convert it to the various uses to which it is put. It is safe to say, that the value of the output of pine lumber alone, produced in Canada, is at least $25,000,000, or two and a half times as much as that of any other manufacturing industry; and, when we consider that 60 per cent. is paid for labor, and that, nearly all to men, representing a large population, you can readily see how important it is, either by legislation or otherwise, to protect and conserve the source of this great factor in our prosperty. How can we extol sufficiently this monarch of the forest that we are so much indebted to? The tree when growing in the open country is of little or no value, except as a shade tree, its literal branches reaching almost to the ground, it is in the dense forest we have to look for the great tree of commerce, where nature acts the pruner. There the branches decay and drop off, the trunk shoots upward high above its neighbors, seeking that which it was deprived of below—light and air. By this action of nature we get our clear pine, so much prized by mechanics. As the branches drop off, the wood grows over them, and we get the stately tree carrying its size well up, and often attaining 60 or 70 feet to the branches. I once saw a tree that measured 40 inches in diameter 70 feet from the ground, without a knot or defect visible in this space. Naturally, however, it is very rare to get a log or the best of timber without finding knots or defects as you get near the heart, the remains of the dead branches that fell off during the tree's youth. My experience teaches me that white pine is of slow growth. The smallest trees that ought to be taken for saw logs or timber should be at least fourteen inches at the butt. This would take not less than fifty years to produce, and such a tree as I have before described as much as one hundred and fifty; more than three inches in twenty years. Large grooves of pine are usually found on poor light soil, I think, consequently, that the bulk of the pine found under such circumstances is apt to be punky or defective for the want —so to speak—of nourishment. The best pine is usually found on stronger soil mixed with hardwood. It is unpleasant to contemplate the want of this valuable timber. Once gone it is gone forever, and cannot be reproduced in our or our children's time, as unlike mineral or the other products of the soil, the quantity produced from these are limited by the amount of labor employed in producing them. Perhaps, however, time will find a substitute in some artificial wood, or employ metal to take its place.

OTHER CANADIAN WOODS.

Hardwoods, to which I will briefly refer, that were once almost discarded, except for burning, are coming largely into use in consequence of the improved woodworking machinery that has been devised of late years, making the work of preparing and completing joiner work much more simple and easy than it was to do the same thing in pine when I served my time over 50 years ago, and when flooring, mortising, tenoning, sticking mouldings out of dry spruce with hard knots, was done by hand. The facilities also for reaching hardwoods and getting them to market will help to make up for the loss of this favorite material, which, I hope, is yet a long way off. I might say before closing this part of my subject that the magnificent cedar of British Columbia will, no doubt, largely take the place of white pine for joiner-work. The Douglas fir will be a valuable substitute for our coarser woods, when they become scarce and high in price. A lumberman's life is not passed on a bed of roses, yet there is a charm about it to those who have the stamina to endure its hardships, and enjoy its excitements, that is not easily forgotten. Who, that has followed it, can forget the log drive from early morn to sun-down, kedging across the lake to the tune of the chanteur, or breaking the jam in the roaring cascade, whose noise is drowned by the yells and shouts of the crew on seeing the great mass move off, each great log as it were, trying to get ahead of its neighbor, until they reach still water. What excitement after the risk run and efforts made! Old lumbermen can and do look back to such scenes with much pride. What other business has so many contingencies connected with it, apart from the ordinary mishaps in trade?—sometimes too much snow, other times too little. On other occasions the ice or the floods carry away his booms and scatter the logs, to be often stolen by land pirates, who will secret his property, and annoy him in trying to find it.

As to the utility of the forest, though it may not attract the rain or influence its downfall, there can be no doubt as to its regulating the flowing of the waters by holding them back in the glades and swamps, sheltering the land from the fierce rays of the sun, preventing rapid evaporation to a great extent, and thus preventing oftentimes damaging floods and dried up streams. For the reasons advanced does it not behoove us to use our influence to bring about such legislation as will have the effect of preserving and protecting our forests, on which so much depends."

In concluding his address, Mr. Ward said that on the 15th of April last was the fiftieth anniversary of his entrance into a sawmill to work.

THE GAS ENGINE AND THE STEAM ENGINE JOINED.

REFERRING to the discussion of the gas engine question, a prominent engineer remarked in conversation that he failed to see why the gas engine and the steam engine should not be compounded, so to speak. He put the case something in this manner: In the gas engine one of the problems is to keep the cylinder reasonably cool, and in the steam engine to keep the cylinder hot. Now, suppose we have a gas engine running and jacket its cylinder with water, which is then used for boiler-feed water, thus saving the heat which is now thrown away. Then take the exhaust from the gas engine through the jacket of the steam cylinder, and, if necessary, as it probably would be, add a heating chamber for the steam to pass through just before reaching the cylinder, so that more heating force could be employed. Two such engines adapted to each other would probably mean a relatively small gas engine and a steam engine large enough to carry all the load in case the gas engine refused to work for any reason, and, arranged in this way, each would supplement the other so far as the proper distribution of heat is concerned. The proposition is a novel one, and there is a chance to do some thinking over it. Possibly someone may be so situated as to make it easy to try the plan and let us know the results.—American Machinist.

DAMAGE TO CHIMNEYS BY LIGHTNING.

AN investigation was recently carried on in Germany, by C. Carlo, upon the subject of the damage done by lightning to chimneys, both with and without lightning conductors. From a study of twenty-four cases, he draws the following conclusions:

1. Lightning very seldom strikes a chimney in such a way as to leave any perceptible effect.

2. The damage done by lightning to chimneys is in most cases inconsiderable; only in one case was a chimney actually destroyed, and in four cases only was the damage so great that it was necessary to pull the chimneys down.

3. Lightning strikes chimneys both with and without lightning conductors; the latter appear, however, to be struck oftener than the former. Of the cases reported on, two were with and fifteen without lightning conductors; in four cases it was not definitely known whether a conductor was in position or not.

4. In low, marshy grounds, lightning flashes seem to occur more often than in high and dry neighborhoods.

5. In one case only has lightning struck a steam boiler so as to necessitate repair.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

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WHITE PINE PROBLEMS.

THAT business is constantly undergoing changes, is evident to the most unobservant. The lumber trade is no exception. Take white pine: It was not many years since it was king of all timbers. It still holds much supremacy in the lumber market, but the sway that it held a few years ago, if not shortened, has to be maintained by constant fighting and eternal vigilance.

For some years yellow pine has been encroaching on the field hitherto controlled by white pine. The nature of the two woods is not in every way identical. For many purposes yellow pine will never fill, with satisfaction, the place occupied by white pine. Where, however, competition could not be met on the grounds of merit, a reduction in price was made to further the interests of this southern wood. And in times of depression, such as all countries have suffered for years past, not only is it the tendency, but the necessity becomes strong for customers to satisfy themselves with an inferior article, when it means a saving in cost. This was the card played by southern lumbermen. They were selling lumber practically at a loss, but they had great quantities of lumber to sell, and they were playing for future trade. Having in a measure, at least, secured the desired end, the price of yellow pine has now been advanced. On the other hand, white pine, though not declining to a degree to affect the market, does not take on that measure of strength, that would indicate any important advance in price.

White pine owes its present dullness, however, to something more than competition with yellow pine. Duluth lumber has been working its way into the eastern markets for some time, and following on somewhat similar lines to the southern lumbermen, there has been a disposition to figure prices below a current market basis. This year pine from Lake Superior is cutting an important figure in the market. In Saginaw, we are told, that Norway bill stuff held there at $8 to $8.50, is selling at Lake Superior points at $7. A result is that factory men in that State are buying their lumber in Duluth, and shipping it into Michigan, claiming that they can buy at those interior points, pay freight and handling, and make more money out of it than to buy stock manufactured on the Saginaw river.

A continuation of this policy cannot but affect the entire market for white pine, and in any change that may take place, Canada, like Michigan, is largely interested.

CUTTING OF TIMBER FOR PULP WOOD.

IT is worth while remembering when cutting the products of Canadian forests that there are other uses to which logs are put than that of manufacturing lumber. There are good reasons to think that the sawmill will be outrun in the race, as one of our greatest industries, by the pulp mill, which already consumes large quantities of timber and seems to be open to almost limitless development.

It is just about fifty years ago, in the year 1846, since the wood pulp industry may be said to have commenced. Give one Keller credit for the first paper-making from ground wood, which was manufactured under a patent taken out in Saxony in the previous year. As with most new industries, the growth at the outset was slow, but of recent years the manufacture of wood pulp has jumped into immense proportions. We can understand this, when it is remembered that of the making of books there is no end, and of the making of newspapers, were it possible, a stronger statement might be made. We are living in an age of newspapers, almost countless in numbers, and in many cases reaching into immense circulation daily, consuming tremendous quantities of blank paper.

Years ago it was learned that rags, cotton waste and straw were neither sufficient nor cheap enough to meet the demand of the paper maker. Wood paper was invented. It did not cover every requirement at first, but as a result of experiments and inventions improvements were rapidly made. Newspaper stock, which brought from fifteen cents to twenty cents a pound in the sixties, is to-day sold by Canadian mill men as low as three cents. The industry is growing, until the paper made from pulp wood on this continent is shipped to almost all parts of the world. Australian papers are said to be printed on paper having its origin in the spruce forests of this continent.

Canada's interest in pulp wood is in her immense spruce forests in Quebec and New Brunswick in particular, though spruce is also found in some parts of Ontario and British Columbia. Conditions are peculiarly favorable for this industry because of her splendid water privileges, for as Mr. J. H. Lefebvre, C. E., has pointed out the three things necessary to the success of the pulp industry, namely, suitable wood, extensive water power, and cheap labor are found in abundance in Canada. Our immense forests of coniferous trees contain a practically inexhaustible supply of the different kinds of woods required in this line of manufacture, and besides are of a very superior quality. A proof of this is found in the yearly increase of American importations, and further in the energy with which United States manufacturers are securing possession of large tracts of spruce land in the Lower Provinces. The importation of Canadian wood for pulp to the United States increased from $57,197 in 1890 to $454,253 in 1893, and the increase goes on. Norway and Sweden have held a prominent place as manufacturers of pulp, but in England Canadian pulp has sold at an average of $24.80 a ton as against $20.27 for the Scandinavian product, a proof of the better quality of our pulp wood. The immense growth of the wood pulp business is such that it absorbs nearly fifty per cent. of the spruce logs produced in New York and the New England States.

It is not necessary to enter into a discussion of the processes of pulp manufacturing. Our interest is as lumbermen. A cord of wood produces about 900 pounds of chemical and about 1400 pounds ground wood or mechanical. In the Dominion there is now made about 50 tons of sulphite or acid pulp, 50 tons of soda pulp, and 100 tons ground wood pulp per day. In order to produce this quantity of sulphite and soda pulp about 225 cords of wood are required daily or 70,000 cords per year. And to produce ground wood manufactured about 160 cords daily or 32,000 cords a year. These figures are suggestive of the importance of this industry, and of the wisdom of preserving it to our own people, for with the free export of spruce logs to the United States, and a heavy duty exacted on all mechanical and chemical pulp imported by that country, it becomes a question how far we are serving this end.

There can be no doubt that the spruce forests of the Dominion must each year grow in value, and as may be noted from an interview with a prominent Ontario lumberman published in the Eli page, those who are wise in their day and generation, are going to give thought to securing possession of spruce forests, perhaps even more so than those of white pine or any of our other woods.

EDITORIAL NOTES.

ANTICIPATED trouble by the lumbermen of the Ottawa Valley, and those in certain parts of New Brunswick, in the expected enforcement of the new sawdust act, has been set at rest by the announcement of the Hon. Mr. Angers, in the Senate, that the act compelling Canadian lumbermen to consume the saw dust and mill refuse would be amended with a view of conserving the interests of the Ottawa Valley and the lumbermen of the St. John river. It provides that when a good case can be made out against the preservation (contained in existing statutes) of sawdust in any river or stream, the government may grant the exemption.

A NEW form of tree has been recently discovered in Japan, at an elevation of some 2,000 feet, which is said to partake very largely of the nature of Douglass fir. The Pacific coast has all along been looked upon as the home of this wood, which finds a market to-day in many parts of the world. It will be interesting to watch the growth and development of the new species. It is described of a tall growth with horizontally arranged branches, but in point of size, it falls much below the species on this continent. This being the case, even though it may be the same nature of timber, it must, from a commercial standpoint, lose a great deal of its worth, as Douglas fir is valued, not alone for its great endurance and strength, but also for size.

THE step initiated by Mr. J. R. Booth, fixing the hours of work in his big mill at ten hours a day, and followed generally by the other mills, large and small, of the Chaudiere, is one that marks the trend of the present day towards shorter hours for workingmen. What is pleasing in connection with the present step is that it was taken voluntarily by Mr. Booth, and no friction was observable in the mill men generally falling into line. At the ten hour day the same wage will be paid. This is further worthy of remark because made at a time when profits in the manufacture of lumber are exceedingly close. And yet there is good reason to believe that in the reduction of the actual number of hours the men will work as great an amount of work will be accomplished per week. The superficial observer will be disposed, perhaps, to question this statement, but there are many noticeable instances on record, where a reduction in the hours per day of labor by large manufacturers has brought to them as large, and in some cases a better, return than under the longer day.

IT is interesting to watch how trade shifts from one section of country to another, as circumstances make this necessary. It would seem that we sometimes deplored, rather unncessarily, the losses that are sustained to particular sections of country, when the resources that have built up those sections no longer exist. There are points in Ontario, as in other parts of the Dominion, that once rejoiced in the constant hum of the saw mill. Things are dead there to-day, because the timber of those territories has been cut away. But what is proving a loss to one place, becomes a benefit to another. It is

necessity, that sets men planning work afresh, and seeking for other fields to conquer. We have thought of this as we have read a report of Mr. C. W. Spencer, who returned to Montreal, recently, from an annual tour of inspection of C. P. R. lines east of Port Arthur. He says: "We shall have an increased shipment of over 120,000,000 feet of lumber over last year in this district between Sudbury and Sault Ste. Marie. They are spending $10,000 in Kenabutch in erecting a saw mill, and houses are springing up fast." Attention has been directed to this new territory only within recent years, as timber has become scarce in some of the more settled places.

IN a sketch of British Columbia timber interests in the May monthly issue of the CANADA LUMBERMAN we gave Mr. R. E. Gosnell, of Victoria, B. C., credit for the estimate that there are 100,000,000,000 feet of good timber in sight in British Columbia. Mr. Gosnell writes us that whilst he made use of these figures in referring to the timber interests of the coast province, he did not give them as his own figures, but that "it has been estimated," or "it is estimated" that such is the case. He says: "I wish to call your attention to this for the reason that it is not desirable to assume the responsibility of so important a statement regarding the subject, upon which I had not in any sense claimed to be an authority. This much we do know, however, that the extent of timber is very great, and were it up to the 100,000,000,000 feet or half that amount, it is still an enormous resource, but not too great to render your advice as to its preservation necessary and serviceable. The exact amount of timber land under lease is 542,000 acres, but that does not, of course, represent anything like the real extent, although it does represent the best of it. Over 500,000 feet of lumber have been cut from one acre of timber land, and that is by no means unusually heavy, but if we take one-fifth of that as an average for the 540,000 acres under lease, we get 54,000,000,000 feet; so that the latter may be accepted at least as a safe estimate for the whole of British Columbia."

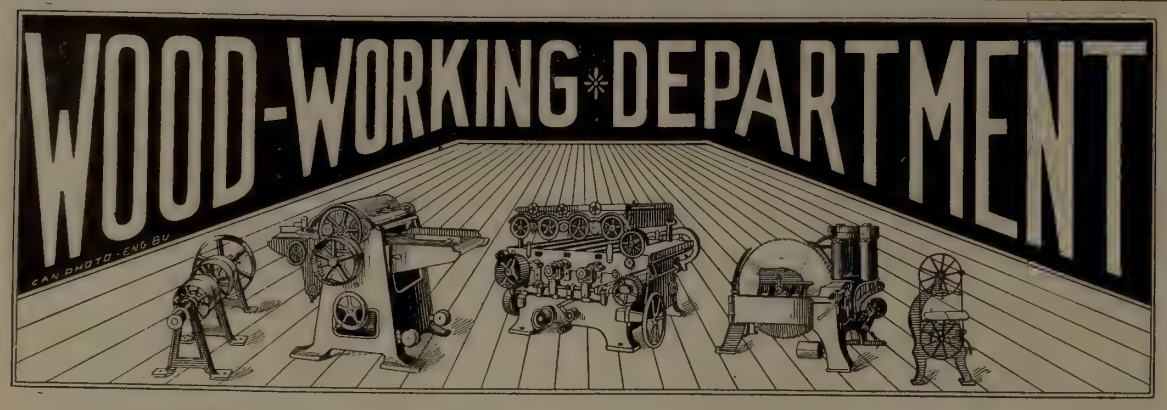
THERE are tricks in all trades, it has often been said. Where lumbermen in some cases have united on an advance in prices, it is stated that more unscrupulous members of the combination are getting away from the real purpose of the agreement by giving concessions in the shape of better qualities of lumber, where they are ostensibly holding, at the same time, to association prices. It is here the difficulties in combinations always show themselves. This is to be remembered regarding the man who will play false with his fellowmen where an agreement has been entered into, he will play false as quickly with the very men who may think they are receiving a favor from him. We would advise any dealer who buys from a lumberman, who has agreed with others to stick to certain prices, to watch closely every transaction, for if the unscrupulous man does not get even with him in some way it will be no fault of his. Besides, without drawing the lines too strict, the individual who is prepared to accept of another terms which he knows represent the violation of an agreement, is not himself too straight, and may be worth watching. We know the old story that business cannot be done unless a little sharp practice enters into it, but this is to be noted that when everybody in trade commences using sharp tools, there is no telling where blood will not be drawn first. The old saw is terribly hackneyed, but it is true yet, that honesty is the best policy, and there is nothing like square, up-and-up business methods. Where any man is a consenting party to a lowering of the standards of business methods, he himself has taken a step downwards.

CONSIDERABLE interest is attached by Quebec lumbermen to the proposed amendment to the Dominion Inspection Act of 1893, which will provide that lumber conform to the inspection of all other articles of trade and commerce, but not compulsory. In the matter of square timber, however, inspection is to be compulsory for two or three years. Going back a good many years in the history of the lumber trade of Quebec lumbermen are disposed to think of the difficulties they had to fight against before the Cullers' office at Quebec was established. History saith, that this was instituted about fifty years ago, for the protection of the lumberers, who, previous to that date, felt that they were unfairly oppressed by buyers at Quebec. Lumbermen in those days were obliged to submit to all sorts of "allowances" in the measuring and culling of timber purchased by the merchant who engaged his own culler, to put on his own measurement. It is said that lumbermen lost from 20 to 30 per cent. of the value of their lumber, sufficient to completely wipe out all margin or profit, and not unfrequently leaving them in so tight a corner financially, that an escape was impossible. In a word, the allegation is that they were completely at the mercy of the buyers. The establishment of the Cullers' office, was the means of changing all this, and the unpleasant friction, to put matters mildly, became a thing unknown. Whenever anything went wrong, redress could always be had at once, by applying to the Supervisor, who would award a survey and thus rectify any loss incurred by wrong measurement or otherwise. The contention in favor of the proposed change is that conditions have altered, making the existence of the Cullers' office, and those attached to it, no longer a necessity. But this is seriously questioned by those who know well lumber conditions in Quebec. Where an office has been in existence for so great a length of time, and with the lumber trade of Quebec still assuming large figures, it would appear the part of prudence to go slow in making any changes.

IT is difficult to understand why the Treasury Department at Washington should rule that the red cedar of British Columbia must come under a 25 per cent. duty. The case, as presented by British Columbia lumbermen, through Mr. J. G. Scott, was really unanswerable on its merits, and this was the view taken by the New York Board of Appraisers. What consistency was there in ruling that the red cedar of British Columbia was not a cabinet wood, and therefore ought not to be classed among cabinet woods, and yet charge an impost on it as one of them? It is said the department ruled that the cedar of the Pacific coast was cedar in the general commercial sense, and though botanically it might vary a little from a true cedar, nevertheless it was cedar still. It may be a cedar in name. It is not a cedar in point of fact. It has been generally admitted by leading lumber journals of the United States that it was through an oversight that it was placed under the cabinet schedule in the first place. The West Coast Lumberman in its latest issue says: "There is but little doubt that the duty on cedar was laid on through a careless wording of the act." The Timberman and other journals have voiced the same thought. When the government at Ottawa evinced a disposition to trifle with the question of duty on boom sticks, that gave rise to friction with Michigan lumbermen, the CANADA LUMBERMAN took ground that the quicker the government receded from its absurd position, the better would it be for the lumber trade. The question of free trade in lumber is too big a one to admit of trivial disputes of this character. The same is to be said in reference to the red cedar trouble. The government at Washington have no reasonable grounds for ruling out red cedar from under the free trade tariff. Their own officers, the New York Appraisers, and the lumber press generally, without regard to their particular opinions on the question of free trade, are of one mind on the matter. Without the necessity for further protest on the part of Canadian lumbermen, it is to be hoped that the authorities at Washington will at once remove cause for friction in this particular, as the Canadian government have absolutely removed cause in the case of the boom difficulty with Michigan lumbermen.

THE Pacific Lumber Trade Journal, the new lumber paper published at Seattle, Wash., and which it is fair to say reflects credit upon its editor and manager, Mr. Victor H. Beckman, is disposed in the first issue to read the shingle trade of the Coast, a deserved homily. Our contemporary freely admits that the red cedar shingle industry of Washington territory has suffered many reverses during the past two years, and these are to be attributed to a class of men who, it declares, are as foreign to the trade as a clown at a funeral. Stated briefly, the shingle trade of the Pacific coast, and British Columbia cannot be altogether excepted, has run the gauntlet, and all the disaster that comes, of an unhealthy boom in business. Red cedar shingles became known for many meritorious qualities, and with abundance of this wood indigenous to the Pacific coast, every Tom, Dick and Harry thought he saw money in shingle manufacturing. The result was that a class, quoting from our contemporary, composed of "ex-butchers, real estate men out of a job, lawyers without clients, doctors without patients, insurance men sans occupation, and wholesale merchants with an eye to the main chance," embarked in the shingle business. Late in the year of 1892 the shingle industry was on a good basis, giving employment, at good wages, to several thousand men in the mills and camps. This attracted the attention of inexperienced men with little ready money, with the result that in an incredibly short time mills were built by the score, without regard to location, existing conditions, or the law of supply and demand. Competition became so keen three months ago that shingles were sold as low as 85c. per thousand, barely the cost of labor, and leaving nothing for raw material, investment, interest, etc. It is estimated that nearly $2,000,000 were lost through this senseless and criminal price-cutting. Has the end been reached? This, it is difficult to answer definitely as yet, but it is believed that the situation is changing, and commonsense will take hold of the reins of the shingle manufacturing of the Pacific coast. Lumbermen everywhere throughout the Dominion will trust that this will be the case, for unhealthy and commercially immoral methods employed in any department of a particular trade reflects back on the entire trade.

WHAT of white pine prices in the near future? When the new cut is on the market, will prices go up or down? This question is being widely discussed in lumber circles everywhere. There is a good deal of diversity of opinion. Some there are who contend most determinedly that there will be a break in prices not long after midsummer has been entered upon. They argue that stocks are not very much depleted at leading mill points, and that when these are supplemented by the new cut, with trade continuing as slow as it has been since the first of the year, no other result can follow. The question is whether stocks at mill points are large. Whilst it is true that some mill men are holding more white pine than they would wish to, with the mills busy cutting on fresh logs, yet this is not everywhere the case. This much seems certain, that buying has been conducted on so conservative a scale, that the yards of lumbermen throughout the country must be well thinned of stocks. If they are going to do any trade they will have to fill up with new stocks, and it is doubtful if the ability to meet such a demand will be any too complete. The situation, centres around the one point of a betterment in trade conditions. If the season's trade is going to warm up, though late about it, there is no good reason to suppose that prices, except possibly for particular grades, will decline. A survey of commercial conditions point to an improvement in business. Bankers and others, who are supposed to keep their hand on the pulse of trade, tell us that this is the case. Other circumstances will also enter into the situation. The belief is growing that the output of white pine for 1895 will not be on a very extensive scale. Possibly it may reach the figures of 1894, but this is hardly probable. At this writing, it also looks as though a good many logs will be hung up, and if so the cut will be made still smaller. Much will depend too on white pine men themselves whether prices can be made to improve. There is encouragement in the position assumed this season by the yellow pine men, and also the spruce manufacturers. Business in both these departments of lumbering had been demoralized, and was going from bad to worse rapidly. None too soon, Southern States lumbermen on the one hand, and spruce men in the Eastern States on the other hand, took the bull by the horns and formed strong organizations, with the result that to-day both have fixed on a basis of advanced prices, that has all the appearance of proving strong combinations, and which will help these men to make some money this year, where they had been sacrificing profits in the past. For white pine men to attain this end would mean that in sections of country, as we have remarked in another article, where the tendency has been to do business, regardless of profits, lumbermen would need to join hands with the older manufacturers and resolve to put an end to the foolish method of cutting prices.



BUSINESS END OF WOOD-WORKING.

THE laws of business are as fixed and exacting as those of nature or science. Violate them, and disaster is sure to follow. Work closely up to their requirements, and, other things being equal, success is assured.

In the engine room the engineer knows that if he neglects even the simplest rules that govern the management of steam or electric power, trouble will come. Every hour in the day he must be on the alert, satisfying himself that there is not the slightest detail in connection with his engine that is allowed to go wrong. Boiler explosions occur when these well-fixed rules of engineering science are violated. They do not occur by accident. So it is all through the workshop. Let planer, mortiser, and tenoning machine be carefully and correctly run and careful and correct work will be executed. Spoiled work comes from a shop, and losses are sustained, when the workmen become careless, and the foreman less vigilant in guarding every interest of his employer.

Neglect of little things, producing waste and destruction of valuable material, and expensive machinery, can be given as the explanation of business disaster in many wood-working concerns. But a careful study of the situation will reveal the fact that the leaks, which eventually sink the ship, exist within the four walls of the counting-house more frequently than in that larger space usually known as the shop or factory. Bradstreet's put down as the first and chief cause of failure, incompetence, and it is no stretch of the word to say that the man, with capital invested in business, who does not watch closely the daily transactions represented in the books in his counting-house, is incompetent to engage in business. A study of business failures will show that capital has become impaired, and losses, that have wrecked the business, made, through bad bookkeeping, or no bookkeeping, more often than in any other way. An examination of the assets of insolvent concerns reveals a heart-rending condition of affairs, oftentimes, in the size of figures opposite the item bad or doubtful accounts. These bad accounts arise through a lack of watchfulness in giving credit, as well as in neglect in rendering accounts and keeping up close collections.

Bad bookkeeping and office mis-management does not stop with losses through bad debts. The history of business tells of thousands, and tens of thousands of dollars, that are lost every year by mercantile concerns through neglect to charge goods, in whole or in part. Let anyone give memory play for a few minutes and he will bring to recollection errors that have been made in accounts rendered, where charges have been omitted, cash neglected to be credited, and various other blunders made, all the result of careless office management.

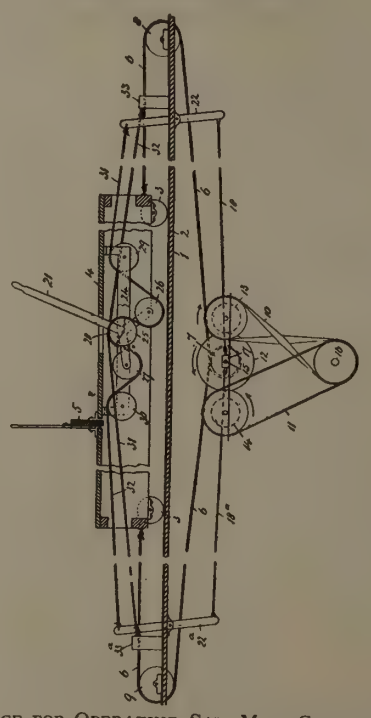
How many men engaged in the wood-working business take stock regularly, and strike a trial balance to know in what position they stand? When times are good and business is rushing, the ingo and outgo run sufficiently parallel to each other to keep things easy. But those seasons come around that are known as cycles of commercial depression, and here and there, at this point and at the other, business men commence to find the strings tightening. Do they wisely sit down and examine into their business? Too often not. The practice ought to be made as exacting a feature of business management as that the boiler is properly protected for the night before the engineer turns the key in the engine house door.

A man eminent in practical science has observed: "It is astonishing how few people I have met with in the course of my experience who can define a fact accurately." It is astonishing how few men in business can define accurately, or nearly so, the condition of their business at any given time, except when the assignee comes into possession.

These may seem to be commonplace statements, but they are of a character that will bear repetition. Two important considerations come into play in the management of a wood-working industry: (1) That the proprietor himself be a practical wood-worker, or else place the mechanical department of the business in skilled and capable hands. (2) That he be a thorough-going business man, living up to the science of business in all particulars.

It is a good thing when these two conditions can be made to dovetail together, but in the present day of intense competition, and close profits, if one is more essential than another in the wood-working business in Canada, the latter ought to have choice. The mechanical end of the business can, with some safety, be delegated to others. The business end calls for the closest attention of the proprietor himself.

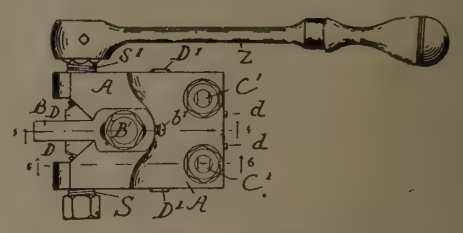
NEW CANADIAN PATENTS.



DEVICE FOR OPERATING SAW MILL CARRIAGES.

Patentee: John Hamilton, Stewartville, Ont., 1st March, 1895; six years.

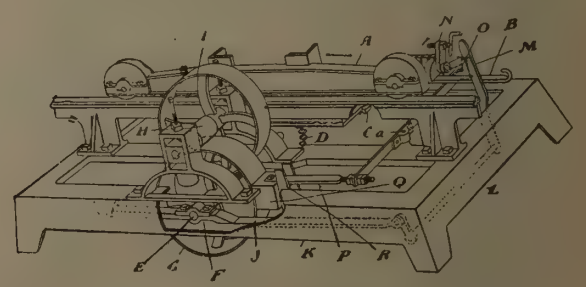
Claim.—1st. The combination with a saw-mill carriage and accessories, means for driving the same and a hand lever fulcrumed to said carriage, said lever having two sets of sheaves and two cables passing in reverse order between said sheaves, said cable secured at the ends to fixtures and to tilting levers, operating said accessory means, whereby the hand lever when inclined effects a pull on one cable, and when inclined in the opposite direction effects a pull on the other cable to reciprocate the carriage when desired by a person riding thereon, as set forth. 2nd. A device for reciprocating or gigging saw mill log carriages by accessory means, said device comprising a hand lever fulcrumed to the carriage and having two sets of sheaves journalled thereto, and two cables, one cable passing between one set of sheaves and the other cable passing in reverse order between the other set of sheaves, and over sheaves attached to the carriage, one end of said cables attached to a fixture and the other to a lever, whereby by an operation of each cable forms a loop which is elongated by a sheave when the hand lever is inclined to effect a pull on either cable, as set forth. 3rd. The combination, with a saw mill log carriage and accessory, means for gigging the same, of a hand lever fulcrumed to said carriage, said lever having two sets of sheaves and two cables, one cable passing between the other set of sheaves in reverse order, whereby each cable forms a loop, one loop being elongated when the hand lever is inclined in one direction and the other loop elongated when the lever is inclined in the opposite direction to effect a pull on the cables, respectively, and to cease when said lever is vertical for the operation of the carriage by accessory means such as a friction gear steam feed, etc., as described and set forth.



DEVICE FOR SHAPING SWAGED SAW TEETH.

Patentee: John F. Pribnow, Mellon, Wis., U.S.A., 12th March, 1895; six years.

Claim.—1st. The combination in a shaper for the points of saw teeth, of the frame work, a stop, clamping jaws, and carrying blocks for said jaws, said carrying blocks being secured to the frame of two-sized bolts, whereby they serve both as pivot and securing bolts substantially as set forth. 2nd. That said carrying blocks having perforations and said frame having slots, through which said slots pass, the smaller portions of the bolts being flattened where they pass through said slots, and said slots being equal in width to the smaller diameter of the bolts, whereby said bolts are prevented from turning. 3rd. The combination, in a shaper for the points of saw teeth, of the frame work, carrying blocks for the clamping jaws pivoted to the framework, and said clamping jaws independently adjustable upon said carrying blocks. 4th. Said clamping jaws secured to said carrying blocks by bolts passing through slots, and into said jaws, and set screwed, whereby the longitudinal adjustment of the jaws may be finally regulated.



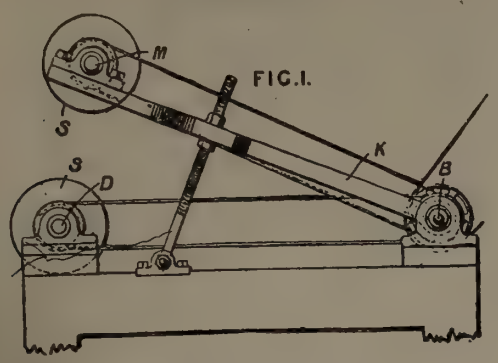
SHINGLE MACHINE.

Patentee: B. R. Mowry & Son and Isaac Milton House, Gravenhurst, Ont., Assignee of Asa Mutchinbacker, Rosseau Falls, all in Ontario, 26th March, 1895; six years.

Claim.—1st. In a shingle machine, a pivot on the frame of the machine and carrying a brake-shoe adapted to engage with a pulley geared to the carriage of the machine in combination with the reciprocating carriage, adapted to engage with the lever and apply the brake, substantially as and for the purpose specified. 2nd. In combination with reciprocating carrier carrying a pivoted dog, which may be set to engage with the said lever and apply the brake. 3rd. In a shingle machine, the combination of the pulley G, brake-shoe Q, bar P, fork R, lever G, dog N, and reciprocating carriage A, substantially as and for the purpose specified.

David Cross, employed in Galbraith's sash and door factory at New Westminster, B. C., recently had his hand badly cut by a shingle saw.

AN ENGLISH PATENT.



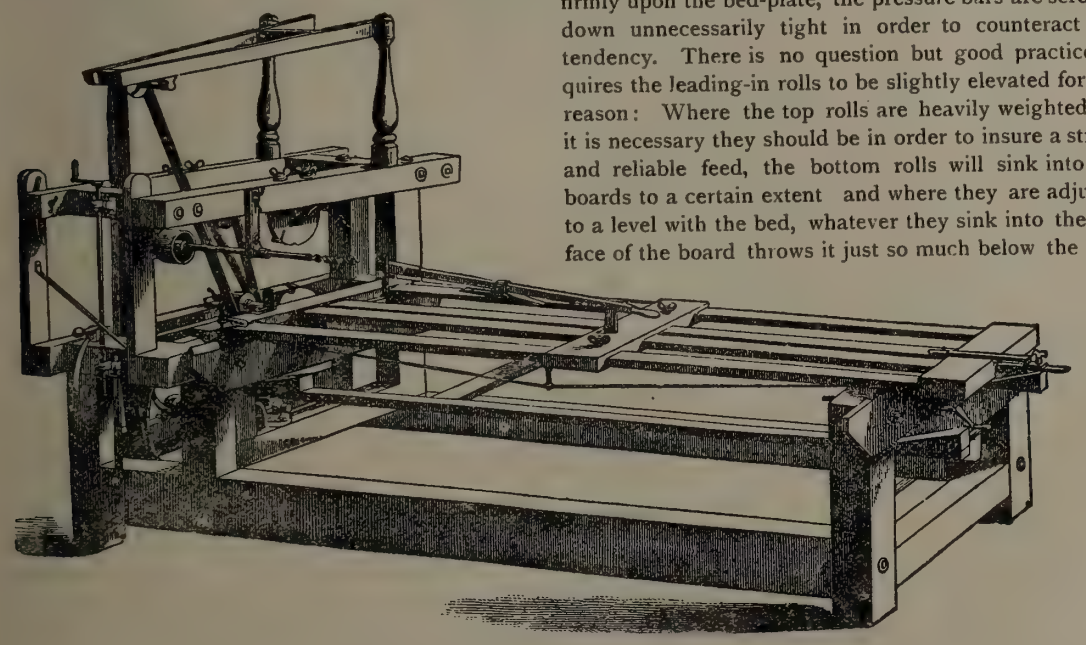
Relates to a machine for sawing, mortising and trenching, and for marking for setting out work. The figure shows an elevation of one form of the apparatus. Adjustable circular saws or cutters S S are fixed on parallel shafts M D worked by driving belts from a third shaft B. The shaft M is carried by brackets on pivoted arms K, which may be adjusted to regulate the distance between the shafts M D between which the wood, &c., is introduced. Many modifications are described, in one of which the shaft D is mounted similarly to the shaft M. Guides and gauges may be arranged for the wood, etc.

TENONING MACHINES—THEN AND NOW.

IT is by taking a glance into the past that we can best learn, oftentimes, how high is our altitude to-day. Let wood-workers look at the two illustrations here given, and they will have some idea, at least, of the progress made in the manufacture of wood-working machinery within less than half a century.

The cut here given of a new tenoning machine, as in operation in many wood-working establishments to-day, stands out in striking contrast to its representative of forty years past.

This tool is used principally for sashes and blinds. The cutter-heads are made small, so that they can be run at great speed and do better work and more of it. The top headstock is adjustable up and down and in and out, and both headstocks can be moved up and down together without changing the thickness of the tenon in the least. The bottom headstock and the main standard are in one piece, gibbed to the inside of the frame, and raised and lowered by a screw. Both top and bottom cutterheads are run by one belt at the same speed, and this belt is provided with a self-operating weighted tightener having vertical and horizontal adjustment.



TENONING MACHINE MADE IN 1856.

This machine is provided with a combination roller table, greatly facilitating the work both in ease of operation and quantity turned out. In this device the top part of the table travels farther in a given time than the under part, not requiring the extra long ways. The table is secured to ways with safety gibs and stops, so it can not be thrown from the ways or into the knives. It is perfectly rigid and cannot be thrown or worn out of line. It is provided with a positive hold-down, conveniently and quickly operated, and by which the shortest piece is firmly held in place. The guard and cleaning device avoids chips accumulating on ways. The fence is adjustable to any required angle. The cut-off attachment is adjustable to any length tenon desired (by means of a screw) without stopping, and is run with the same belt as the heads. The machine weighs 900 pounds.

PLANING MILL PRACTICE.

NOTWITHSTANDING all that has been said on the subject of planing mill practice, together with the care and management of wood-working machinery generally, still there seems to be a wide difference of opinion upon certain points even among those who profess to be experts at the business, says a writer in the Age of Steel. Many of those articles which appear in various trade journals from time to time are not only instructive to the young operator, but the hints thrown out may not always be uninteresting to the more experienced man, while on the other hand, others contain points that are of a doubtful character. It is all folly to suppose that one mans knows it all and incapable of learning something more, even from an amateur operator, still, the best and the most expert planing mill operators, like the doctors, often disagree.

For example, the operator tells us that the bottom leading in rolls of a planing machine should be set upon an exact level with the bed, and attempts to prove his theory correct, while another argues with equal force that they should in all cases be raised from one-eighth to one-quarter of an inch above it. Now, while there is no question that by slightly elevating those rolls over the bed-plate, the machine will feed easier and the lumber will not drag so heavily upon the plank and consequently the wear will be less, not only upon the bedplate but the gearing also. But there is no doubt that this manner is often carried to extremes by some operators. By elevating the rolls too far above the bed, the tendency is to lift the board from it, and as it is essential in order to avoid easy work, that the board should rest firmly upon the bed-plate, the pressure bars are screwed down unnecessarily tight in order to counteract this tendency. There is no question but good practice requires the leading-in rolls to be slightly elevated for this reason: Where the top rolls are heavily weighted, as it is necessary they should be in order to insure a strong and reliable feed, the bottom rolls will sink into the boards to a certain extent and where they are adjusted to a level with the bed, whatever they sink into the surface of the board throws it just so much below the level of the bed and produces an unnecessary pressure upon it, but in no case will the pressure of the top rolls be sufficient even upon the softest lumber to sink the bottom ones into the lumber one-eighth of an inch, or even a small portion of it.

The careful operator, however, who is a close observer, can always judge from the working of the machine whether the pressure upon the bed is sufficient to cause extra wear and friction, and regulate them accordingly. As a rule, the sinking into the lumber by the bottom rolls, upon ordinary work amounts to but little, and if a thick piece of paper or tin be placed upon the bed and a straight edge laid upon it, and the bottom rolls raised until they come in contact with the straight edge, it will be found sufficient for all practical purposes.

To say that absolute perfection may be obtained so that all classes of lumber, both hard and soft, may be run with exactly a uniform pressure upon the bed, would be absurd; therefore, as no fixed rule will apply to all cases, the experienced operator must judge for himself from the size of the rolls, the amount of pressure upon them and the nature of the work, just how much elevation is necessary in order that the lumber pass through the machine with as little resistance as possible. As the lumber, after passing the rolls in front of the bed-plate, is already compressed so that the rolls behind the cylinder will not sink into it, there is no necessity of elevating the back rolls, but they should be set level with the bed.

TENONING MACHINE, 1895.

Another point has been frequently referred to, is the amount of allowance for jointing upon the side next to the long guide. Where the groove is run upon this side, it is very important that sufficient margin be allowed for jointing, but the extra amount cannot be governed by any fixed rule, but must be determined by the condition of the lumber, and the good judgment of the operator, and there is no question but a large amount is wasted in some mills by setting the long guide too far back of the stationary matcher head. Where the man at the saw, whether it be a single or double edger, is particular in straightening the stuff, that is, to avoid short crooks, but little margin will be required for that purpose.

In most cases it is customary to allow one-eighth of an inch for this purpose, and under favorable conditions, this is amply sufficient, and all over that is a waste of just so much material. With stock lumber, however, where it is matched as it comes from the yard, the case is different, and short crooks and lumps, especially, where there are knots near the edge, often render it necessary to set the long guide further back so as to allow a greater margin for jointing. Still, it is a question whether it is not more economical to run a few boards a second time than to set the guide back of the matcher head, so as to take off a quarter of an inch, as is frequently the case, whether it is required or not. There is probably no other place in the planing mill where good judgment and economy may be practiced, than at the edging saw. It is customary with many sawyers in ripping up strips for matching, to allow about one-eighth of an inch, but in many cases the strips will be found to measure from one-quarter to three-eighths of an inch wider than there is any necessity for.

Now, if the strip is to be six inches face when matched, there is no necessity for being sawed more than six and one-half inches. This allows three-eighths for the tongue and one-eighth for jointing on the groove side, but more strips will be found to measure six and three-quarters than otherwise and of course all over what is really necessary is so much waste of lumber, and while it may appear to the sawyer a small matter it will amount to many hundreds of feet or even thousands in the course of a year.

OF those entitled to rank among the large lumbermen of Ontario are the Muskoka Mill and Lumber Co., composed, as most people know, of Mr. A. H. Campbell and his two sons, owning large timber interests in the northern sections of the province and with the head office at Toronto. It may be taken as significant of the outcome of lumbering in Ontario at not a very distant day, that this firm have within the past few years disposed of considerable of their limits in this province, and become investors in spruce lands in New Brunswick. There is not necessarily any connection between their transaction in Ontario and New Brunswick, but they have shown that they are able to take a long look ahead in putting some of their money into spruce lands in the Lower Provinces. I was conversing the other day with Mr. Campbell, and learned, as with others who have studied the matter, that he sees a profitable investment in spruce. His idea is to acquire, perhaps, 500 or 600 miles of spruce lands, and at some distant day operate these. It is believed that spruce can be cut over every ten or fifteen years, and with limits of the size named by Mr. Campbell it will be readily seen that these would practically never be denuded, and a continuous revenue of a very profitable character would be derived from them. I am not going to anticipate anything that may be said in the editorial columns on the question of pulp wood, but it is well known by lumbermen that this industry is assuming large proportions in Canada, and bids fair to over shadow what has heretofore been considered the legitimate business of lumbering. Mr. Campbell paid a visit to the Maritime Provinces about two years ago, and I was enquiring as to his impressions of the lumbering industry there. Viewed from the standpoint of an Ontario lumberman, he could not but think that lumbermen there were much behind in their methods. The equipment of their mills is, with few exceptions, of the most primitive character. "I pointed out," said Mr. Campbell, "to one of the largest lumbermen in New Brunswick the loss that he must be yearly sustaining by his method of sawing lumber, giving rise to so great waste. The reply was of the most easy-going nature. Money was being made at the mills and our friend did not see any occasion to change. And so it is in every department of business. They are splendid people down there, but conservative, and lacking the go-ahead-ativeness that we are inclined to think belongs to the people of the west."

* * * *

It is at this season of the year that some of the greatest risks are taken on by those engaged in the activities of lumbering. Dangers and privations, though much less to-day than years ago, have to be endured by the shantymen who spend their winters in the woods. Life there, however, is tame compared with what it is when the drives commence. Rafting is one of the exciting experiences of lumbering. How old raftsmen can dilate on the adventures of the river drives, as they have made their way through these waters in all sorts of ways and under, at times, most exciting conditions. One moment sailing along placidly and again plunging through a dam and over an apron into the pool beneath. Then again logs are stranded, a jam is formed, and the energy and ingenuity of the drivers are fully taxed. "It depends a good deal," said Mr. Gordon, of McArthur Bros., who was giving the writer some of his experiences a few days ago, "where the rafts are making for. I can remember rafting twenty-five or thirty years ago. It was something different then to what it is now with the progress that has been made in this line of business, as in every other. Then, it is one thing to raft logs across the Georgian Bay, and it is something quite different to take a raft of logs down the St. Lawrence. I can tell you excitement runs high at times, when the rafts are running the rapids of this great Canadian river. We speak of business men being keen-witted, but all the keenness, and all the wit, that the cleverest can summon up is required when this work is engaged in. Losses of life too often occur, but the risks seem inevitable to the work. Fancy yourself strapped to the rafts, as the men have to be when going through certain portions of the rapids. The ordinary traveller knows what it is to run the St. Lawrence rapids in one of our lake steamers, and what danger is undertaken, of the excitement that occurs, when the steamer, may, perchance, strike the rocks." I had gone down the St. Lawrence on the Corinthian a few years ago when that vessel met with a mishap as she was running the Lachine rapids. There was great excitement on board, but from what Mr. Gordon has just stated, one can readily understand that that was child's play along side of the excitement and risk attending these raftsmen, when their improvised vessel of logs should chance to strike the rocks of the St. Lawrence. As one has said: "The dexterity and agility of drivers are astonishing. Upon logs of all sizes, bobbing, floating and rolling, they walk, stand and ride. The bucking broncho is a rocking-horse compared to these sawlogs with their treacherous antics. Tests of skill are at times attempted between expert drivers by two of them getting upon one log and turning it rapidly by turns, as a squirrel turns the wheel in his cage, when one contestant will attempt to check it and thus throw the other driver into the water. Chill and frequent are the baths these men daily receive, often spending the entire day in the water that is fresh from a snowbank."

* * * *

The address delivered recently by Hon. J. K. Ward, of Montreal, and which the LUMBERMAN is publishing in full this month, is very suggestive of the changes that have taken place in the past few decades in methods of lumbering. Mr. Ward is able to speak as one who knows all about it, for fifty years ago he commenced at the lowest rung of the ladder and has with intelligent interest, and much personal success, watched the progress of this great industry from that time forward. This matter was further brought under my notice as I talked a few days ago with Mr. McBurney, of McBurney & Laycock, operating a mill at Callender, Ont., and cutting this season for Robert Thomson & Co., for the British market. Mr. McBurney a number of years ago carried on a saw mill business at Simcoe, which is still his home. There is no longer, however, any opportunity to engage in lumbering in Simcoe, for the forests there-abouts have long since been depleted of their timbers. Mr. McBurney remarked to me, that with a reasonable competence in hand, it might have been the wisest thing for him to have left lumbering alone, and enjoyed the evening of his days in his old home. But he is a man of too great energy to withdraw for any length of time from the activities of business, and so he keeps at it, sometimes in one direction and again in another. I am not going to play the preacher at this point in my talk, but the fact that the timbers in the district of Simcoe are depleted, and that this place is only one of scores of others, points the old, but ever necessary lesson of the need of taking greater care of the forest resources of the Dominion. Mr McBurney lumbered a good part of the winter with Mr. Laycock, who by the way is a well-known Buffalo lumberman, in the vicinity of northern Michigan and Wisconsin, where they were cutting timber for the Flatt Bros., of Hamilton. Mr. McBurney thinks that this firm will rank among the largest shippers this season of lumber for the British markets. As with the lumber got out by McArthur Bros., Sharpless Bros., and others, it is forwarded to Quebec, and from there exported to Great Britain. I was interested in what Mr. McBurney had to tell of the changed conditions of lumbering in northern Michigan and Wisconsin. Lumbermen no longer plant their mills in the territory in which the lumber is cut, but bring the logs a distance of from 300 to 500 miles to mills located in other parts of the country. This change has come about, through the enterprise of the railroads in shaping their equipment and rates to meet this particular line of trade. It is a sight worth seeing, said Mr. McBurney, to watch the immense car loads of logs that go out from that district daily, to be sawn at some of the great mills of the country hundreds of miles away. I questioned whether this was a paying method of lumbering, and was informed that mill men could bring the logs even 500 miles, lay them down at their mill door, and the cost would be less than that of operating mills in the locality where the logs were cut. This experience is just another instance of the large place that steam occupies in the business economy of the present day. Mr. Meaney, Toronto manager of Robert Thomson & Co., was with us at the time of conversation and remarked, that at one time his firm endeavored to make an arrangement with the Grand Trunk Railway to carry logs from the northern lumber districts to Hamilton, where they would have been willing to have established a large saw mill and woodworking business. But nothing satisfactory could be arrived at with the Grand Trunk.

* * * *

One of the hard problems in the Canadian lumber business is that of securing anything like uniformity of prices. This matter came under my notice a few days ago by the remark of a country mill man, that he was unable to interpret the LUMBERMAN'S quotations for hardwoods in the light of his experience in endeavoring to sell certain classes of woods in the Toronto market. He had been unable to secure within two or three dollars of the quoted price in Toronto for certain woods. This is to be remembered that the prices quoted on the fourth page of the WEEKLY LUMBERMAN are those at which wholesalers are selling their lumber in Toronto. This lumber is brought from the mills of the province at a cost for freight and handling. On top of this must be added the wholesalers profit. I do not know that a mill man could expect to secure that price, should he come to a dealer in Toronto and offer the output of his mill. He is in the position of the manufacturer of woollen goods who comes to the wholesaler and offers to sell him goods at certain prices. The wholesaler makes his purchase. When he comes to sell to the retailer, his profit must necessarily be added to the cost. This will account in part, at least, for the apparent discrepancy in prices, to which my friend the mill man referred. A broader interpretation, however, must be placed on all current price lists of lumber. They must be read alongside of the comments on the market conditions that find a place every week in all lumber journals, and that prove a leading feature of the WEEKLY LUMBERMAN. The situation in certain lines will change sometimes for the week. A few weeks ago, maple, which had been demanding a certain price, became slow, and at that time could have been bought a little less than the current market quotations, and yet it would not have been fair to say that the current market quotations were out. Within a month after this date, building operations had become more active in certain large centers, and maple was going into consumption more largely and the price again stiffened. This also is to be remembered, and it suggests another trouble the trade has to contend against, that ash, or elm, or basswood, may be quoted mill run at a certain price. But mill run will differ widely in certain mills. I may go to a mill man and get his figures for basswood, mill run. I examine his stock and find that it runs less to 1sts and 2nds than the stock of his neighbor. Or it may be that a larger percentage of the stock of one man will be off in color as compared with that of another. So it is through every class of wood. It is impossible to draw these distinctions in prices in a printed price list. They must always be flexible enough to permit of changes in the local conditions and situation. I talked this matter over only a week ago with a lumberman whose operations run into large figures, and who can talk from the standpoint of a mill man, as well as a wholesaler. "What we have to contend against here," said he, "is the imperfect character of inspection. We all go paddling our own canoe; fix our own standard of what constitutes certain grades, and as long as we can dispose of the stuff in this way we are satisfied, seemingly forgetting that the most successful business can always be done when the trade are something nearly of a unit in methods of handling their business." But to repeat, let current lumber prices of the WEEKLY LUMBERMAN be read alongside with the comments on the week's trade and the remarks and quotations that are given in Stocks and Prices column, and how closely to the mark the editor shapes these things will at once be seen.

CANADA LUMBERMAN

WEEKLY EDITION

The Lumberman Monthly Edition, 20 pages } $1.00 PER YEAR { The Lumberman Weekly Edition, every Wednesday

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NEW YORK LIFE INSURANCE BUILDING, MONTREAL.

Weekly Lumberman, published every Wednesday Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

Lumberman, Monthly. A 20-page journal, discussing fully and impartially subjects pertinent to the lumber and wood-working industries. Contains interviews with prominent members of the trade, and character sketches and portraits of leading lumbermen. Its special articles on technical and mechanical subjects are especially valuable to saw mill and planing mill men and manufacturers of lumber products.

☞ Subscription price for the two editions for one year, $1.00.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type, and no display is allowed beyond the head line. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue.

FOR SALE, 2 CAR CHERRY, DRY, FIRSTS and seconds, at $52.00 per M ft.
J. KAUFMAN, Berlin, Ont.

FOR SALE.

DOUBLE FRICTION FEED, CONSISTING of spools, cable shafting, &c., complete, made by Wm. Hamilton Mfg. Co., of Peterborough; used part of one season, good as new. Write for particulars.
J. W. HOWRY & SONS, Fenelon Falls.

NOTICE.

TENDERS WILL BE RECEIVED AT THIS Department up to and including the 4th day of June next for the right to cut pine trees over seven inches in diameter on the stump, on that part of the township of Vankoughnet, in the District of Algoma, lying outside the boundaries of the Batchewaung Indian Reserve, except the following part sections S E 1-4 of section 11, S W 1-4, section 12, S W 1-4, section 14 and the S E 1-4 of section 25.

Parties making tender will state the amount they are prepared to pay as bonus, or for the right to receive a license to cut the pine trees over seven inches in diameter on the stump, which, when cut, will be subject to the following rates of dues: on square or waney timber $25 per thousand feet cubic, on sawlogs $1.25 per thousand feet, board measure.

No pine trees of a less diameter than seven inches on the stump shall be cut.

The department reserves all timber except the pine together with the right to dispose of such other timber at any time, and purchasers of the other timber will have the right to make roads and to do whatever may be necessary in the premises to cut and remove the same.

Terms of payment 1-2 cash, balance in 3 and 6 months.

Notes for balance to be endorsed by parties satisfactory to the department. A marked cheque for 5% of the offer must accompany each tender.

For further particulars and conditions of sale apply to P. C. Campbell, Esq., Crown Timber Agent, Sault Ste. Marie, or to the Department of Crown Lands, Toronto.

A. S. HARDY,
Commissioner of Crown Lands.

Department of Crown Lands
Toronto, April 25th, 1895.

WANTED.

PONY PLANER, SECOND-HAND, TO PLANE six inches; state price and particulars.
FRASER & CO., Rear 103 Niagara St.

WANTED.

A POSITION AS LUMBER SALESMAN FOR a Pine Mill. Have one of the best trade connections west of Toronto, also east. Apply
P O. BOX 537, TORONTO.

BUYER WANTED (HUSTLER)

INTELLIGENT, EXPERIENCED BUYER and Inspector, for Canadian Hardwoods. State salary expected, and best central points of location. Must be highly recommended, as quick, honest, smart worker.
YOUNG & KEELER CO.,
54 South St., New York.

WANTED

UNLIMITED QUANTITIES OF ALL KINDS of Hardwood Piece Stock, Kiln dried if possible, from 2 inches and up wide, 18 inches and up long, 1 inch thick, either planed or rough. Splendid chance to work up your lower grades. Also plain oak slats which may be cut from slabs, green or dry. Apply for specifications. Can use logs, planks, boards and squares. Give full particulars of stock on hand, price and freight rates to New York. Address, P. O. Box 2144, New York City.

FOR SALE (2ND HAND)

4 HORIZONTAL TUBULAR BOILERS, 48 IN. diameter, 13ft. 6in. long and 3in. tubes; 1 Horizontal Tubular Boiler, 35in. diameter, 8ft. long and 3in. tubes; 1 Boiler, 45in. diameter, 24 ft. 6in. long and five 10in. flues in it; 1 Right Hand Horizontal Engine, 26 in. bore, 40in. stroke, 15ft. fly-wheel, 10in. crank shaft; 1 Right Hand Engine, 15in. bore, 28in. stroke; 1 Left Hand Engine, 14in. bore, 24in. stroke; 1 Left Hand Engine, 12in. bore, 12in. stroke; 1 Vertical Engine, plate bed, 12in. bore 14in. stroke, link motion—suitable for steamboat; 1 Westinghouse Engine, cylinder, 7in. bore, 9in. stroke; 4 Box Factory Cross-Cut Saw Tables—new; 1 Double Header Shingle Machine; 2nd hand Wheels, Axles, Boxes, &c., for lumber yard cars.
THE RATHBUN CO.,
Deseronto, Ont.

FOR SALE

STEAM SAW MILL PLANT, CONSISTING of 70 H.P. Engine and Boiler, with Smoke-Stack, Grate Bars and all connections and fittings complete; Heavy Circular Saw Rig, Slab Saw Rig, Bull Wheel and Chain, Waterous Automatic Shingle Machine and Jointer, Shafting, Pulleys and Belts—everything guaranteed in good running order, and cheaper than any other in Canada. Must be sold. Also for quick sale, one Gang Lath Machine, good as new, at half price; and one Drag Saw Rig, fitted for Mill Work, has friction feed, at half price.
F. J. DRAKE,
Belleville.

BUSINESS DIFFICULTIES AND CHANGES.

Congdon Bros., Grafton, N. S., have lost timber to the value of over a thousand dollars by forest fires.

W. F. Young and S. Farrell have opened a lumber yard at Neepawa, Man., and J. McMurchy, at Arden, Man.

800,000 feet of lumber of the Golden Lumber Co., Golden, B. C., was destroyed by fire a week ago. Fully insured.

An Ottawa despatch says that fire has totally consumed the saw mill of Powell & Kelltie, at McCool Siding. Loss about $100,000.

A fire in the planing mill of J. A. DesRivieres, Ottawa, Ont., a few days ago damaged building and machinery to the amount of $1,300; fully insured.

Subscribe for the CANADA LUMBERMAN, weekly and monthly editions, $1.00.

CURRENT TRADE CONDITIONS.

ONTARIO.

BUSINESS of the week has been disturbed by the holiday, in the Queen's Birthday. We do not know that lumbermen grumble at this, but it is a fact, that the thread of business is always broken by seasons, however brief, of this kind. That these conditions are offset by advantages of more than a counterbalancing nature, needs hardly to be remarked, though this is not the place to discuss that phase of the question. Aside from this fact, the week's record is of an improving nature. There is a better movement of stocks, whether we glance at the home market, or to the export. Building operations are active in Toronto, and also in many other cities and towns throughout the province. These are helping to bring a certain measure of business to lumber, for lumber is going into consumption, to greater or lesser extent, by these operations. Canadian lumbermen, who have within the past week or two returned from business trips in the eastern states, report rather more ease in securing orders, though none can boast of any large transactions. Whatever another season may bring forth, it seems quite certain that buying this year will be on a careful scale. As general trade revives and lumber is wanted, orders will be placed for stock, but he will be a bold man who will go in for the heavy purchases, that a few years ago was the rule with even those who considered themselves shrewd and careful in their business methods. Prices are stationary. Whether the future will tell of an advance, or decline, we shall not pretend to say here. Various circumstances enter into the situation, and some of these we have taken occasion to discuss in the editorial pages of the monthly edition of the LUMBERMAN, that goes into readers hands with this issue of the WEEKLY.

QUEBEC AND NEW BRUNSWICK.

Shipments of lumber from Montreal to Quebec ports are multiplying. Shippers of stocks for the United Kingdom at this end are well pleased with the manner in which the season has opened, and unless some labor troubles enter into the situation in Great Britain, even with a report of a depressed market there, the stocks of white pine that will go from this side of the Atlantic for the present season, will run into good size. The loading of the Cynthiana, at Montreal, with lumber for Manchester direct, is being watched with interest by shippers on this side of the water, and also at point of destination. It is one of the important results of the building of the Manchester ship canal. Shipments of lumber at New Brunswick ports continue to increase in volume. Good results are coming from those who have been cultivating the United States market. Spruce is cutting an important figure in shipments this year, and it looks as though the business of the year will be augmented in a profitable manner by the advance in prices that has taken place this season, a result of the organization of the Northeastern Lumbermen's Association. In contrast with conditions in some other parts of the Dominion lumbermen of New Brunswick, are congratulating themselves on the splendid manner in which the drives are coming along this season.

BRITISH COLUMBIA.

It is to be said of lumber trade in British Columbia that it continues active, and whilst no boom is on, there is reason for the trade feeling satisfied with the result of business so far in the present year. Exports abroad and shipments to the United States are in good number and size, whilst local trade in the province and the Northwest territories is of decent proportions.

UNITED STATES.

The reported injury done to the growing wheat in different States of the Union, has had a tendency to create depressing fears among lumbermen, as in commercial circles elsewhere. Most States, and some in particular, were building on a good harvest to bring back trade to its natural healthfulness. It is a question, however, whether as much injury has been done to the crops as was generally reported. Usually the first reports received of this kind are the worst. Shipments of the week are rather better than those of preceding weeks in the month, and will round up a fair month's trade for May. Purchases of pine are, of course, small in volume, but there are more of them than has been the case lately. Whilst this careful method of buying is discouraging to those who have large quantities of lumber to sell, and is in decided contrast to conditions in other years, yet it is not an unhappy state of affairs. It tells of a measure of carefulness that will go a long way to restore confidence and invite larger and better trade in the future. Late rains have removed some of the anxiety touching the log drives, and in Wisconsin and other districts, where a good deal of pine has been cut, and it was feared the logs would be hung up, it is now believed that these will come along without further hindrance. This means, of course, a considerable pine output in these districts, something that may not help prices. In eastern markets, where Canadian lumbermen are

interested, the volume of trade is swelling some, and more encouragement is held out to those who are on the road aiming by all the arts in their power to drum up business.

FOREIGN.

Nothing of a particularly cheerful character enters into the reports of the lumber trade in the United Kingdom of late. We do not know that British lumbermen are naturally pessimists. But for some reason or other they do not take on any large spirit of the enthusiast lately. The most we hear is of over-stocked markets, few transactions, and declining prices. Denny, Mott & Dickson, in their May wood circular, say of Canadian timber, that the demand for yellow pine, oak and elm is quiet, and the present stocks promise to hold until the new season's supplies come to hand. The Timber Trades Journal, referring to a recent sale of Churchill & Sim's, remarked that very little fresh knowledge of the state of the market could be added from its proceedings, only that if any people thought, now had come the time for good buying, they were very careful not to let it be seen. Imports at Liverpool are of a meagre character, and the Glasgow market has hardly held as strong a position as formerly. In view, however, of the approaching Quebec import season, the low point at which stocks of the leading descriptions are getting reduced, is considered satisfactory, and holders, particularly of prime waney, and square pine, are firm as to prices. Some life is thought to be shown in Australian trade, indicated by an improved demand for boats, though at varying rates. West India trade does not show up very encouragingly, nor is there much strength in business in South America.

HARDWOODS.

The demand for quartered sawed oak, which has been strong and difficult to meet, in United States markets, keeps up. With an improvement in building trades, there is quite a large demand for maple flooring, and prices keep firm. Elm and basswood are being sought for by furniture manufacturers, whilst the call for birch and ash is very fair. Altogether the week in hardwoods has well maintained the strength that this branch of business has taken on of late.

STOCKS AND PRICES.

CANADA.

The ss. Buenos Ayrean has sailed for Glasgow, with 15,322 deals and ends, shipped by J. Burstall & Co.

Lumber shipments from St. John, N. B., for the past week total about 4,500,000 feet of deals for British ports, and 3,000,000 feet of long lumber, 3,200,000 lath, 4,400,000 shingles for United States ports.

The Playfair mill at Midland, Ont., is about ready to commence operations, and is under contract to cut 250,000,000 feet of logs for the Arthur Hill Co., of Saginaw, Mich., at the rate of 25,000,000 feet annually.

The Royal City Mills, New Westminster, B. C., is filling an order for dredging timbers for Quebec. The sticks will be 50 feet long and 3 feet square, and the order will fill a double car. Each stick will be free from knots, cracks, or flaws of any kind, and all will be cut from the finest Douglas fir logs, and will be the largest dimensions ever shipped from British Columbia.

Of a recent sale conducted by Foy, Morgan & Co., London, Eng., the Timber Trades Journal reports, that Colonial goods showed up very dull, and the languid bidding at the commencement was largely due to the large assortment of 2, 1¼ and 1½ inch pine offered without reserve, and realized very indifferent prices. There was, however, rather more disposition on the part of buyers to acquire 3x9 deals than has lately been noticeable, but the demand had very little strength in it, certainly nothing in the price realized to lead to hopes of any permanent improvement. Best Quebec 13 ft. broad pine did not make the f. o. b. cost.

Among the exports from St. John, N. B., for the week are: Per bark Muncaster Castle, for Liverpool, Eng., by W. M. Mackay, 1,405,144 deals and battens, 48,761 ends, 97 scantling; per sch. Parlee, for Boston, by Stetson, Cutler & Co., 404,000 laths, 800,000 shingles; per sch. Cerdic, for Beverly, Mass., by Miller & Woodman, 1,374,000 shingles; per sch. Reporter, for New York, by Miller & Woodman, 157,197 deals; per sch. Ina, for Vineyard Haven, Mass., by Stetson, Cutler & Co., 153,840 boards; per sch. Walter Miller, for Vineyard Haven, Mass., by J. R. Warner & Co., 34,027 scantling, 123,025 planks, 27,123 deals; per sch. Beaver, for New York, by Miller & Woodman, 2.85,867 deals; per sch. Flash, for Lynn, Mass., by Stetson, Cutler & Co., 134,776 boards; per sch. Vado, for Newport, R. I., by James E. Warner & Co., 551,200 laths.

UNITED STATES.

Log run at Saginaw, Mich., ranges from $14 to $18, box lumber $10 to $10.50 and Norway $8 to $8.50.

The sale of 1,000,000 feet of hardwood lumber at Alpena, largely ash, is reported, but no price given out.

During the past week lumber shipments at Alpena, Mich., included 3,760,000 feet of lumber, 100,000 shingles, 110,000 cedar posts.

C. K. Eddy & Sons, of Saginaw, have bought 6,000,000 feet of logs of Whitney & Batchelor, and have about 10,000,000 coming from Canada.

Log run, Canada stock, is reported to have sold at Michigan as low as $14, and considerable sales at $16 and $17, where choice logs brought $18.

About 50,000,000 feet of lumber have been brought from Lake Superior points by Saginaw lumbermen, and planing mill and box shook manufacturers.

A white pine operator of experience is quoted as saying that white pine and Norway stuff must hereafter be sold at a price which will allow but little, if any, more than $1 a thousand for the stumpage.

THE LOG DRIVES.

W. H. Murray, one of the best informed lumbermen of St. John, N. B. says, that the drives are coming along in great shape this year; that all the logs are out and will come into the booms.

A boom of pulp and other timber, containing about 1,000,000 feet, broke loose a few days ago, as it was being towed down to the Sault Ste. Marie Paper and Pulp Mill, at Sault Ste. Marie, Ont., and run on to the rapids. A large portion of the logs were caught by two tugs and placed in the lower bay. But the broken boom hung on to the rocks in the rapids. It is feared that a number of the logs got away past recovery.

William Mason & Sons, of Ottawa, say, that although many men engaged in the lumber industry, were experiencing great difficulties, owing to the lowness of water, they were more fortunate, as their cut was adjacent to the principal streams, namely, the Madawaska, Coulonge and Ottawa rivers, and consequently they did not have to drive the small creeks any distance.

As the season advances, says the Timberman, of Chicago, it is evident that the anticipated shortage in the log supply for the year will be realized. Unless the June rains should furnish an extraordinary volume of water to the white pine country, there will be a considerable percentage of the winter's log crop hung up. The Wisconsin valley is about the only section where the drives are making good progress.

A million and a quarter of logs is the quota of the St. Maurice river this year. The St. Maurice waters are very high, and the booms will not be spread for two or three weeks yet. At the Grandes Piles, the water was just at a height so that the ice rose to the top of the pins and took away the wire poles, which had to be replaced, but the rumor that 40,000 logs had broken loose is false, and all the logs are being kept back.

An unusually large quantity of lumber was cut between Grand Falls and Fredericton, N. B. last winter. These logs are being delivered at Springhill in large quantities.

There were over 30,000,000 feet of logs in the southwest Miramichi booms, New Brunswick, a week ago, with the water still very high.

In the French River district of Ontario, the streams are getting low, and the need of rain is much felt in order to get the logs out. Michigan towing companies are rapidly completing arrangements for the season's work.

A recent snow storm and heavy rains have removed the fears that the drive in Rainy river, Mich., would be hung up. The McArthurs have 5,000,000 feet to come out, and M. Chandler has a considerable quantity of logs and board pine in the stream.

THE SITUATION.

REFLECTED THROUGH CORRESPONDENCE OF "WEEKLY LUMBERMAN."

P. B. Lantz, New Ross, N. B.: "The Gold Mill River Co. is starting a drive of 3,000,000 feet. All the other mills are actively engaged in cutting spruce boards for home markets and West Indies. I have cut 300,000 spruce boards and scantlings, and am cutting custom stocks for 20,000 fish barrels, used mostly in Lunenburg county. We are cutting spruce shingles from $1 to $1.50 per thousand. If the drought continues, as it has the last few weeks, our water supply will soon go out on small rivers leaving half the timber uncut. Price of spruce boards are from $7.50 to $8; scantling and dimensions from $8.50 to $10.50; spruce staves from $5.50 to $6.50."

W. S. Greensides, Mount Forest, Ont.: "There is a fair movement of stocks, comprising principally R elm, basswood and birch, though I cannot report any sales in this district of very large volume. Stocks of the better class are not large. Prices are firm. I have sold all my stocks except the maple."

W. J. Sheppard, Waubaushene, Ont.: "A fair trade is doing, chiefly in dimension stuff and common. My impression is, that stocks in this locality are not large. Generally speaking, I do not think stocks are heavy anywhere. What is held is mainly good grades. Prices are firm, and will likely advance on some lines."

A. McPherson & Co., Longford Mills, Ont.: "Only a light movement of stocks, basswood and birch being in best demand. Orders are small. Stocks are large in this locality, and mostly good and above cull lumber. Prices are firm. There is a large cut of hemlock in this district, and there will likely be an over production."

William Lees, Fallbrook, Ont.: "There is none of the old cut on had in this district. Stocks that will be mostly held here are hemlocks, ash and basswood. We have very little pine. Prices are holding about as usual. There has been more than the usual amount of shingle cedar taken out in this district."

Rhodes, Curry & Co., Amherst, N. S.: "A fair movement of stocks is to be noted of business of late. Spruce deals and dimension timber are in considerable demand. Price for deals for Europe are bringing about $9, and dimension for United States $10. Mostly all deals in this section, and stocks pretty well sold. Prices for deals are steady; dimension stuff and laths advancing."

Sheppard & Morse Lumber Co., Burlington, Vt.: "Cannot say that there is any great activity in business. Movement of stock is small and spasmodic. Lumber in most demand at present time is spruce, southern pine, and some white pine. Buyers are very cautious, and only filling actual needs. Stocks are ample to meet all trade offering. Prices hold firm, as they could not go lower without loss. Prospects are brightening, and general confidence being restored."

Eastman Lumber Co., Eastman, Que.: "An active movement of stocks is to be noted in this district, consisting chiefly of hemlock, 12 feet, and spruce matchings. As far as we know, stocks are light and prices firm."

John Harrison, Owen Sound, Ont.: "A fair movement of stocks in pine, basswood and birch. A recent sale includes 500,000 ft. of pine. Stocks here are about 25 per cent. larger than last year. Prices are firm. We have had a good winter's business."

H. Cargill & Son, Cargill, Ont.: "Cannot say that there is much movement of stocks. What little is in demand is hemlock, and pine bill stuff. Last season's stocks are well depleted. Good lumber all sold out; a fair stock of common. Prices remain stationary."

SHIPPING MATTERS.

Barque Rosa will leave Boston for St. John, N. B., to load deals.

Two Canadian boats are at Ashland, Wis., loading waney board pine for Montreal.

The bark Ontario is chartered to load lumber, Yarmouth to Buenos Ayres, at or about $6.75.

SS. Niceto has been fixed to load deals at St. John, N. B., for Liverpool, Eng., at 35s.

Barque Axel arrived from St. John, a week ago from Boston. She had on board 77,576 feet of lumber, and will finish her cargo at St. John for Buenos Ayres.

The British barque Duke of Argyle, has been chartered to load lumber at Hastings Mill, Vancouver, B, C., for Adelaide, N. S. W., at £1 19s 9d.

Stocks of Quebec deals are now commencing to reach the Liverpool market in fair quantity.

The ss. Challerton, Euskara and other vessels, are loading deals at St. John, N. B., for Liverpool and other English ports.

A Liverpool report says, that the steamer Architect has arrived from St. John, N. B., with a large cargo of spruce for Messrs. Lumley, Lloyd & Co., from W. M. Mackay, which appears to be going away with celerity. The spruce market is, perhaps, a little stiffer than it has been, owing to the scarcity of tonnage available for the lower gulf ports.

LUMBER FREIGHT RATES.

LUMBER freight rates for pine on the Grand Trunk Railway have been made a fixture, as below. Of any intended change due notice will be given lumbermen.

General instructions in shipping by Grand Trunk are embodied in these words in the tariff schedule: On lumber in carloads, minimum weight, 30,000 lbs. per car, unless the marked capacity of the car be less, in which case the marked capacity (but not less than 24,000 lbs.) will be charged, and must not be exceeded. Should it be impracticable to load certain descriptions of light lumber up to 30,000 lbs. to the car, then the actual weight only will be charged for, but not less than 24,000 lbs. The rates on lumber in the tariff will not be higher from an intermediate point on the straight run than from the first named point beyond, to the same destination. For instance, the rates from Tara or Hepworth to Guelph, Brampton, Weston or Toronto, would not be higher than the specific rates named from Wiarton to the same points. The rates from Cargill and Southampton to points east of Listowel and south and west of Stratford will be the same as from Kincardine, but in no case are higher rates to be charged than as per mileage table published on page 9 of tariff.

Rates from leading lumber points on pine and other softwood lumber, shingles, etc., are as follows: From Glencairn, Creemore, Aurora, Barrie and other points in group B to Toronto, 6½c.; Collingwood, Penetang, Coldwater, Waubaushene, Sturgeon Bay, Victoria Harbor, Midland, Fenelon Falls, Longford, Gravenhurst and other points in group C, to Toronto, 6½c.; Bracebridge to Toronto 7c.; Utterson, Huntsville, Navor, Emsdale, Katrine to Toronto, 7½c.; Burk's Falls, Berriedale and Sundridge, to Toronto, 8c.; South River, Powassen and Callender to Toronto, 9c.; Nipissing Junction and North Bay, 10c. Rate from Goderich, Kincardine and Wiarton to Toronto, 6½c. These rates are per 100 lbs. Rates from Toronto east to Belleville are 7½c. per 100 lbs.; to Deseronto, 9c.; to Brockville and Prescott, 10c.; to Montreal and Ottawa, 11c. The

rates on hardwoods average about from 1c. to 2c. per 100 lbs. higher than on softwoods. For rates on railway ties, mahogany, rosewood, walnut, cherry, and other valuable woods, application must be made to the district freight agent.

On the Canadian Pacific the rates on pine and softwoods may be illustrated as follows: Cache Bay, North Bay, Sturgeon Falls and Warren, to Toronto, 10c; Algoma, Cook's Mills, Massey, Spanish River and Whitefish to Toronto, 13c.; Ottawa to Toronto, 10c From Ottawa, Hull, Aylmer and Duchesne Mills to station on the Lake Erie and Detroit River, Erie and Huron, Toronto, Hamilton and Buffalo, and Michigan Central Railways, the rate is 14½c. per 100 lbs. Regulations apply as to minimum size of carload of 30,000 lbs., and an advanced rate is charged for hardwoods.

Lumber freight rates on the Canada Atlantic Railway are as follows: Ottawa to Toronto, 10 cents per 100 lbs.; Ottawa to Oswego, $1.90 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Montreal, $1.00 per M ft., (3,000 lbs. and under per M ft.); Arnprior to Montreal, $1.50 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Quebec, $2.00 per M ft.; Arnprior to Quebec, $2.50 per M ft.; Ottawa to Buffalo, 12 cents per 100 lbs.; Ottawa to Port Huron and Detroit, 14 cents per 100 lbs. Ottawa to New York, five carloads or over $3.00 per M ft.; Arnprior to New York, $3.50 per M ft.; Ottawa to Boston, Portland and common points, local 15 cents; exports 13c. per 100 lbs.; Arnprior to Boston, Portland and common points, local 17 cents; export 15 cents per 100 lbs.; Ottawa to Burlington, 6 cents per 100 lbs.; Ottawa to Albany, 10 cents per 100 lbs.; Arnprior to Albany, 12 cents per 100 lbs.; Ottawa to St. John, N. B. and common points, 20 cents per 100 lbs.; Ottawa to Halifax, N. S. and common points, 22½ cents per 100 lbs Minimum carload weight for shipment of lumber, lath, shingles, etc., is 30,000 lbs., and rates quoted above are in cents per 100 lbs., except when quoted per M ft. the minimum carload charged is 10 M ft., lumber not exceeding 300 lbs. to the M feet. Ottawa rates apply on shipments from Rockland and Hawkesbury.

MODIFICATION OF HARDWOOD RATES.

THE Grand Trunk Railway and Canadian Pacific have made the rates on hardwoods from certain points to Toronto and Hamilton as follows. The regulations are over the signature of Mr. John Earls, W.D.F.A., of the G. T. R., and given in reply to a letter from Toronto hardwood men:

"After careful consideration we have come to the conclusion that, on and after Jan. 1st, 1895, a modification will be made in the present arrangements for hardwood lumber, to the effect that the rate will be 7½c. per 100 lbs. from our Northern and Northwestern branches to Toronto and Hamilton. This rate, however, will not apply from main line points and the straight run between Toronto, Sarnia and Windsor; also that so far as rates on common lumber to points like Guelph, Galt, London, Woodstock, Ingersoll, etc., from all lumber shipping stations the rate will be the same on hardwood as on pine." On the old principle, we suppose, that half the loaf is better than none, hardwood men have something, possibly, to be thankful for, though there is no good reason why the rates generally on hardwood should not be as low as on pine. It is understood that the C. P. R. rate will be made uniform at 7½c. from same points.

CEDAR—ORDERS PROMPTLY FILLED FOR telegraph, telephone or electric poles, ties, posts, cedar shingles and cedar light wood; also hemlock dimension lumber—J. E. MURPHY, Hepworth Station.

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Having Brown Ash 12, 14 and 16 ft. firsts and seconds, inch Bass firsts and seconds 12 feet, or any other Hardwood Lumber, can sell same for cash by addressing

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Bills cut to order.
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Spruce Lath, Spruce Shingles, Spruce and Pine Clapboards, Birch Flooring, Pine and Spruce Lumber, also Hemlock Bark.

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Can. Office and School Furniture Co., Preston, Ont.
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Machine Knives, Peter Hay, Galt, Ont.
Penberthy Injector Co., Detroit, Mich.
Pike Poles, John Adamson, Toronto, Ont.
Silver Solder, P. W. Ellis & Co., Toronto.

Business Wisdom: "Do as I have done—persevere." George Stephenson.

The Price Lists that here follow will be revised each week up to the hour of going to press, and in connection with these we would draw attention to the week's trade review under the heading of "Current Trade Conditions" on the first page, immediately followed with matter marked "Stocks and Prices," which presents the lumber situation of the week, together with a record of the week's sales and transactions.

PRICES CURRENT.

TORONTO, ONT.

TORONTO, May 29, 1895.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		2 30
XX shingles 16 inch		1 40
Lath, No. 1		2 00
Lath No. 2	1 80	1 85

HARDWOODS—PER M. FEET CAR LOTS.

Quality, 1s and 2s unless otherwise specified.

Ash, white, 1 to 2 in.	$26 00	$28 00	Cherry	1 " 1½	50 00	60 00
" " 2½ to 4	30 00	32 00	"	2 " 4	60 00	55 00
Ash, black, 1sts and 2nds, 1 to 1½ in	21 00	23 00	Elm, soft	1 to 1½	$14 00	$15 00
Ash, black, 1sts and 2nds, 2 to 4 in	23 00	25 00	" "	2 " 3	15 00	16 00
Ash, M. R., 1 " 1½	18 00	20 00	" rock	1 " 1¼	16 00	18 00
" " 2 " 4	20 00	24 00	" "	1½ " 3	20 00	22 00
Birch, 1 " 1½	24 00	26 00	Hickory	1½ " 2	28 00	30 00
" 2 " 4	26 00	29 00	Maple	1 " 1½	16 00	18 00
" sqrs. 4x4 " 8x8	28 00	32 00	"	2 " 4	18 00	20 00
Basswood 1 " 1¼	16 00	18 00	Oak, red, p'n	1 " 1½	28 00	30 00
" 1½ " 2	19 00	19 00	" "	2 " 4	30 00	32 00
" m. r. 1 " 1¼	14 00	16 00	" white	1 " 1½	28 00	30 00
Butternut 1 " 1½	23 00	25 00	" "	2 " 4	30 00	35 00
" 2 " 3	25 00	28 00	" quart'd	1 " 2	48 00	52 00
Chestnut 1 "	22 00	25 00	Walnut	1 " 3	85 00	100 00
			Whitewood	1 " 2	32 00	36 00

OTTAWA, ONT.

OTTAWA, May 29, 1895.

Pine, good sidings, per M feet, b.m.	$30 00	37 00
Pine, good strips, " " "	26 00	31 00
Pine, good shorts, " " "	19 00	25 00
Pine, No. 1 dressing sidings, per M feet, b.m.	19 00	24 00
Pine, " " strips, " " "	17 00	20 00
Pine, " " shorts, " " "	15 00	17 00
Pine, 10 s.c. and better stock, " " "	16 00	18 00
Pine, 8 s.c. " " " " "	13 00	15 00
Pine, " sidings " " "	13 00	15 00
Pine, " strips " " "	11 00	13 00
Pine, " shorts " " "	9 00	11 00
Pine, box culls " " "	9 00	12 00
Pine mill culls " " "	8 00	10 00
Lath per M	1 40	1 75

QUEBEC, QUE.

QUEBEC, May 29, 1895.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	16 @	22
For fair average quality, according to average, etc., measured off.	20	26
For good and good fair average, " " " " "	25	30
For superior " " " " "	32	40
In shipping order " " " " "	36	42
Waney board, 18 to 19 inch " " " " "	36	42
Waney board, 19 to 21 inch " " " " "	38	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	45	51

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	28	32

BIRCH.

16 inch average, according to average and quality	21	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $40 to $43 for 3rd quality.
Bright spruce, according to mill specification, $40 to $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality. F.O B. batteau.

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N. Y., May 29, 1895.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in.	$47 00	50 00	No. 3, 1¼ to 2 in.	16 00	17 00
2½ and 3 in.	50 00	53 00	Shelving, No. 1, 13 in and up, 1 in.	31 00@	33 00
4 in.	54 00	56 00	Dressing, 1¼ in.	25 00	26 00
Selects, 1 in.	38 00	39 00	1¼ x 10 and 12		26 00
1¼ to 2 in.	40 00	42 00	1½ in.	24 00	25 00
2½ and 3 in.	47 00	50 00	2 in	26 50	28 00
4 in.		52 00	Mold st'ps, 1 to 2 in.	33 00	35 00
Fine common, 1 in.	35 00	37 00	Barn, No. 1, 10 and 12 in.	21 00	23 00
1¼ and 1½ in.	37 00	38 00	6 and 8 in.	20 50	22 00
2 in	34 00	35 00	No. 2, 10 and 12 in.	17 00	18 00
3 in.		45 00	No. 3, 10 and 12 in.	14 00	16 00
4 in		45 00	6 and 8 in.	13 50	15 50
Cut'g up, No. 1, 1 in.	26 00	27 00	Common, 1 in.	16 00	18 00
1¼ to 2 in.	32 00	33 00	1¼ and 1½ in.	18 00	20 00
No. 2, 1 in.	16 00	17 00	2 in	19 00	22 00
No. 2, 1¼ to 2 in	22 00	23 00			

ALBANY, N.Y.

ALBANY, N. Y., May 29, 1895.

PINE.

Uppers, 3 in. up	$50	$52	Dressing boards, narrow	$19	$21
2½ in.	50	52	West India shipping boards.	16	17
1 to 2 in.	45	48	Box boards	12	14
4 inch uppers	50	52	10-in. dressing and better	26	30
Selects, 2½ in. up	40	42	10-in. common	14	15
1 to 2 in.	36	40	12-in. dressing and better	25	32
Fine common, 2½ in. and up	38	40	Common, 1x11	14	16
1 to 2 in.	34	38	No. 1 barn, 1x12		20
No. 1 cut, 1 to 2 inch	25	35	1x10	18	21
No. 2	18	25	1x8	16	18
No. 3	17	20	No. 2 barn, 1x12	17	19
No. 1 molding, 1 to 2 in.	33	36	1x10	17	19
No. 2 molding, 1 to 2 in.	25	28	1x8	17	19
Stained saps		20	Shaky or star clear, 1 to 2 in.	19	21
Bracket plank	30	35	Dressing	16	18
Shelving boards, 12-in. up	28	30	Common	11	15

LATH.

Pine	$2	25	Spruce	$2	00

SHINGLES.

Sawed Pine, ex. XXXX	$4	25 $4 30	Bound butts, 6 x 18	$6	00 $6 15
Clear butts	3	25 3 35	Hemlock	2	15 2 30
Smooth, 6 x 18	5	40 5 50	Spruce	2	20 2 30

NEW YORK CITY.

NEW YORK, N. Y., May 29, 1895.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply, rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$28 00 @	40 00	Building orders $26 00 @ 37 00
Decking	44 00	50 00	

SPRUCE.

6 to 9 in.	13 00	14 00	10 to 12 in.	15 50	16 00
6 to 12 in.	14 50	15 50	Lath	1 85	2 00
9 to 12 in.	15 50	15 75			

SAGINAW, MICH.

SAGINAW, Mich., May 29, 1895.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$45 00	Selects, 1 in., 8 in. and up wide	$38 00
1¼, 1½ and 2 in.	45 00	1¼, 1½ and 2 in.	40 00
2½ and 3 in.	50 00	2½ and 3 in.	45 00
4 in.	55 00	4 in.	50 00

FINE COMMON.

1 in., 8 in. and up wide	33 00	2½ and 3 in., 8 in. and up wide	40 00
1¼, 1½ and 2 in.	34 00	4 in.	45 00

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	25 00	2½ and 3 in., 7 in. and up wide	35 00
1¼, 1½ and 2 in.	30 00	4 in.	38 00

STRIPS. A AND B (CLEAR AND SELECTS).

1¼ in., 4, 5 and 7 in. wide	34 00	1 in., 4, 5 and 7 in. wide	32 00
6 in. wide	36 00	6 in. wide	36 00

FINE COMMON OR C.

1¼ in., 4, 5, 6 in. wide	30 00	1 in., 6 in. wide	30 00
1 in., 4, 5 in. wide	28 00		

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24 00	1 in., 4, 5, 6 in. wide	23 00

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in.	17 00	1 in., 4, 5 and 7 in.	17 00
1 in., 6 in.	18 00	1 in., 6 in.	18 00

NO. 2 FENCING OR NO. 4 FLOORING.

1 in., 4, 5 and 7 in.	14 00	1¼ in., 4 to n.	14 00
1 in., 6 in.	14 50	No. 3 fencing, 1 in., 6 in.	13 00

SHELVING.

No. 1, 1 in., 10 in. stocks	25 00	No. 2, 1 in., 7 and 8 in. stocks	19 00
1 in., 10 in. and up wide	26 00	1 in., 10 in. stocks	21 00
1 in., 12 in. stocks	29 00	1 in., 12 in. stocks	23 00
1 in., 12 in. and up wide	30 00	1 in., 10 in. and up wide	22 00
1¼ in. 1½ and 2 in., 8 in. and up wide	29 00	1 in., 13 in. and up wide	25 00

BARN BOARDS OR STOCKS.

No. 1, 12 in.	19 50	No. 2, 9 in.	14 00
10 in.	17 50	8 and 7 in.	14 00
9 in.	17 50	No. 3, 12 in.	13 00
8 and 7 in.	17 50	10 in.	12 00
No. 2, 12 in.	16 00	9 in.	12 50
10 in.	14 00	8 in.	12 50

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$10 00	1 in., 13 in. and up wide	$12 00
1 in., 6 in. wide	11 00	1¼, 1½ and 2 in., 7 in. and up wide	12 00
1 in., 7 in. wide and up	11 00		

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9 in. wide	17 00	1 in., 10 in. and up wide	17 00
1 in., 6 in. wide	17 00	1¼, 1½ and 2 in., 8 in. and up wide	17 00

COFFIN BOARDS.

No. 1, 1 in., 13 in. and up	20 00	No. 1, mill culls	9 00
No. 2	17 00	No. 2, or red horse	7 00

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23 00	No. 2	19 00
No. 1 (nearly clear)	21 50	No. 3	16 00

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16 ft.	$ 8 50	Hemlock, 2x4 to 10, 12 to 16 feet	8 00
18 ft.	10 50	2x12	8 50
20 ft.	11 50	Add $1 to each additional 2ft. in length.	
22 and 24 ft.	12 50		

SHINGLES, 18-IN.

Fancy brands, XXXX	3 25	Standard brands. river made, XXXX	2 90
Clear Butts	2 00	Clear Butts	1 90

WHITE PINE LATH.

No. 1	1 85	No. 2	1 35
		Hemlock	1 25

LUMBERMEN'S SUPPLIES

SUGAR.	c. per lb.	
Granulated	4⅜	4½
Extra bright refined	4	4⅛
Bright Yellow	3⅞	4
Medium Yellow		3⅞
Dark Yellow	3⅜	3½
Raw		

SYRUPS AND MOLASSES. SYRUPS.	Per gallon bbls.	½ bbls.
Dark	25	30
Medium	30	35
Bright	33	40
Very Bright	50	00
Redpath's Honey		40
" " 2 gal pails		1 25
" " 3 gal pails		1 50

MOLASSES.	Per gal.	
Trinadad, in puncheons	0 32	0 35
" bbls	0 36	0 37
" ½ bbls.	0 40	0 40
New Orleans, in bbls.	0 30	0 32
Porto Rico, hdds	0 38	0 40
" barrels	0 42	0 44
" ½ barrels	0 44	0 46

RICE, ETC.	Per lb.	
Rice, Aracan	3½	3¾
" Patna,		4¾
" Japan		5
" Imperial Secta		5½
" Extra Burmah	3⅞	4
" Java Extra	6½	6¾
" Genuine Carolina	9½	10
Grand Duke	6¼	6½
Sago	4¾	5½
Tapioca	4½	5½
White Beans, per bushel		1 75

FRUITS. FOREIGN.	c. per lb.	
Currants, Provincial, bbls.	3½	4
" " ½ bbls	3⅝	4⅛
" Filiatras, bbls	4	4½
" " ½ bbls	4½	4¾
Currants, Patras, bbls	5	5½
" " ½ bbls	5¼	5¾
" " cases	5	6½
" Vostizzas, cases	6½	7½
" " ½ cases	6¾	7¾
" 5-crown Excelsior		
" (cases)	8	8½
" " ½ case	8¼	8¾
Dates, Persian, boxes	4½	5
Figs, Elemes, 10lb. boxes	10	12
" 7-crown	16	18
" Natural Figs, 28lb bxs		
Prunes, Bosnia, casks	4	4½
" " cases	5½	7
" " bags		
" Anchor C, bags		
" " E, "		
" " G&J, cases	5	5½
Raisins, Valencia, off-stalk	4¾	
Selected	5½	6

CANNED GOODS.	Per doz.	
Apples, 3's	$1 00	$1 10
" gallons	2 25	2 50
Beans, 2	0 85	0 95
Corn, 2's	0 90	0 95
" Epicure	1 15	
Peas, 2's	0 85	0 95
" Sifted Select	1 45	
Peaches, 2's	2 00	2 25
" 3's	3 00	3 25
Plums, Gr. Gages, 2's	1 85	2 00
" Lombard	1 50	1 60
" Damson Blue	1 50	1 60
Pumpkins, 3's	0 90	1 00
" gallons	2 10	2 25
Tomatoes, 3's	0 85	0 90
'Thistle' Finnan Haddies	1 35	1 40
Salmon, talls	1 25	1 35
" flats, No. 1	1 50	1 60

CANNED MEATS

(CANADIAN.)

Comp. Corn Beef 1lb cans			$1 65	$1 75	
" " 2	"	2 35	2 75		
" " 4	"	4 80	5 00		
" " 6	"	7 50	7 75		
" " 14	"	18 00	18 50		

COFFEE.

GREEN.	c. per lb	
Mocha	28	33
Old Government Java	25	35
Rio	20	22
Plantation Ceylon	29	31
Porto Rico	24	28
Guatemala	24	26
Jamaica	22	20
Maracaibo	24	24
Caffaroma, 1 and 2lb tins, asstd		33

DOMESTIC.

Apples, Dried, per lb	6	6½
" Evaporated	8	10

TOBACCO AND CIGARS.

British Consols, 4's; Twin Gold Bar, 's	59c
Ingots, rough and ready, 8's	57
Laurel, 3's	49
Brier, 7's	47
Index, 7's	44
Honeysuckle, 8's	56
Napoleon, 8's	50
Victoria 12's	47
Brunette, 12's	44
Prince of Wales, in caddies	48
" " in 40lb. boxes	48
Bright Smoking Plug Myrtle, T & B, 3's	60
Lily, 7's	47
Diamond Solace, 1's	50
Myrtle Cut Smoking, 1lb. tins	70
¼ lb. pg., 6 lb. boxes	70
oz. pg., 5 lb. boxes	70

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN].

AMONG the mills doing good work this season is that of C. & I. Prescott, Albert, which is cutting over 45,000 feet per day. In the plant is a lath machine, which for two hours one day recently manufactured one bunch per minute, which is 6,000 an hour, or at the rate of 60,000 per day. The firm think they take the cake on this work.

The mills of the province are at present very busy.

The Snowball mill at Chatham is running, giving employment to 200 men.

Gibson's new saw mill, at Blackville, will cut from 30,000 to 40,000 feet per day.

The drives are all out in the main Tobique, except McCallum & Esty's and Giberson's.

G. D. Prescott's steam mill at West River is cutting 32,000 feet of deals per day, besides boards and ends.

Stetson, Cutler & Co. employ 150 men and boys in one of their mills. They have recently added in one of their mills a Prescott band saw and edger.

Burn's portable saw mill, which was at work near Bloomfield, was destroyed by fire the early part of the month. It will be replaced at once by another mill.

A raft of 60 joints of logs, belonging to Chas. Stillwell, of Waterloo, while in tow of the tug Martello, was broken up and went ashore in a northeast gale a few days ago.

A despatch here from Mobile states that the schooner Anne E. Valentine, lumber-laden for Port Liman, dropped her anchor and went ashore in seven feet of water.

There is some talk of the erection of a large pulp mill here, in which New York capitalists are believed to be interested. But at this writing nothing definite has developed.

The shingle sawyers and bunchers, of Restigouche county, want 11c. and 14c. a thousand instead of 8c. and 11c., the rate last year. It is doubtful if employers will accede to the request.

In place of shipping by rail this year, D. F. George, of Fredericton, will ship by schooner, thus saving, so he says, about $1.50 a cord on hemlock bark, which is the particular stock he ships.

All the drives of lumber on the south branch of the Oromocto are on the rafting-grounds. There has been about double the quantity of lumber got out on these waters this season compared with last.

It is uncertain yet whether A. Cushing & Co. will rebuild their mill recently destroyed by fire. In the meantime they are having their logs cut at Flewelling's mill on the Kennebecasis, the mill to run at night for that purpose.

A log train is being run on the C. P. R. between Magaguadavic and Vanceboro, and will be continued until about the last of June. The logs which are being piled for Messrs. Murchie & Sons, of St. Stephen, are dumped into the St. Croix at Vanceboro. About 40 car loads are carried from Magaguadavic every day.

Newcastle is the centre of an extensive lumber business this season. W. A. Hickson's saw mill has been running since the first of the month and employs about 150 hands, and cuts about 9,000,000 ft. of spruce lumber, 1,000,000 shingles and 4,000,000 laths. Messrs. D. & J. Ritchie's lumber mill is also in active operation. The mill employs 200 men and cuts about 14,000,000 of spruce lumber, 7,000,000 lath, 2,000,000 pilings annually.

ST. JOHN, N. B., May 25, 1895.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

PATIENCE is a virtue which needs to be freely exercised in the lumber business these days. This has not yet brought to the lumbermen of the Saginaw Valley that share of trade which they had reason to hope for in the month of May. Trade has improved over April, but falls short of what had been anticipated. Firms who have given the matter thought say that the volume of trade will fall fully 25 per cent. below that up to the years preceding the panic of 1893. It sounds very like a chestnut to say that no doubt business will be better in the month to come, and yet there is reason to think that this will really be the case. Logs will commence to arrive from the Canadian shore in large numbers shortly and will be speedily cut into lumber by the mills here. In a comparatively short time this cut will be placed on the market, and the view is entertained that stocks are just running bare enough at distributing centres to make the demand larger than some hold will be the case.

The Tittabawassee River Booming Co., will bring down about 22,000,000 feet of logs.

Rail shipments from Saginaw points are increasing over water shipments steadily, and to an extent to discourage vessel owners.

During the first four days of May there was shipped out from Bay City by vessel over 8,000,000 feet of lumber intended for Buffalo, Tonawanda and Ohio ports.

F. W. Gilchrist, of Alpena, and who has large lumber interests in Canada, is also owner of a large fleet of lake vessels. and expects to do a good trade this season.

Albert Pack, of Alpena, well-known to Canadian lumbermen, and one of the most enterprising members of the trade in this state, has been re-elected member of the police commission in that city for five years.

The saw-mills at Cheboygan expect to cut about 40,000,000 feet more lumber this season than last. The tug Mocking Bird is preparing to take boom sticks from Tawas to French River, making ready for the season's rafting.

The Canadian propeller Enterprise, which has come into the possession of F. W. Gilchrist, of Alpena, has been remodelled, at a cost of about $20,000. She is now known as the Norseman, and made her first trip to Cleveland with a cargo of lumber and cedar posts a few days ago.

During April the lumber shipments from Saginaw were:

	Feet.
Chicago	1,950,000
Toledo	600,000
Tonawanda	400,000
Port Clinton	390,000
Cleveland	320,000
Total	3,660,000

A good reason prevails for expecting that many logs will be tied up at different points in Michigan this year. Rains during the past few days have helped matters some, but not to the extent that will be necessary to relieve the logs. The waters are very low. Such conditions, however, may help prices.

The annual report of the St. Mary's Falls Canal, at Sault Ste. Marie, for 1894, which has just been completed, shows that during the year 722,788,000 feet of lumber passed through the canal, and that the freight rate was $1.90 per thousand, yielding a revenue of $1,373,297.20. Iron ore heads the list, but lumber comes second.

A change that is showing itself in methods of lumbering is the growing of Saginaw as a distributing centre. The prediction was made some years ago that the time would come when there would be as much lumber come to the Saginaw river cities by water as would be sent out, and the developments of this year seem to indicate a confirmation of this prediction. Some large shipments of lumber are coming here from Lake Superior and other points. W. B. Mershon & Co. have purchased 14,000,000 feet to come here from Lake Superior points. The same may be said of several Bay City concerns. Lake Superior lumber is going to cut a growing figure in transactions from this time out.

SAGINAW, Mich., May 23, 1895.

AN AUSTRALIAN LETTER.

MESSRS. E. B. Clifford & Co., of Sydney, N.S.W., write as follows to the LUMBERMAN, furnishing some interesting particulars of trade conditions in that country, and particularly the uses to which Australian woods are placed. They say: "Our export lumber trade has been very narrow and small up to the present time, but there is not the least doubt that when New South Wales hardwoods get well known, that a large demand will exist for them. Of the durability of these woods we will mention later. A proof of their durability for wood pavements is shown by the fact that on one of our busiest streets, subject to heavy travel, the pavement of native woods has been in existence for the past eleven years. These woods were laid in the first place in a very primitive method, viz.: one batten between each row of blocks, which made it a kind of a corduroy road. These same blocks have recently been taken up, and found to be as sound as the day they were put down. Each block had one inch taken off the ends, making them five inches instead of six inches, and on examination were found so sound that fresh blocks were not used, but the old blocks were put down again. These five inch blocks are now expected to last fifteen years, which in a climate like this should prove the durability in your climate of double the time.

"The woods used by the city corporation, also throughout the colony, for pavement purposes, are blue gum, black butt, spotted gum, mahogany, tallow wood, iron bark and turpentine. I may mention that these woods are now being largely shipped to London, Eng., in lengths of 3 feet to 16 feet, 9 inches wide by 3 inches thick, and great supervision is exercised on this side in shipping them. A government inspector is retained to inspect the brand and pass each piece before shipping. This consequently means that what he brands is first-class and fit to go into any building in this city, and is used in all of our streets. We can get and send you sample blocks of each of these woods in sizes as used by our city corporation. If your railways require a sleeper of our New South Wales iron bark I can send you over one if you will let us know, and all you would have to pay would be the freight on it. The sleepers used in this part of the world are 9 feet long, 10 inches wide, 5 inches thick. These would cost 3s. 9d. per sleeper f.o.b. steamer or sailing vessel. These sleepers would be passed by our government inspector, and when they are are passed by him they go into the very best work. They have been proven to stand all the trouble of water and rainy weather. Shifting ashes from the fire will not burn them. There are sleepers down now and being used by our railways for the past twenty-eight years, and are almost as sound as when first put down. They are run over daily and likely to remain for the next eight or ten years. We can get iron bark for bed plates for your engines, or for any heavier work that you might contemplate. This wood will last under water and under ground a very long time. Its density of weight is also in its favor, and is allowed by old hands to be superior to any known wood."

SYDNEY, N. S. W., April 15, 1895.

A BRITISH COLUMBIA SUIT.

THE following letter from Robert Ward & Company, Ltd., Victoria, B. C., explains itself:

"We have a copy of the May issue of the CANADA LUMBERMAN, and observe therein an item regarding the decision rendered against us in an action with John Clark. The facts of the case are that John Clark, ship-builder and ship owner, owed us some eight thousand dollars, and gave what we believe to be a fraudulent judgment in favor of his son, John Clark, Jr., and Isaac Hennigar, for a sum approximating $8,000, and under these judgments the sheriff seized what property John Clark, Sr., possessed, and John Clark, Jr., purchased the property, stating that he had paid Hennigar himself. We, however, obtained an injunction from the Supreme Court restraining the defendants from interfering in any way with the property they had just purchased. In the meantime John Clark, Sr., left the country, probably with a view of avoiding criminal action on our part. He, however, wished to consult with his partners, and returned here, as he thought, unknown, and kept in hiding. We succeeded in obtaining information as to his whereabouts and had him arrested on a casa, and lodged in jail. The defendants, John Clark, Jr., and Hennigar, thereupon applied to the Court, raising the unique point that by seizing the person of John Clark, Sr., our judgment was satisfied, and that we had no further right to restrain defendants from disposing of the property in question. This the Court held good, and ordered the release of Defendants Hennigar and John Clark, Jr., from the suit. This judgment, however, was appealed to the Divisional Court, and the judgment reversed. John Clark, Sr., was never released, and is still a prisoner in the Provincial jail."

NEWS AND NOTES.

—Sawyer Bros., of Coldwater, Ont., intend putting a new Valentine planer in their mill.

—The W. C. T. U. of Victoria, B. C., will probably send a missionary to the lumbering districts on the mainland.

—Chew Bros., Midland, Ont., have put up a fine new mill, adding a 20×24 engine, and new band and gang mills.

—The Georgian Bay Box Co., Midland, intend putting in fuel pipes in their large box factory, also a blower for refuse shavings, etc.

—A band sawyer named D. B. Dickson, while working at the Brunette saw mills, New Westminster, B. C., was struck by a large cant of timber and severely injured about the head and legs.

—The steam barge New Dominion is reported to have sunk in the Georgian Bay, eight miles from Parry Sound. The vesssel carried 250,000 feet of lumber, which was insured. The crew is said to have reached shore safely.

—The Victoria Harbor Lumber Co. have put in a new band mill, made by the Wm. Hamilton Mnfg. Co., of Peterboro. They have also erected a new burner. Their large mill will commence operations about June 1st.

Mr. Theodore Ludgate has resigned a position in the Crown timber offices at Peterboro, Ont., to accept the management of a large lumbering business at Traverse City, Mich. Before his departure he was presented by the citizens with a complimentary address and a gold watch and chain.

—D. Sprague, of the Winnipeg saw mill, has received word that his log drive of 6,000,000 feet has been successfully floated into the main stream of the Rosseau river, and it is not expected that there will be any difficulty in getting the logs to Winnipeg. The first part of the drive will reach Winnipeg early in June.

THE NEWS.

—Beecroft & Sloan have purchased J. E. Moore's planing mill at Flesherton, Ont.

—Gilmour & Hughson's mills at Chelsea, Ont., have commenced operations for the season.

—J. H. & W. Mackintosh are about to commence the erection of a saw mill at Halifax, N. S.

—Samuel Running, of Frankville, Ont.. is adding a planer and matcher to his saw mill equipment.

—Drinkwater Bros., of Alloa, Ont., have purchased a saw mill which they are operating at that place.

—Findlay & Lewis' new planing mill and sash and door factory at Parry Sound, Ont., is nearing completion.

—A new saw mill will be erected at Savanne, near Fort William, Ont., during the coming summer, at a cost of $22,000.

—D. A. Hyslop, of Woodburn, has closed down his saw mill for the season, having cut about 125,000 feet of lumber.

—S. Lavellee, of Ottawa, will erect a factory at Arnprior, Ont., for the manufacture of sash and doors. About forty-five hands will be employed.

—The Hawkesbury Lumber Co.'s mills at Hawkesbury, Ont., are running day and night. Between eight and nine hundred hands are employed.

—It is said that the firm of R. H. & James Klock, of Klock's Mills, will operate Lindsay'a mills at Aylmer this season. The firm have a large supply of logs on hand.

—Machinery for the manufacture of boxes and packing cases will shortly be placed in the Ontario and Western Lumber Co 's mills at Keewatin, Norman and Rat Portage.

—The J. M. Thomson Co., of Menominee, Mich., are building a new saw mill near Richard's Landing, Algoma. This will make eight mills now in operation on St. Joseph Island.

—The Walkerton Herald states that the largest number of logs ever taken out of the Greenock swamp in one season were taken out last winter, Mr. Cargill alone taking out between six and seven million feet.

—The mills of J. R. Booth at the Chaudiere have commenced running day and night, and it is expected to continue this arrangement throughout the summer season. About one thousand men are now employed around the mills.

—Incorporation has been granted to the Richmond Industrial Company, of Richmond, Que., to manufacture wooden wares and purchase the effects of the Richmond Water Power and Manufacturing Company. The capital stock is $100,000.

—E. G. Lavallee, of Notre Dame des Anges, Lake St. John, Que., is building a large saw mill at that place, which will cost in the neighborhood of $15,000. The machinery is being supplied by Messrs. Carrier, Laine & Co., of Levis, the large air wheel being ten feet high and weighing eight tons.

—A writ is said to have been issued by E. W. Nesbitt, of Woodstock, against James Sharp, of Burke's Falls, and Wm. Carmichael and Wm. Gibson, of Powassan, for $2,000 damages for alleged wrongful conversion of trees in the timber limits on South River, Parry Sound district, and for an injunction to restrain the defendants from cutting timber or handling timber already cut in that locality. The plaintiff holds the right to the limits from the Ontario Government.

—A dispute has arisen concerning the possession of the Martineau saw mill at St. Gabriel, Que., the use of which was claimed by Mr. Matte for the sawing of certain logs there, under an agreement made shortly after the failure of Beland & Martineau, but which was disputed by Mr. Martineau. The engine was recently taken to Quebec, where a seizure was effected. Judge Caron, therefore, granted a motion to put Mr. Matte in possession of the engine, which has been taken back to the mill.

CASUALTIES.

—Robert Adair, of Tamworth, had the thumb cut off his right hand while working at an edging saw in Wood Bros.' shingle mill at that place.

—Two young men named J. Gerard and A. Pinion were seriously injured a couple of weeks ago in a jam of logs on the Booth drive on the Opeongo.

—While driving logs on Brennan's drive on the Maganetawan river recently, a young man named J. Jarvis was drowned. His home was at Byron, Ont.

—A fortnight ago, while working in Broadfoot & Box's factory at Seaforth, Ont., William Patterson lost a finger of his left hand by coming in contact with the saw.

—Arthur Boulet, thirteen years of age, was killed in Price's steam saw mill at St. Thomas de Montmagny, Que., recently. His head was caught by a chain and almost torn from his body.

—M. Brittain, of Chatham, was recently engaged with others in preparing a raft of logs, when one of them rolled upon him, dislocating his shoulder and breaking one of his legs.

—Benjamin Coughlin was rafting logs at Elm Tree Brook, N. B., for B. N. T. Underhill, of Blackville, when he fell off the log and was drowned, owing to the swift current.

—A young man named Ed. Charbonneau, in the employ of the Bronson & Weston Lumber Co., was drowned at Pine Sault Creek early last month. He was 22 years of age and unmarried.

—Frank J. Mavelle, formerly of Westport, Ont., was killed recently while working in a saw mill at Saginaw, Mich. He was thrown on the saw, which penetrated his breast diagonally to a depth of 10 inches.

—While operating a circular saw in W. McLellan's mill at Amherst, N. S., Kelton Carter was struck in the face by a piece of deal thrown from the saw. His lower jaw was terribly shattered and his head bruised and cut. He remained unconscious for twelve hours.

—A fatal accident occurred at David Degaer's saw mill at Binbrook, Ont., on the 17th inst., by which Adam Smith, aged 72 years, lost his life. He was showing some friends how he used to run a saw when he was young, when his foot slipped and he was thrown upon the saw and almost cut to pieces.

TRADE NOTES.

—The Waterous Engine Works Co., of Brantford, are placing new machinery in S. T. King & Son's saw mill at St. John, N. B.

—Stetson, Cutler & Co., of St. John, N. B., have purchased from the Wm. Hamilton Manufacturing Co., of Peterboro', Ont., a Prescott band saw and an edger, for use in their Indiantown mill.

—Geo. White & Sons, of London, Ont., have recently fitted the saw mills of Gow & McLean, of Fergus, and George A. Patrick, of Delaware, with new internally-fired boilers and "Clipper" engines.

—The Cant Bros. Co. of Galt, Ltd., manufacturers of woodworking machinery, in announcing the retirement of Mr. H. Cant, beg to state that this will not in any way interfere with their business, which will be carried on as usual.

INSTRUCTIONS TO BOILER ATTENDANTS.

THE Manchester Steam Users Association of England, has issued a revised edition of its "Instructions to Boiler Attendants."

In forwarding these instructions to its members, the Association says :

"These instructions have been drawn up with much care, it being desired to make them as complete and educational as possible. There are so many points affecting the safety and proper treatment of boilers, that it was found impossible to compress the instructions into a small space. In boiler and engine rooms, height of wall space is more generally available than width, and, therefore, the sheet was made long and narrow, rather than short and wide. If hung up so as to be about two feet from the floor, it can easily be read from top to bottom.

"It is desirable that the sheet should be mounted, and the best plan of doing this will perhaps be to have a board about ¾ in. thick built in three or four widths and stiffened by a batten at each end, the joints being grooved and tongued. On this board the sheet might then be pasted, and varnished for preservation. In most cases it might be well to have this done by a bookbinder.

"When mounted, the sheet should be placed in a good light, and where the boiler attendants can have convenient access to it. They should be encouraged to study and master its contents. Much of the information contained therein will be of service daily, and not merely on the occurrence of an emergency."

GETTING UP STEAM.—Warm the boiler gradually. Do not get up steam from cold water in less than six hours. If possible, light the fires over night.

Nothing turns a new boiler into an old one sooner than getting up steam too quickly. It hogs the furnace tubes, leads to grooving, strains the end plates, and sometimes rips the ring seams of rivits at the bottom of the shell. It is a good plan to blow steam into the cold water at the bottom of the boiler, or to open the blow-out tap, and draw the hot water down from the top.

FIRING.—Fire regularly. After firing, open the ventilating grid in the door for a minute or so. Keep the bars covered right up to the bridge. Keep as thick a fire as quantity of coal will allow. Do not rouse the fire with a rake. Should the coal cake together, run a slicer in on top of the bars and gently break up the burning mass.

Repeated trials have shown that under ordinarily fair conditions, no smoke need be made with careful hand-firing. Alternate side firing is very simple and very efficacious.

CLEANING FIRES AND SLAKING ASHES.—Clean the fires as often as the clinkers render it necessary. Clean one side at a time, so as not to make smoke. Do not slake the clinkers and ashes on the flooring plates in front of the boiler, but draw them directly into an iron barrow and wheel them away.

Slaking ashes on the flooring plates corrodes the front of the boiler at the flat end-plate, and also at the bottom of the shell where resting on front cross wall.

FEED-WATER SUPPLY.—Set the feed valve so as to give a constant supply, and keep the water up to the height indicated by the water-level pointer.

There is no economy in keeping a great depth of water over the furnace crowns, while the steam space is reduced thereby, and thus the boiler rendered more liable to prime. Nor is there any economy in keeping a very little water over the furnace crowns, while the furnaces are rendered thereby more liable to be laid bare.

GLASS WATER GAUGES AND FLOATS.—Blow through the test tap at the bottom of the gauge hourly, as well as through the tap in the bottom neck, and the tap in the top neck twice daily. These taps should be blown through more frequently when the water is sedimentary, and whenever the movement of the water in the glass is at all sluggish. Should either of the thoroughfares become choked, clean them out with a wire. Work the floats up and down by hand three or four times a day to see that they are quite free. Always test the glass water gauges and the floats thoroughly the first thing in the morning before firing up, and at the commencement of every shift.

It does not follow that there is plenty of water in the boiler because there is plenty of water in the gauge glass. The passages may be choked. Also, empty gauge glasses are sometimes mistaken for full ones, and explosions have resulted therefrom. Hence the importance of blowing through the test taps frequently.

BLOW-OUT TAPS AND SCUM TAPS.—Open the blow-out taps in the morning before the engine is started, and at dinner-time when the engine is at rest. Open the scum tap when the engine is running, before breakfast, before dinner, and after dinner. If the water is sedimentary, run down ½ in. of water at each blowing. If not sedimentary, merely turn the taps round. See that the water is at the height indicated by the water-level pointer at the time of opening the scum tap. Do not neglect blowing out for a single day, even though anti-incrustation compositions are put into the boiler.

Water should be blown from the bottom of the boiler when steam is not being drawn off, so that the water may be at rest and the sediment have an opportunity of settling. Water should be blown from the surface when steam is being drawn off, so that the water may be in ebullition and the scum floating on the top. If the water be below the pointer, the scum tap will blow steam ; if above the pointer, the scummer will miss the scum.

SAFETY VALVES.—Lift each safety valve by hand in the morning before setting to work, to see that it is free. If there is a low-water safety valve, test it occasionally by lowering the water level to see that the valve begins to blow at the right point. When the boiler is laid off, examine the float and levers and see that they are free, and that they give the valve the full rise.

If the safety valves are allowed to go to sleep, they may get set fast.

OPENING DRAIN TAPS AND STEAM PIPES.—If the boiler is one of a range, and the branch steam pipe between the junction valve and the main steam pipe is so constructed as to allow water to lodge therein, open the drain tap immediately the boiler is laid off, and keep it open until the boiler is set to work again. If the main steam pipe is so constructed as to allow water to lodge therein, open the drain tap immediately the engine is shut down, and keep it open till the engine is set to work again.

If the water is allowed to lodge in the pipes, it is

impossible to blow it out under steam pressure without danger. Attempting to do this frequently sets up a water-hammer action within the pipes, and from this cause several explosions have occurred. The only safe plan is not to let the lodgment occur, or to shut off the steam before opening the drain taps.

SHORTNESS OF WATER.—If the boiler is found to be short of water throw open the fire doors, lower the dampers, ease the safety valves, and set the engine going, if at rest, so as to reduce the pressure. If the boiler is one of a series, shut down the junction valve. If there is reason to conclude that the water has not sunk below the level of the furnace crowns, and they show no signs of distress, turn on the feed and either draw the fires quickly, beginning at the front, or smother them with ashes or anything ready to hand. If there is reason to conclude that the water has sunk below the level of the furnace crowns, withdraw, and leave the safety valves blowing. Warn the passers by from the front.

EASING THE SAFETY VALVES.—If either the construction of the boiler or the character of the feed water is such as to render the boiler liable to prime, the safety valve should be eased gently.

TURNING ON THE FEED.—From experiments the association has conducted, it appears that this is the best thing to do in nearly every case, especially where the feed is introduced behind the firebridge, as it would tend to restore the water level, and at the same time to cool and reinvigorate the furnace plates. While, however, the experiments showed that showering cold water onto red-hot furnace crowns would not, as has been generally supposed, lead to a sudden and violent generation of steam which the safety valves could not control and the shell could not resist, it is thought that if the furnace crowns were very hot and just on the point of giving away, the generation of a few additional pounds of steam might turn the scale and lead to a collapse. Thus it might be wise to turn on on the feed in some cases and not in others, according to the extent to which the furnaces were overheated, and this it is difficult to ascertain. Under these circumstances a hard and fast rule, applicable to all cases, cannot be laid down, and therefore, having regard to the safety of the fireman, the advice to turn on the feed, as a general rule is confined to those cases where the water has not sunk below the level of the furnace ground.

DRAWING THE FIRES.—This ought not to be attempted if the furnace crowns have begun to bulge out of shape.

It is an extremely responsible task to give any recommendation with regard to the treatment of a boiler when short of water and working under steam pressure, that shall be applicable to every case under every variety of circumstance. A boiler attendant has no right to neglect his water supply and allow it to run short; nor has he a right to charge the fires without making sure that the furnace crowns are covered. Should he neglect these simple precautions it is impossible to put matters right without some risk being run. A boiler with hot fires and with furnace crowns short of water is a dangerous instrument to deal with, and the attendant who has done the wrong must bear the risk. The best advice the association can give the boiler attendants on this subject is, do not let shortness of water occur. Keep a sharp look-out on the water-gauge.

USE OF ANTI-INCRUSTATION COMPOSITIONS.—Do not use any of these without the consent of the association. If used, never introduce them in heavy charges at the manhole or safety valve, but in small daily quantities along with the feed-water.

Many furnace crowns have been overheated and bulged out of shape through the use of anti-incrustation compositions, and in some cases explosions have resulted.

EMPTYING THE BOILER.—Do not empty the boiler under steam pressure, but cool it down with the water in; then open the blow-out tap and let the water pour out. To quicken the cooling the damper may be left open, and the steam blown off through the safety valves. Do not, on any account, dash cold water on the hot plates. But in case of an emergency pour cold water in before the hot water is let out, and mix the two together so as to cool the boiler down generally, and not locally.

If a boiler is blown-off under steam pressure the plates and brickwork are left hot. The hot plates harden the scale, and the hot brickwork hurts the boiler. Cold water dashed on to hot plates will cause severe straining by local contraction, sometimes sufficient to fracture the seams.

CLEANING OUT THE BOILER.—Clean out the boiler at least every two months, and oftener if the water is sedimentary. Remove all the scale and sediment as well as the flue dust and soot. Show the scale and sediment to the manager. Pass through the flues, and see not only that all the soot and flue dust has been removed, but that the plates have been well brushed. Also see whether the flues are damp or dry, and if damp find out the cause. Further, see through the thoroughfares in the glass water gauges and in the blow-out elbow pipe, as well as the thoroughfares and the perforations in the internal feed dispersion pipe and the scum pipe are free. Take the feed pipe and scum troughs out of the boiler if necessary to clean them thoroughly. Take the taps, if not asbestos packed, and the feed valve to pieces, examine, clean and grease them, and, if necessary, grind them in with a little sand. Examine the fusible plugs.

All taps, whether asbestos packed, or metal to metal, should be followed in working, especially when new. The gland should be screwed down as found necessary so as to keep the plug down to its work, otherwise, it may rise, let the water pass, and become scored.

PREPARATION FOR ENTIRE EXAMINATION.—Cool the boiler and carefully clean it out as explained above, and also dry it well internally. When the inspector comes, show him both scale and sediment as well as the old cap of the fusible plug, and tell him of any defects that manifested themselves in working, and of any repairs or alterations that have been made since the last examination.

Unless a boiler is suitably prepared, a satisfactory entire examination cannot be made. Inspectors are sent at considerable expense to make entire examinations, and it is a great disappointment when their visits are wasted for want of preparation.

PRECAUTIONS AS TO ENTERING BOILER.—Before getting inside the boiler, if it is one of a series, take off the junction valve handwheel, and if the blow-out tap is connected to a common waste pipe, make sure that the tap is shut and the key in safe keeping.

From the neglect of these precautions, men working inside boilers have been fatally scalded.

FUSIBLE PLUGS.—Keep these free from soot on the fire side and from incrustation on the water side. Change the fusible metal once every year, at the time of preparing for the association annual entire examination.

If fusible plugs are allowed to become incrusted, or if the metal be worked too long, they become useless, and many furnace crowns have been rent from shortness of water, even though fitted with fusible plugs.

GENERAL KEEPING OF BOILER.—Polish up the brass and other bright work in the fittings. Sweep up the flooring plate frequently. Keep ashes and water out of the hearth pit below the flooring plates. Keep the space on the top of the boiler free, and brush it down once or twice a week. Take a pleasure in keeping the boiler and the boiler house clean and bright, and in preventing smoke.—The Safety Valve.

WASTE IN CONVERTING A LOG INTO LUMBER.

IN the hardwood sections the most experienced estimators, says the Southern Lumberman, almost invariably over-estimate the amount of lumber the standing timber will make. It is not done with fraudulent intent, but simply because neither the estimators, the purchasers, or the manufacturers realize what a small per cent of the actual contents of a hardwood tree is convertable into merchantable lumber. In the pine forests the loss is less than in the hardwoods, because the pine trees are generally more nearly straight and of more uniform diameter at both ends of logs of the usual lengths. After a tree is cut into saw log lengths the amount of lumber that can be got from it can be very closely ascertained by the use of what is known as the Doyle rule as given in Scribner's log book. This rule is in almost universal use where the logs to be measured can be seen all over, but does not apply generally to logs to be measured in water, as a raft. About the only thing that the lumber trade is in full accord on is this Doyle rule. About twenty years ago the publishers of Scribner's log book substituted it for the one the author had brought into wide use years before, and is now considered the standard. If we take the actual contents of a log and compare with the result given in Doyle's rule we will find the loss ranges from 20 to 65 per cent., the loss being greater in the smaller logs. We get the actual contents by taking the mean diameter of the log, finding its cubical contents in feet and multiply by twelve to reduce the cubic feet to board measure.

The following table will illustrate this more fully:

DIAMETER OF LOG. 10 FT. LONG.	Real Contents of Log in feet B. M. or 12th cubic foot, allowing no waste.	Contents in feet B M. as per Scribner or Doyle's rules.	Waste as per ct. of real contents deduced by Doyle.
10 inches	65	23	65
14 "	127	62	51
16 "	167	90	46
18 "	211	122	42
20 "	261	160	39
24 "	376	250	34
30 "	588	422	28
36 "	847	640	25
40 "	1,046	810	23
50 "	1,635	1,322	20

Thus it appears that while in a log 50 inches in diameter 80 per cent. may be converted into salable boards, this ratio drops to 35 as the diameter decreases to 10 inches; a good argument against cutting young and small timber.

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THE GREATEST FOREST IN THE WORLD.

WHERE is the greatest forest in the world?

The question was asked in the Forestry section of the American Association for the Advancement of Science, at its recent annual meeting. The importance of forests for equalizing the climate and the rainfall of the globe was under discussion, and the purpose of the question was to show where the great forest tracts of the world are situated.

One member replying offhand, was inclined to maintain that the greatest continuous tract of the forest lies north of the St. Lawrence river, in the provinces of Quebec and Ontario, extending northward to Hudson's Bay and Labrador; a region measuring about 1,700 miles in length from east to west, and 1,000 miles in width north and south.

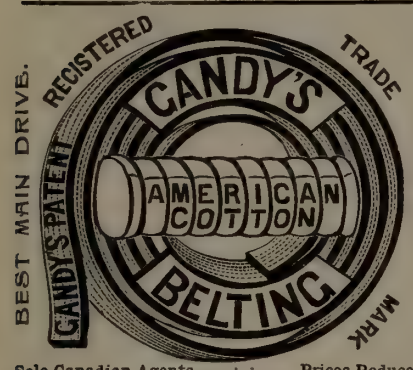
A professor from the Smithsonian Institute rejoined that a much larger continuous area of timber lands was to be found, reckoning from those in the State of Washington, northward through British Columbia and Alaska. But he limited his statement to North America, for he added, that, in his opinion, the largest forest in the world occupied the valley of the Amazon, embracing much of Northern Brazil, Eastern Peru, Boliva, Ecuador, Columbia and Guiana; a region at least 2,100 miles in length by 1,300 in breadth.

Exceptions were immediately taken to this statement by several members who, in the light of recent explorations, have computed the forest of Central Africa in the valley of the Congo, including the headwaters of the Nile to the northeast and those of Zambesi on the south. According to their estimates Central America contains a forest region not less than 3,000 miles in length from north to south. and of vast, although not fully known, width from east to west. Discussion, in which the evidence afforded by travels and surveys was freely cited, seemed favorable to the defender of the Amazonian forests.

Later in the day the entire question was placed in another light by a member who was so fortunate as to be able to speak from some knowledge of still another great forest region of the globe. This gentleman gave a vivid picture of the vast, solemn taigas and urmans, the pine, larch and cedar forests of Siberia.

It appears that Siberia, from the plain of the Obi river on the west to the valley of the Indighirka on the east, embracing the great plains, or river valleys, of the Yenisei, Olenek, Lena and Yana rivers, is one great timber belt, averaging more than 1,000 miles in breadth from north to south—being full 1,700 miles wide in the Yenisei district—and having a length from east to west of not less than 4,600 versts, about 3,000 miles. Unlike equatorial forests, the trees of the Siberian taigas are mainly conifers, comprising pines of several varieties, firs and larches. In the Yenisei, Lena and Olenek regions there are thousands of square miles where no human being has ever been. The long stemmed conifers rise to a height of 150 feet or more and stand so closely together that walking among them is difficult.

The dense, lofty tops exclude the pale Arctic sunshine, and the straight pale trunks, all looking exactly alike, so bewilder the eye in the obscurity that all sense of direction is lost. Even the most experienced trappers of sable dare not venture into the dense taigas without taking the precaution of "blazing" the trees constantly with hatchets as they walk forward. If lost there the hunter rarely finds his way out, but perishes miserably from starvation and cold. The natives avoid the taigas, and have a name for them which signifies "places where the mind is lost."



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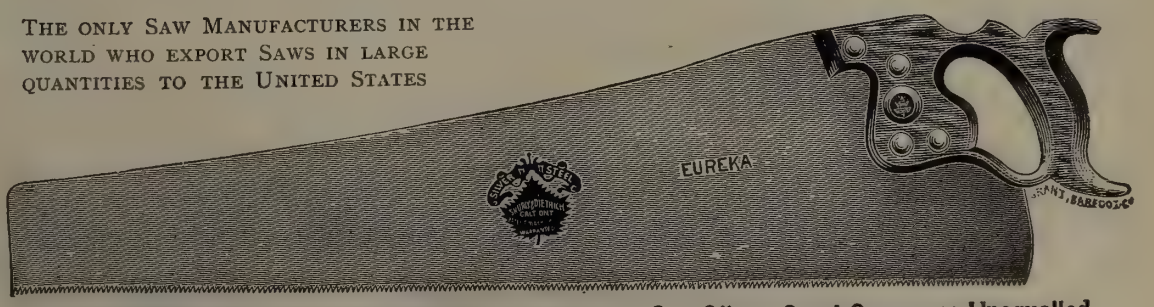


SOLE PROPRIETORS OF THE SECRET CHEMICAL PROCESS OF TEMPERING : : Our Silver Steel Saws are Unequalled

OAK TANNED BELTING

TORONTO
20 FRONT ST EAST
TELEPHONE 475

THE J.C.McLAREN BELTING Co MONTREAL

SPECIAL:

PIKE POLES

COMPLETE

Write for prices ~ JOHN ADAMSON
67 Bloor Street East, TORONTO.

THE DOMINION LEATHER BOARD COMPANY

MONTREAL

MANUFACTURERS OF

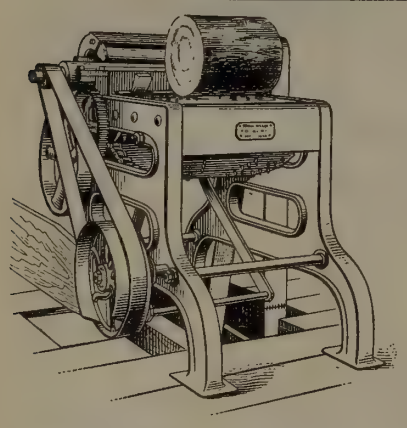
Friction Pulley Board

. . AND . .

ROOFING, SHEATHING AND FLOORING FELTS

. . . STEARNS BROTHERS . . .

Patent Rossing Machine



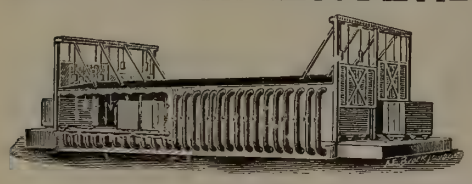
Why you should use this Rosser. . . . .

It will do double the work of any other.
It is the only machine made that will peel Cedar Shingle Blocks.
It will peel dirty blocks without taking the edge off the knives as they cut from the clean bark or block out.
It is a self-feeder, and very easy to operate.
It requires less power than a face wheel.
All iron and steel, very simple and durable.
It will ross knotty and uneven timber without waste.
It occupies about the same space as an ordinary planer.
You can have a chance to try a machine before buying it.

- - - MANUFACTURED BY - - -

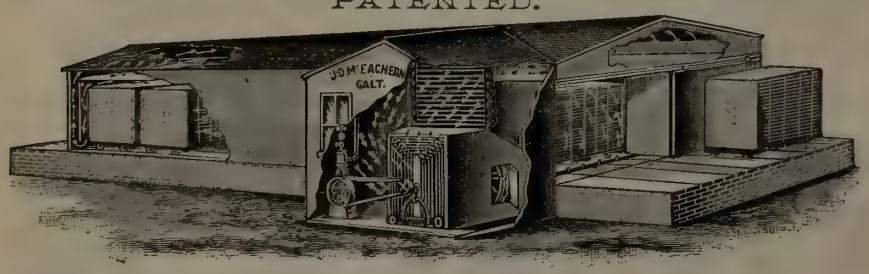
EASTMAN LUMBER CO.
EASTMAN, QUE.

THE PARMENTER PATENT DRY KILN.



The Latest, the Cheapest and Best
FOR DRYING
LUMBER, STAVES, HEADING, ETC.
Write for Particulars to
J. S. PARMENTER,
Box 512, WOODSTOCK, ONT.

McEACHREN'S IMPROVED SYSTEM OF KILN DRYING.
PATENTED.

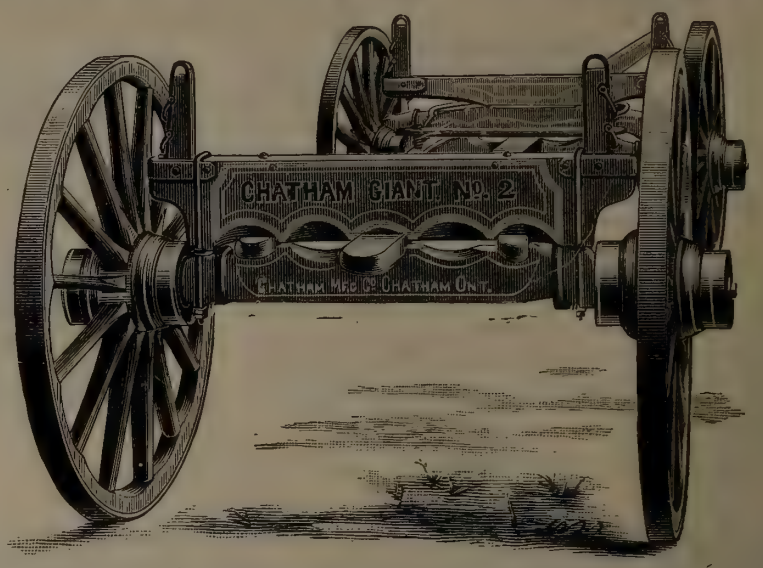


COST of erecting, running and maintaining the lowest and results the highest of any dry kiln and drying system in the market. Green Elm, Ash, Whitewood, &c., for furniture dried in six days; only exhaust steam 10 hours per day used.

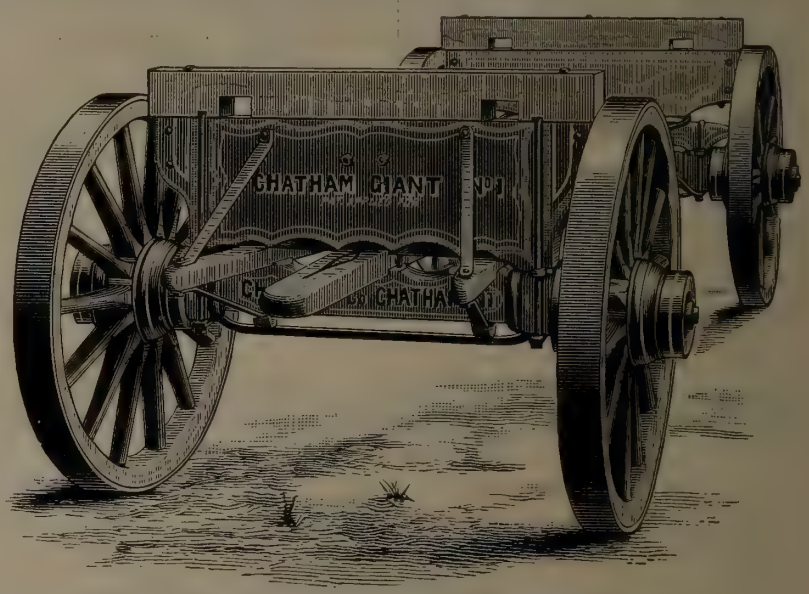
NO CHECKING, WARPING OR CASE-HARDENING.

THE McEACHREN HEATING & VENTILATING CO. Galt, Ont.

THE CHATHAM GIANT LOG TRUCK.



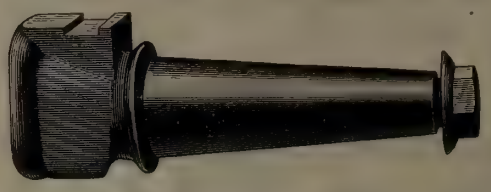
IT must be self-evident that our GIANT ARM LOG TRUCKS, of which the above is a faithful illustration, is the best log truck made; but if conclusive evidence of this is wanted we refer to every mill man and lumberman in the county of Essex, Ont., where millions upon millions of Elm logs are gotten out every year on them, and where these trucks sell readily, while those of other makes remain unsold at $5 to $10 less.



THE CHATHAM GIANT LOG AND LUMBER TRUCK.

As seen above it is a Lumber Truck, but it is quickly converted into a Log Truck by bunks which are grooved at the ends to receive the stakes and slip down between them, and are perforated for side or lug poles. We build these trucks in all sizes from 2½ to 4 inch Malleable Giant Arms. Farmers all over are extensively adopting the lighter sizes as general purpose wagons.

In reference to above trucks we would call the attention of the reader to the accompanying illustration of VANALLEN'S PATENT GIANT ARM with which they are equipped.



It will be seen that the hind bolster and sand-board are formed to rest upon the flat top of this arm, and being securely clipped to the axles forms a complete and solid truss and render the axles unbreakable and inflexible.

Our Malleable Giant Arm farm and teaming Wagons have no equals on this continent, of which the judges on vehicles at the World's Fair, Chicago, gave us an unqualified certificate in the shape of a GOLD MEDAL AND DIPLOMA.

CORRESPONDENCE SOLICITED.

The Chatham Mfg. Co., Ltd.
CHATHAM, ONT.

J. W. MAITLAND—H. RIXON J. G. AINSILE—W. STODART

MAITLAND, RIXON & CO.

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All kinds of Building Material kept in stock

WE MAKE A ... SPECIALTY OF LONG BILL STUFF IN ROCK ELM, PINE, CEDAR AND HEMLOCK

Quotations furnished on application

GALT MACHINE KNIFE WORKS

MACHINE KNIVES

OF EVERY DESCRIPTION FOR

Planing, Moulding and Stave Cutting

Send for Price List

PETER HAY, GALT, ONT.

WHY BAND SAWS BREAK

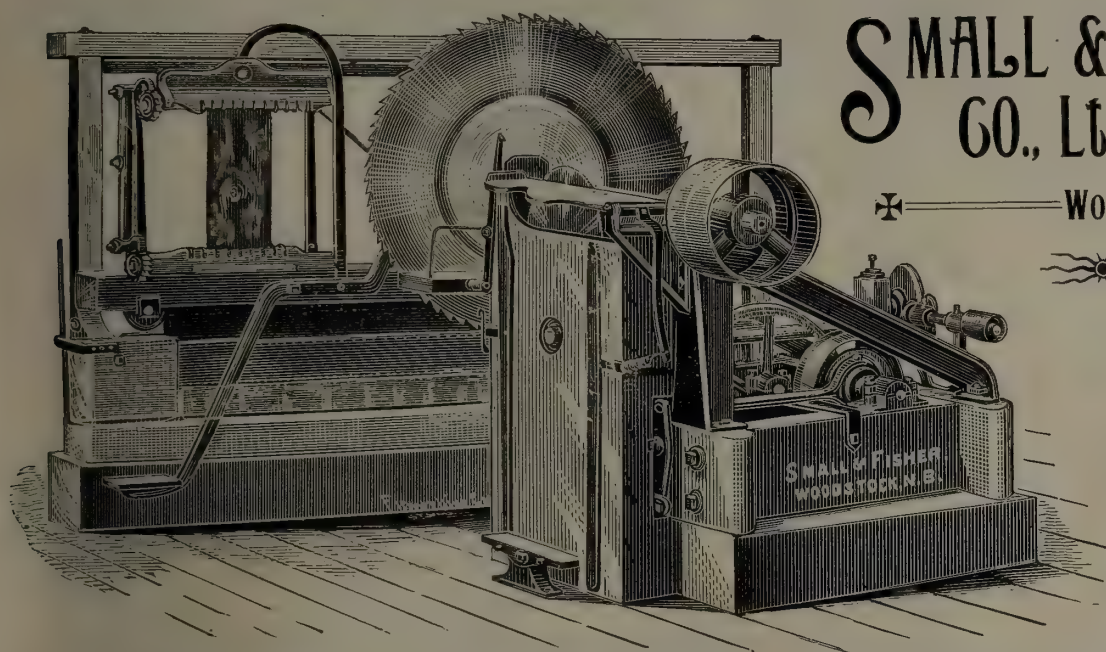
SIXTEEN REASONS, AND HOW TO AVOID THEM

Being instructions to filers on the care of large band saw blades used in the manufacture of lumber.

A book filled with valuable information on the care of band saws. Giving the reasons for breaking; analyzing each reason; giving instructions to dispense with the causes as laid down in each reason; and full details on filing and brazing. The proper styles of hammers to use are illustrated and described, and views of blades showing the blows of the different styles of hammers form an important part of the illustrations. Improper and unequal tension are then treated, and the manner of properly setting irregular teeth is described. In connection with the treatise is a history of the invention, manufacture and use of the saw from its origin to the present time. The work in whole makes an accumulation of information such as has never before been published.

The book is printed on fine paper, good clear type, and is handsomely and substantially bound in cloth. It will be sent to any address on receipt of the price, **ONE DOLLAR.**

Address— CANADA LUMBERMAN, Toronto, Ont.



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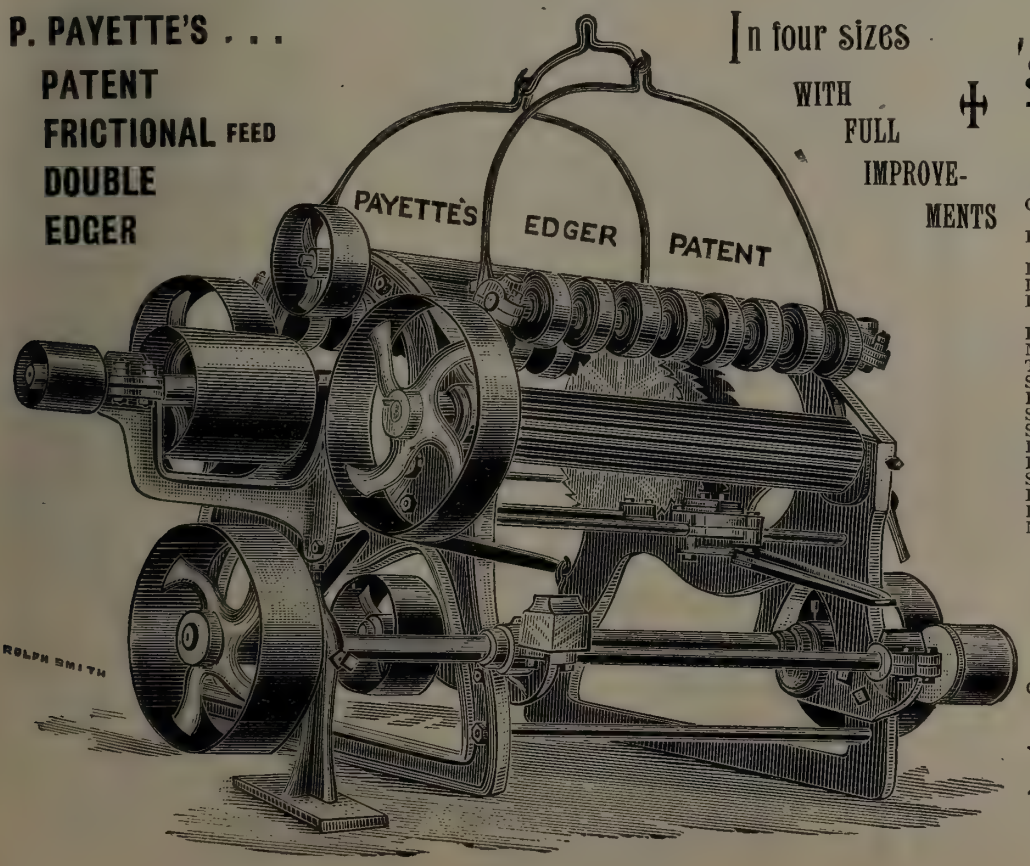
GELIAS & BRO
ALL KINDS
TIMBER & LUMBER
ROUGH & DRESSED
BUFFALO, N.Y.

P. PAYETTE'S . . .
PATENT
FRICTIONAL FEED
DOUBLE
EDGER



In four sizes WITH FULL IMPROVEMENTS

MANUFACTURERS OF

Saw Mill Machinery

Circular Saw Rigs, Light and Heavy Wood or Iron Frames.
Rope and Chain Feed for Saw Carriages.
Live Rollers, Wood or Iron.
Log Canters, Light and Heavy.
Double Edgers, Friction and Direct Feed.
Head Blocks, Light and Heavy.
Mill Dogs. Saw Guides.
Trimmer, Log and Carrier Chains.
Set Works. Top Saws.
Brass and Iron Fittings.
Saw Swage for Circular, Gang or Band.
Swing Saws. Trimmers.
Butting Tables.
Boilers and Boiler Fittings.
Shafting, Boxing, Pulleys, Hangers.
Paper Frictions, Wood and Iron.
Brass and Iron Castings of all kinds.
Machinery for Lath Mill.
" " Shingle Mill.
" " Gang Mill.
" " Re-sawing.
" " Jack-Ladder.
" " Drag Saw.
" " Engines, Stationary and Marine.
" " Pumps.
" " Making Matches.
Cant Hook Handles.

Terms and Prices on application.

P. Payette & Co.

Penetanguishene, Ont.

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FLINT & PERE MARQUETTE RAILROAD

FROM

Port Huron and Detroit

Is the Short Line to

SAGINAW AND BAY CITY

(Centres of the vast lumber interests of Michigan)

MT. PLEASANT, CLARE, REED CITY
BALDWIN, LUDINGTON, MANISTEE
AND
MILWAUKEE, WIS.

The last-named place reached by the Company's line of steamships across Lake Michigan.

The line thus formed is a short and direct route from

MONTREAL TORONTO

and all Canadian Territory

To ST. PAUL, DULUTH and Pacific Coast Points.

This road traverses a section of Michigan with unrivalled advantages to settlers. Cheap lands, thriving villages and towns, well watered with streams in all directions: a market for every product of Forest and Field.

The policy of the "F. & P. M." is known to all travellers and settlers.

A. PATRIARCHE, Traffic Manager.

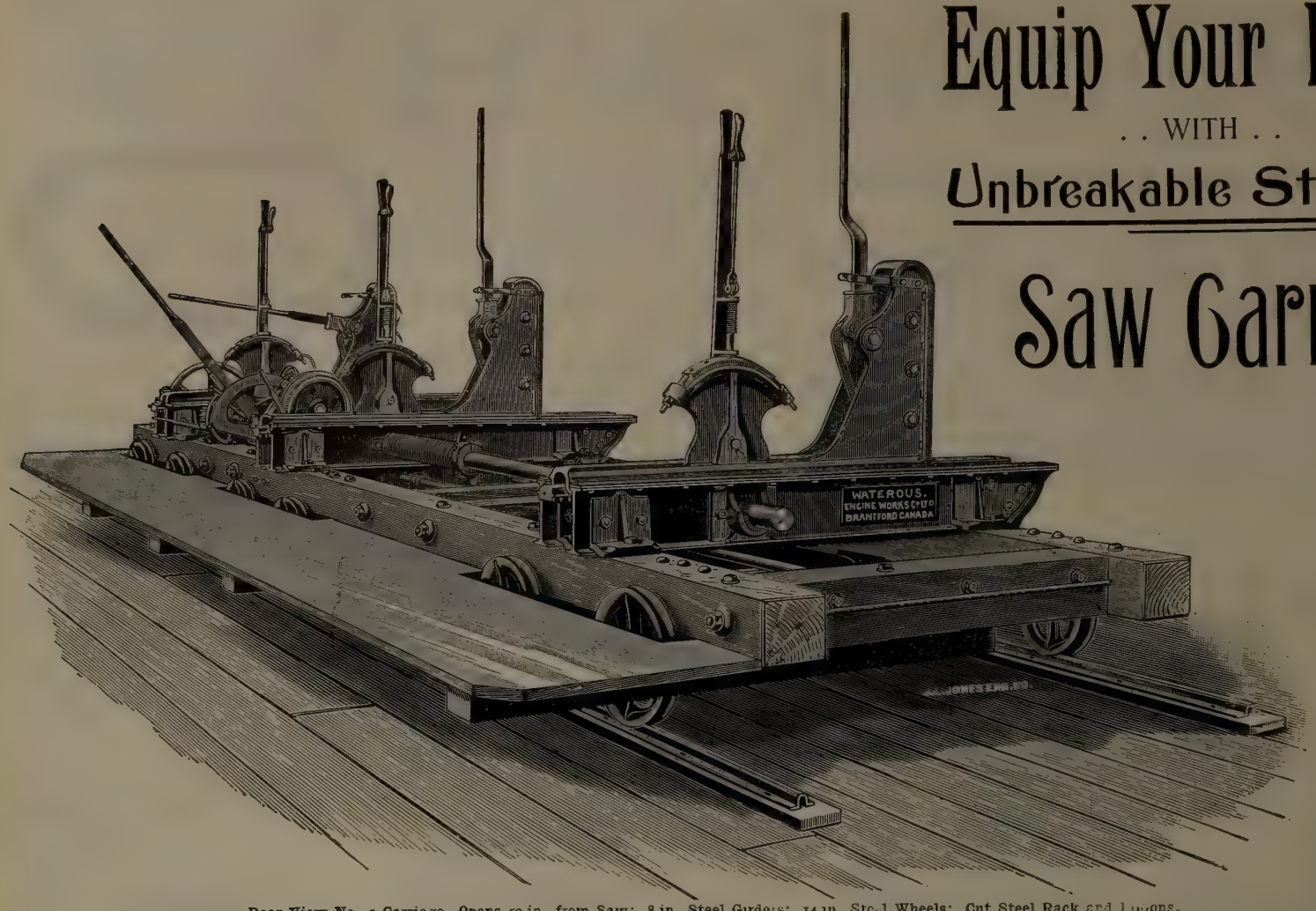
GENERAL OFFICES: - SAGINAW, MICH.

Equip Your Mill

. . WITH . .

Unbreakable Steel Girder

Saw Carriages



Rear View No. 5 Carriage—Opens 50 in. from Saw; 8 in. Steel Girders; 14 in. Steel Wheels; Cut Steel Rack and Pinions.

The First to Start Up of the 18 Allis Bands Sold in Canada this year.

Burk's Falls, Ont., April 19th, 1895.

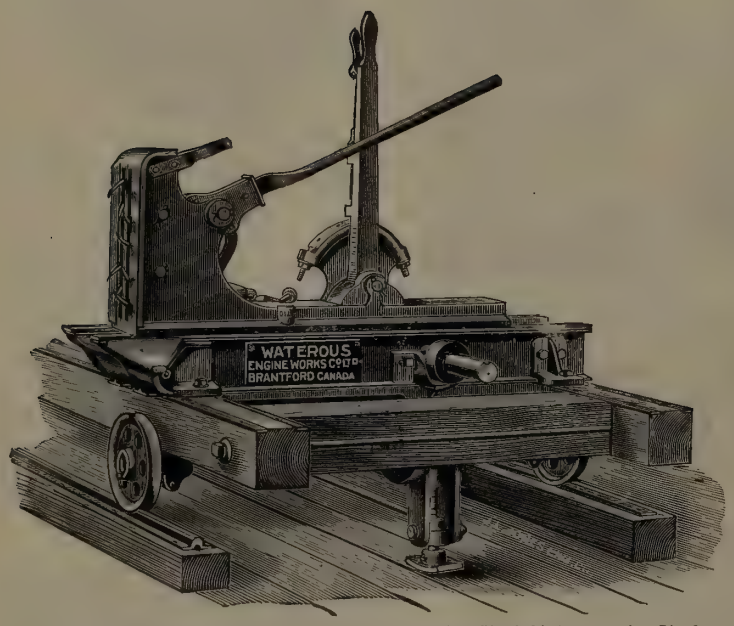
THE WATEROUS ENGINE CO., (Ltd.), Brantford, Ont.

Gentlemen,—We have now tried the No. 3 Allis Band purchased from you. It has been running for the last eight days, and is giving us good satisfaction. It don't seem to take any more power than the circular saw did. We are sawing Birch, and there is quite a lot of frost in it, but it is making splendid work. We have not broken a saw so far.

The trial that we have given the mill is sufficient, and we accept the mill as per our agreement with you. We will have much pleasure in recommending the mill to anyone who may contemplate putting in a band.

Yours very truly, T. G. S. TRAIN.

MR. TRAIN USES WATER POWER



No. 4 A—Front View—Opens 36 in. from Saw; 6 in. Steel Girders; 10 in. Steel Wheels; Cut Steel Rack and Pinions.

Two More No. 3 Bands Just Started

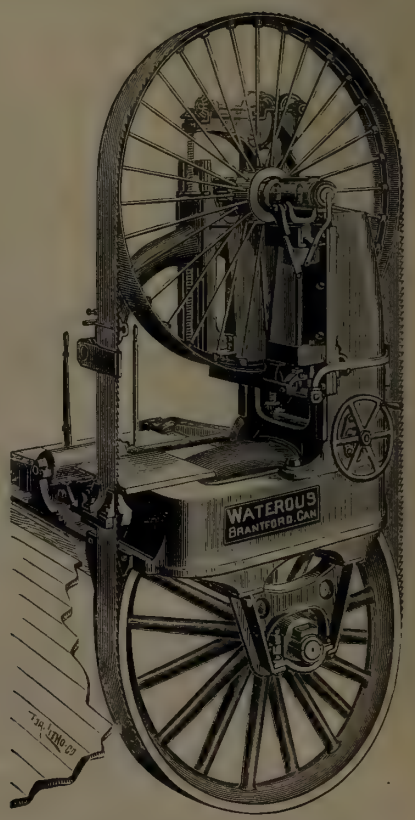
Ottawa, May 10th, 1895.

The Waterous Engine Co.,
Brantford, Ont.

Gentlemen,—This is to let you know that your Mr. Grant has been here since Thursday last, and has hammered and put in order all the saws, except one, that we have here.

We have much pleasure in stating that so far both the mills and the saws on them have given us the best of satisfaction, and if they continue to do as well as they have done, the few days we have been running them, we will be very well satisfied indeed.

Yours truly,
WM. MASON & SONS.



LEFT HAND FRONT VIEW, ALLIS BAND.

If You Change to a Band, Make no Mistake

●——PUT IN AN ALLIS——●

The Most Popular Mill Built.

WE BUILD

Steam Feeds, Steam Niggers, Steam Log Unloaders, Steam Log Rollers, Steam Cut-Off Saws, Heavy Edgers, Trimmers, Stave Sawing Machinery, Conveyor and Haul-Up Chains.

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Waterous, Brantford, Canada

Dodge Patent Specialties

Dodge Wood Split Belt Pulleys . . . . . .
Dodge Split Friction Clutch and Cut-off Coupling
Dodge System of Rope Transmission of Power
Dodge Rope Dressing for preserving Transmission Ropes

1895 CATALOGUE MAILED ON APPLICATION.

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Canada Atlantic Railway

OTTAWA, ARNPRIOR AND PARRY SOUND RAILWAY

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Ottawa and New York Lumber Line - Ottawa and Boston Lumber Line - Canada Atlantic Fast Freight Line

(Operating over the Grand Trunk, Central Vermont, and Boston and Maine Railways.)

SHORTEST AND QUICKEST ROUTE

... FROM AND TO ...

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TORONTO	MONTREAL	BURLINGTON
BUFFALO	QUEBEC	BOSTON
DETROIT	HALIFAX	NEW YORK
TONAWANDA	PORTLAND	ALBANY, &C.

AND ALL POINTS IN CANADA AND THE UNITED STATES.

For through rates, information and list of lumber dealers, apply to any officer of these lines or connections, or to

R. A. CARTER
Contracting Agent, 115 Board Trade
MONTREAL

JOHN SMITH
Ontario Agent, Board Trade
TORONTO

CAPT. J. H. WILLIAMS
15 Lumber District, Albany, N. Y.

C. J. SMITH
General Freight Agent, Ottawa.

P. S.—The opening of the Ottawa, Arnprior and Parry Sound Railway, Ottawa to the Georgian Bay, offers to the manufacturer and purchaser a new district not heretofore reached by any other line.

Dauntless Shingle and Heading Machine

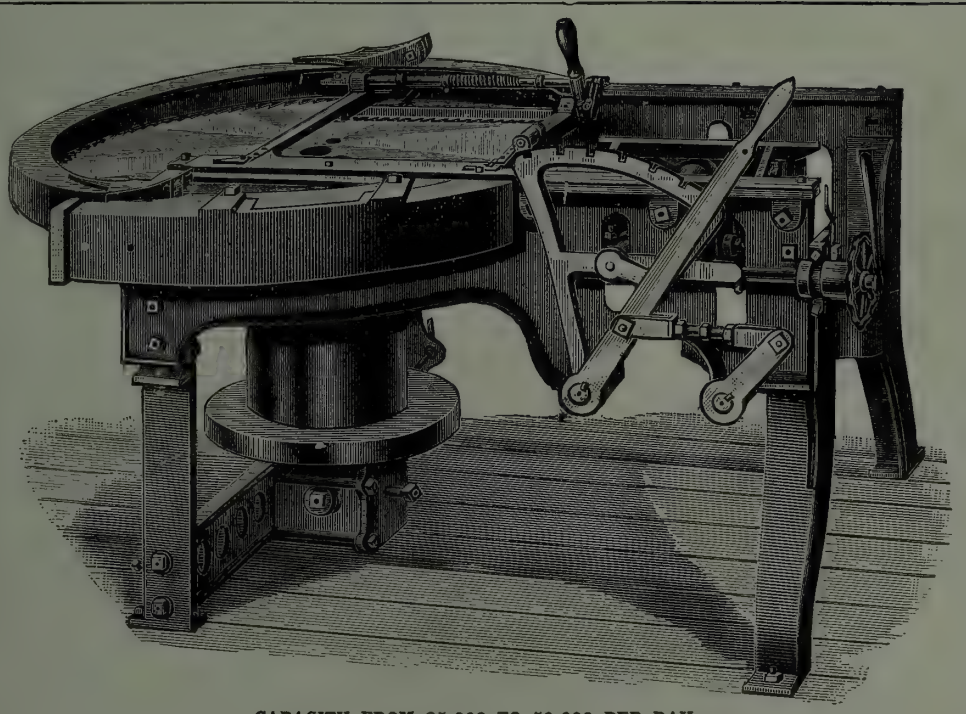
WILL make more Shingles per day than any self-acting machine with vertical saw in existence, and more Shingles from the same quantity of timber.

THE FRAME

... Is of Iron throughout, very heavy and rigid, strongly bolted and braced.

THE CARRIAGE

... Is very light and strong, made of forged Cast Steel Plate, running on steel ways or tracks. Will take in a block 18 inches wide and 19 inches long, adjustable for 16-inch or 18-inch shingles.



CAPACITY FROM 25,000 TO 50,000 PER DAY

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HASTINGS, Dec. 3, 1894.

F. J. DRAKE, Esq., Belleville.

Dear Sir,—We have waited two years before giving you our idea of your machinery. This we did to thoroughly test it, and can now say we know what it can do.

Your Saw Mill is equal, or nearly equal, to any we have seen of much heavier make, and far in advance of any light rig in the market. The capacity per day is fully up to your guarantee, 40 M per day. We have tested with eight men.

The Shingle Mill cannot be beaten for any kind of timber. Ours being in a manner a custom mill, we have good, bad and indifferent timber, but for all it does the work satisfactorily.

You may use this in any way you please, or refer to us at any time.

Yours truly,

(Sgd.) W. J. & H. W. FOWLDS.

F. J. DRAKE

PATENTEE AND MANUFACTURER OF ... SAW, SHINGLE AND LATH MACHINERY

BELLEVILLE, ONT.

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...WHOLESALE DEALERS IN...

HARDWOOD LUMBER

PARTIES manufacturing or having for sale **Birch, Maple, Basswood, Soft or Rock Elm, White or Brown Ash, &c.**, should correspond with us, as we are always in the market for such desirable stock.

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BUFFALO, N.Y.

Annual Sales, 25,000,000 Feet. **We have our own Salesmen in New York and New England.**

Emery Wheels,

Saw Gummers, Automatic Grinding Machines for Veneer, Planer and Paper Knives, &c., &c.

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LUMBER - Wholesale and Retail - . COAL .

Handle all kinds of Pine and Hardwood Lumber

LONG OAK BILLS A SPECIALTY

Office: Corner King and Berkeley Sts.
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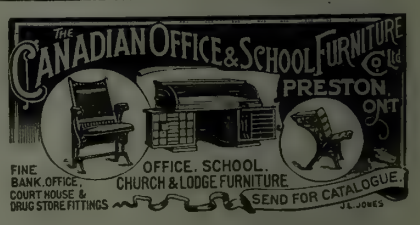
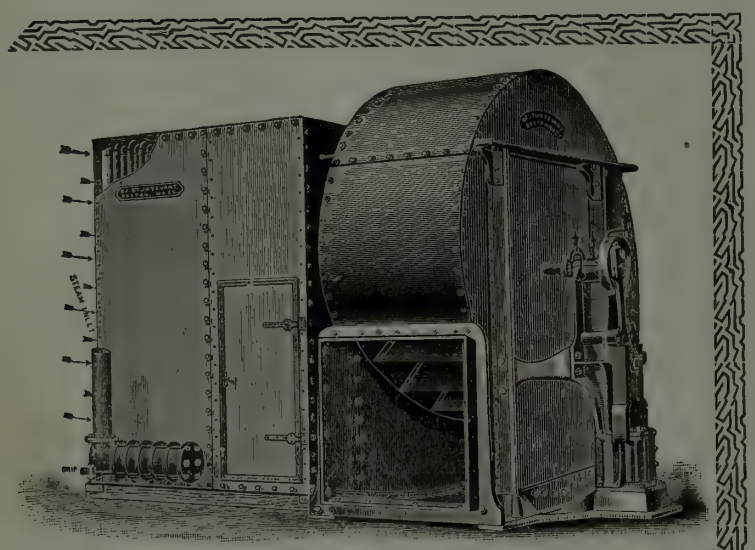


It Pays to Advertise in
THE CANADA LUMBERMAN

A. R. WILLIAMS

....Soho Machine Works, TORONTO....

MANUFACTURER AND DEALER IN


STURTEVANT COMBINED STEAM FAN AND HEATER.

Saw Mill Machinery

Shingle Mill Machinery

Hoop and Veneer Mill Machinery

Wood-working Machinery

Iron-working Machinery

ELECTRIC LIGHT PLANTS. ELECTRIC MOTORS. ENGINES AND BOILERS OF ALL SIZES.

Write for a Circular and Catalogue, mentioning this advertisement.

STURTEVANT DRY KILN PLANTS

EXCEL ALL OTHERS IN EFFICIENCY AND SAFETY.
SEND FOR SPECIAL STURTEVANT DRY KILN CATALOGUES.

A. R. WILLIAMS Soho Machine Works **TORONTO**

THE CANADA LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XVI. NUMBER 7. | TORONTO, ONT., JULY, 1895 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

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AND ALL MACHINERY BEARINGS

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"The Morse" is the only machine in the market that will reface Steam Valves in position.

3,000 MACHINES IN USE.

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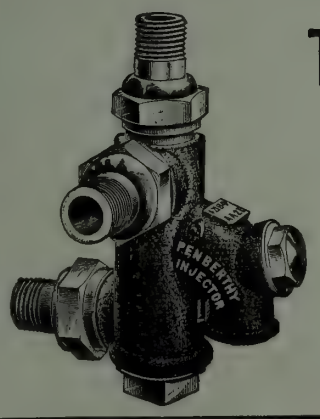

THE.... PENBERTHY AUTOMATIC INJECTOR...

Should be in every Lumber Mill

PENBERTHY JET PUMPS . . WATER GAGES OIL CUPS . . ARE THE BEST

85,000 Engineers have used it, and declare it unequalled as a Boiler Feeder.

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Any one desiring a good Second-Hand Tool, should write us for prices. Have several we will dispose of at a bargain.

CORRESPONDENCE SOLICITED.

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MANUFACTURERS OF

LEATHER BELTING .... AND LACE LEATHER

Danville, Que.

What do you do when the Band Saws Break?

Why, Solder them, of course

We supply a tough quality of silver solder rolled thin for this work. Price, $1.00 per oz. Troy.

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Manufacturing Jewelers

THE TORONTO BLADE TRADE MARK

E. R. BURNS SAW CO.—Toronto

MANUFACTURERS OF

Circular and Long Saws

SHINGLE SAWS A SPECIALTY

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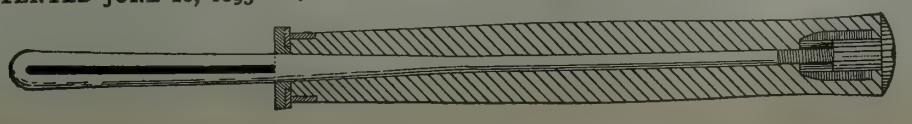
THE "BURNS" CROSS-CUT SAW HANDLE

The Strongest, Most Durable and Easily Adjusted Handle ever invented.

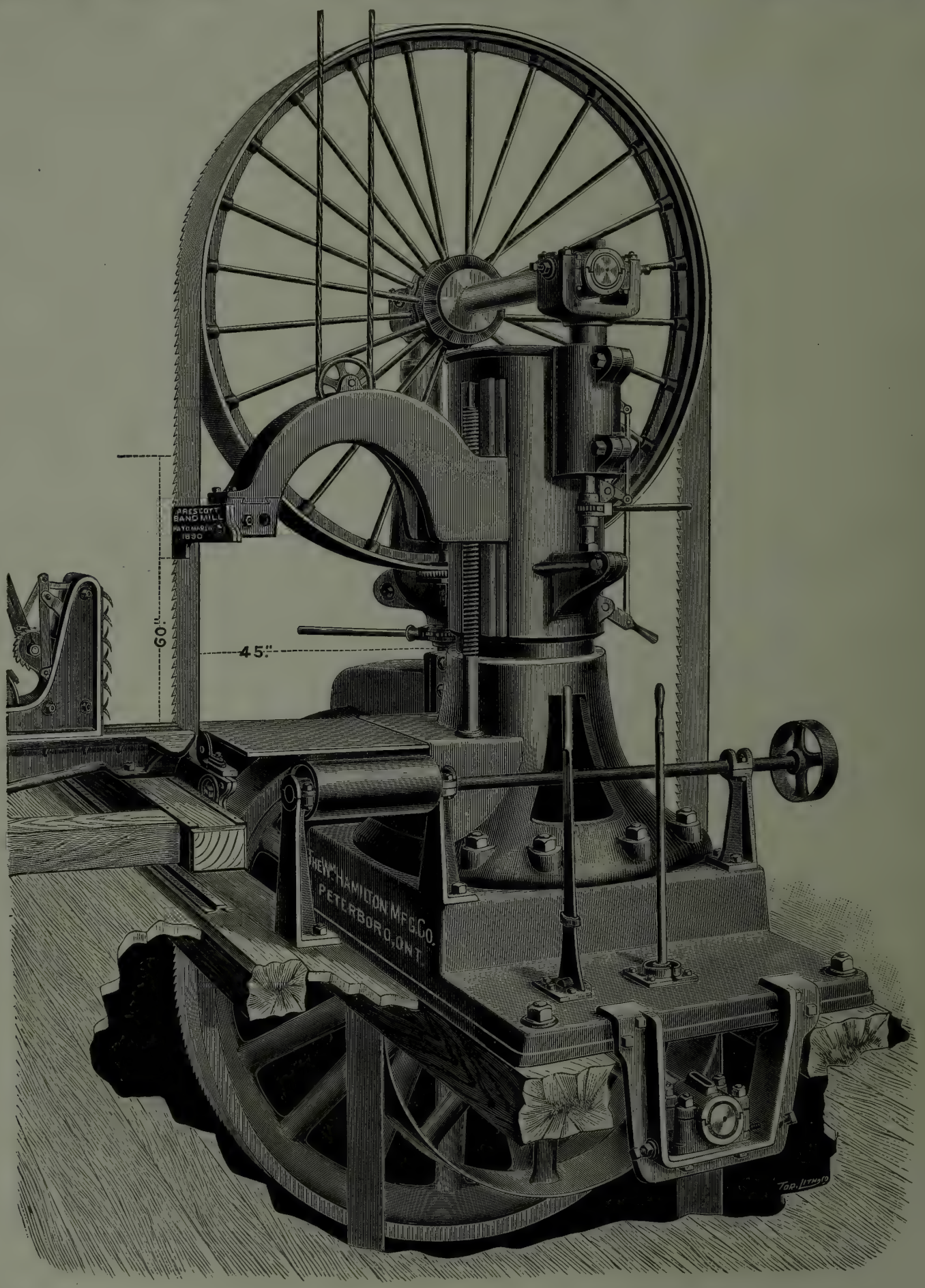
PATENTED JUNE 26, 1893 ◆ ASK YOUR HARDWARE MERCHANT FOR IT



SAWS

THE NEW PRESCOTT

Band Saw Mill



THE WM. HAMILTON MFG. CO., LTD.

PETERBOROUGH, ONT.

Branch Office: Vancouver, B. C.

THE CANADA LUMBERMAN

VOLUME XVI. NUMBER 7. } TORONTO, ONT., JULY, 1895 { TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

MANITOBA LUMBERMEN.

SKETCH OF THE WESTERN RETAIL LUMBERMEN'S ASSOCIATION AND ITS OFFICERS, WITH PORTRAITS.

"In union there is strength."—Old Proverb.

LUMBERMEN in Canada have been slow to realize the force of the old, but timely, saw which we have here quoted. Where lumbermen's associations are found in good numbers in other countries, especially in the United States, their growth in Canada has been slow and stunted. True, in Toronto there is a Lumbermen's Section of the Board of Trade, but it is restricted to lumbermen who are members of this institution, and whilst in particular cases it has put forth a good influence, yet, it can hardly be termed an association in the usual meaning of the term. Talk with lumbermen and they will admit the desirability of a union of the various members of the trade, but whatever the reason may be, it has been found next to impossible to get them together so that this end could be attained. In western Ontario, there did exist a few years ago an organization of hardwood men, which served an excellent purpose, and through methods of mutual protection, made money for by saving losses to its members. But if not actually dissolved, this association has been an inactive force for several years. About a year ago, lumbermen of the Maritime Provinces got together and formed an organization, which started out hopefully, though we are not hearing as much about it as ought to be the case with a living organization.

It is to the west that one must journey to find an illustration of a real live organization of lumbermen in Canada. In Sept. 1891, there assembled in the city of Brandon, Man., about 25 retail lumbermen, having in view the starting of a lumbermen's association. Compared with the membership to-day, and in fact with that which was reported at the second annual meeting, the members were few, but we are told that they were unanimous in purpose, and there and then the Western Retail Lumbermen's Association was formed: constitution and by-laws were adopted; and officers appointed.

Primarily, the organization is of retail men, and for their protection. To quote the Constitution: "The title of this Association shall be the Western Retail Lumbermen's Association, and it shall have for its object the protection of its members against sales of wholesale dealers and manufacturers to contractors and consumers, and the giving of such other protection as may be within the limits of the co-operative Association."

Every trade has experienced the injustice of wholesalers and manufacturers passing the retailer by and selling direct to the consumer. More than once, with the purpose of remedying this trouble, a Round Robin has been signed by retail men in different mercantile lines, resolving to boycott certain wholesalers who have been guilty of this sin. The stand taken by Manitoba lumbermen has been simply this, that they were in the field as customers for the wholesaler and mill man, and they could be depended upon to supply the needs of the consuming public. This position did not mean antagonism to the wholesaler or manufacturer. On the contrary, one of the first steps was to enlist the interest of this branch of lumbering, and a clause was adopted in the constitution admitting as an honorary member any wholesaler or manufacturer who should pay into the treasury the sum of $10 annually. To the honorary members were given all the privileges of membership except that of voting upon any question at the meetings of the Association. At the end of seven months, when the first annual meeting was held, the membership consisted of 130 active members and 15 honorary members, which we are told included practically every wholesale and retail dealer within the jurisdiction of the Association.

One excellent purpose has been served by this organization in keeping down unhealthy competition. No one is debarred from entering the lumber business in any town, but by fixing uniform prices, cutting of prices is suppressed, and when a town becomes over crowded with retail lumbermen conditions soon adjust themselves by one or more dropping out of the business. The scope of the Association has been further extended by admitting to honorary membership manufacturers in British Columbia, as it is from that section, a considerable quantity of lumber of Manitoba and the Northwest is drawn. Questions of freight rates and like matters have always received the attention of the Association, and when a grievance existed, active and business-like methods were promptly adopted to right matters.

The territory of the Association covers the Province of Manitoba and certain portions of the Northwest Territories. The first president was Mr. Alex. Black, of Winnipeg, and this position he held until the annual meeting in February of this year, when Mr. J. L. Campbell, who had been vice-president, was made chief executive officer. The first secretary-treasurer was Mr. G. B. Housser, of Portage la Prairie, to whose energetic efforts, at the inception of the organization, is very largely due its success. At the end of the first year he was succeeded by Mr. I. Cockburn, who has since filled the position with much satisfaction to all the members.

The whole management of the Association has been business-like and energetic. The treasury is never without a reasonable balance on hand. The secretary was made a paid officer, and devotes a large part of his time to the work. The Western Retail Lumbermen's Association is a living example of the advantages to be gained by lumbermen forming themselves into a business organization for self-protection, mutual advantage, and common interest.

The CANADA LUMBERMAN is pleased to publish in this number, on page 10, portraits of the officers of this successful association. These are: President, J. L. Campbell, Melita; Vice-President, Alex. Black, Winnipeg; Sec.-Treas., I. Cockburn, Winnipeg. Directors: D. N. McMillan, Morden; J. M. Neilson, Carberry; R. H. O'Hara, Brandon; J. B. Mather, Glenboro; T. A. Cuddy, Minnedosa; J. Dick, Winnipeg.

THE CURIOUS PAPAW TREE.

AMONG the curiosities of the tree world is the papaw tree, called by botanists *Carica papaya*. This tree is a native of South America, and has been widely scattered in the tropical countries. It is popularly called the "melon tree." It grows to a height of 20 feet. Its leaves are deeply 7-lobed, 2 feet in diameter and borne on footstalks 2 feet long. The fruit is somewhat like a mellon in appearance, 10 inches long, oblong, ribbed and covered with a thick fleshy rind. The fruit is eaten raw or made into a sauce when ripe, and the green fruit is boiled as a vegetable or made into a pickle. The leaves, twigs, trunk and fruit contain an acrid milky juice, which has the singular quality of quickly softening the toughest meat boiled with a little of it. Even wrapping the meat in the leaves or merely hanging it among the leaves will cause it to become tender. The seeds are used as a vermifuge. The leaves are saponaceous. The proteolytic ferment obtained from the half ripe fruit is called papain, and it differs from pepsin in the respect that its proteolytic action goes on in either mental or alkaline solutions as well as in acid solutions.

The total revenue from timber in Manitoba and the Northwest to 1st January, 1895, was $1,038,328, and the total revenue from timber within the railway belt, $250,899.

BY THE WAY.

A THIRD attempt to float a large raft of logs on the Pacific is about to be attempted. We do not know how wise this movement is to be considered. It would be worth something to lumbermen to be able to transport logs in this manner, but the two previous atttempts were so disastrously unsuccessful, involving a loss of about $40,000, that it may well be questioned whether it is the part of business wisdom to make another attempt. It may be that there is luck in odd numbers and that the third trial will prove a success. Let us hope that it may be so. The new raft is about 525 feet long, 52 feet wide, 30 feet deep, and draws 21 feet of water. The route will be out of the Columbia and down the Pacific Coast to San Francisco.

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THE prodigal manner in which the most valuable of timbers are cut and wasted is always a question of serious concern with thoughtful lumbermen. There are few men in the present day, who do not realize the sacrifices that were made through the manner in which white pine in times past suffered by the woodman's axe. To-day white pine is prized and every tree counts. The Northwestern Lumberman reads a lesson to those who would slash and cut down oak, as though the country was full of this valuable product. It pertinently says: "Perhaps after northern and southern pine there was never a more lavish and inconsiderate cutting of any American wood than of oak. The impression seems to have prevailed that there was no end of oak." Oak occupies a very strong position on the market to-day, and it is simply suicidal to allow it to be sacrificed. It is a case of throwing gold dollars away.

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A TRADE journal, published in the Southern States, loses its head, when it says that it will take more than a reduction in freight rates to induce the people to go back to the use of common articles of twenty-five years ago, and classes as among these out-of-date materials white pine. In its ectasy of delight at the success of yellow pine, it says: "It is a much more beautiful wood for finishing than white pine; it is more serviceable; has greater strength, and takes a superior finish as a building material. White pine is a back number, as far as beauty, taste and business uses are concerned." Let us give even the devil his due, and admit that yellow pine possesses many useful qualities. But when its fame is to be exalted by disparaging white pine, where the daily newspaper might be excused for this kind of nonsense, it is hardly pardonable in a class journal that ought to know better, and ought to speak on all subjects by the book. As has been remarked, more than once, yellow pine has owed its foothold in white pine districts largely to the price at which it has been sold during a period of depression when the mass of consumers had to satisfy themselves with a cheaper article. Yellow pine has come to stay and will not want a ready market, but for many of the best purposes to which lumber is put white pine will, as it always has, hold indisputable supremacy.

A skillful carpenter ought to be able to ex-plane all j-oaks knot to in-tree-cate, and fir-three-more he should be able to put up jams without jars.

A European firm has adopted the practice of packing pieces of leather one against the other in the grooves of wheels used for wire rope driving, securing the leather at intervals by wire cord passing through the leather and holes in the pulley rim. The resistance to slipping is immensely increased, and the rope in some cases wears fifty per cent. longer.—Power.

PLEA FOR THE FORESTS.

A SUGGESTION THAT CANADA ESTABLISH FORESTRY SCHOOLS.

MR. EDWARD JACK, a well-known New Brunswicker, and an expert in forestry, when in Ottawa a few weeks ago, was interviewed on the subject of Canada's forest wealth. He said that Canadians did not know half nor quarter enough about their own timber interests.

"The first thing we want to do," he said, "is to get information as to our forests, their trees, character and extent. In order to do this we must have men suitably educated as foresters. This can be done only by the establishment of forestry schools. They should be located in some convenient forest; the buildings should be simple and the cost little. The parties to be taught forestry should be selected from among young men who have worked some winters in the woods and who have a fair education; that is, who can read, write and who understand the ordinary rules of arithmetic. Teaching should be confined to the summer months, thus the pupils would have the winter in which to work and thus gain a living.

"Young woodsmen would not have the wants of their city brethren. They could if needed cook their own simple meals and attend to their own wants. The school need be but a temporary structure, a log cabin, or it may be built of boards, as only a shelter from summer storms would be needed; indeed a large tent or two would be sufficient.

"The pupils should be selected with care, and only those taken who were anxious and willing to learn. The subjects to be taught should be land surveying and rough plan-drawing, and as much of botany, mineralogy and geology as was absolutely necessary to show the pupil the relation of soil and air to the growth of the tree. After being taught plain surveying, one hundred acre tracts might then be surveyed and the pupil taught to estimate the number of trees of various kinds or the number of thousand feet, b. m., of timber on such a lot to the acre, and the cost of hauling it to the nearest stream. This knowledge of cost of hauling most of them would already have."

"Do not lumbermen make pretty close estimates now?"

"In estimating the quantity of timber growing on any certain piece of land, lumbermen seldom have any fixed rules to go by," said Mr. Jack, "and here is where the pupils of a forestry school would derive the greatest benefit, for when they had been taught to estimate the quantity of timber by rule so far as this is possible on a lot of land, their services would be of the greatest value to him who has dealing in timber lands. The course of study might comprise a period of four summers and the brightest and best pupils might be selected as instructors of others or as employees under the government, which needs the services of a number of well instructed woodsmen, men who would be capable of going on the Dominion lands and of reporting on the timber standing therein, its quantity and present and prospective value.

"Some years since I accompanied a party of members of the Roval Arboricultural Society of Edinburgh on a trip through some of the principal forests of Scotland. We remained over night among other places at a country hotel on the Tay. The party comprised many distinguished foresters. One, I remember, represented the Maharajah of Yohore. Each representative was called upon to describe the system of forestry adopted in the country which he represented, and I was asked in my turn to describe the forestry system of Canada. I was mortified enough when I had to reply that Canada had no forestry system.

"A Japanese gentleman who was at the Forestry Exhibition held some years ago at Edinburgh, heard with surprise the same thing, and told me that Japan then had a forestry school with some thirty professors.

"The possession of a trained staff of practical foresters would be the means of saving hundreds of thousands of dollars annually to Canada. We have many woods, especially on the lower St. Lawrence and on or near the shores of New Brunswick, which we now look upon as of little or no value, but which in the near future will form the basis of great industries and will add much to our commerce.

"I am the correspondent of L'Echo Forestier, a special organ of the French timber trade, published in Paris, and I learn from the editor that France stands ready to use some of these woods, and I hear the same thing as regards Spain from a correspondent at Barcelona.

"The Intercolonial Railway crosses many rivers running through great forests, nearly all at right angles, and I am satisfied that with a proper investigation into the character of the woods on these streams, made by competent men and published to the world in English, French and German, many very extensive industries in now unused woods would spring up, especially along the shores of New Brunswick, where labor is abundant and good, and where one can live as cheaply as he can in any part of the world, as the sea will furnish him with a great part of his food, and where the soil is good enough to grow all the vegetables needed for a family."

THE WORKING SURFACE OF A PULLEY.

IT has taken considerable time to settle the question in regard to belts made of leather, as to which side should run next to the shaft wheels, if, indeed, it has been settled, for even now it is rehashed occasionally by saw mill men, says an exchange. It is always a pleasure to see the best side of a belt stand out whenever a new belt is to be set in motion, and good looks go a long way on all such occasions.

In spite of all tests that have been made on leather belting, nothing has ever been said of the extra cling that the flesh gets by being easily squeezed into every depression on the face of the pulley, which the grain side has a tendency to bridge over. This seems to follow the law of friction where the particles of one material interlock themselves with those of another. Pulleys covered with leather and wheels made of hardwood of all kinds have given much greater driving power from the same grasp of belt than the handsomely polished metal pulleys have done, though this latter class of wheels has all the advantages that are to be derived from atmospherical influences.

But the fine imperfections on the true surface, which are the real gear teeth of friction, are not there in the abundance found in the material that is more closely allied with the belting itself. Everything would seem to indicate that a driving wheel is finished in the wrong direction when a covering of leather adds so much to its driving capacity.

The teeth of gear wheels are not cut lengthwise, and this gives all the hold that its strength will allow to the turn of a pulley, with the finishing cut taken crosswise and ground on a polishing wheel, herringbone fashion. This may not be appreciated in the machine shop, but the object to be obtained is the very one that a draw file is used for, namely to pitch the minute grooves found on every surface in the right direction.

CONCERNING FIRES.

IT is very generally argued, that when a boiler is being heavily worked, a thick fire is absolutely necessary, but from some experiments lately made, the opinion appears to be an erroneous one. As to the economy of the two, some maintain, that heavy fires give the most economical results; but this, also, is questionable. Valuable information on the subject has recently been brought out by the results of two evaporative tests, says the Mechanical World. They were made on a 72-inch return tubular boiler, having 1,000 3½-inch tubes, 17 feet in length. The heating surface amounted to 1,642 square feet, and the grate surface to 36 square feet, the ratio of the two being 45.6 to 1. On the thick fire test, the depth of the coal on the grate varied from eight to twenty inches, being heaviest at the rear end, and lightest at the front end. On the thin fire test, the depth was maintained uniformly at about six inches. The difference in the results, as appears from the figures given, indicates an increased evaporation, due to thin fires amounting to 15.6 per cent.

He who wood-pile up his fortune to the skies must knot forget to advertise.

The "last" man among the wood-workers is awl-ways the first among the shoemakers.

When a man devises a little tool that helps the work along faster and better than before, show him you appreciate it, either by making his work easier, giving him better work, by a money consideration, or last but not least, letting him see that you consider him a valuable man with valuable ideas.—Machinery.

MEASUREMENT OF LUMBER.

The following table shows comprehensively the number of feet contained in scantling or timber of given sizes:

SIZE	LENGTH														
	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
1 × 8	8	9	11	12	13	15	16	17	19	20					
1 × 10	10	12	13	15	17	18	20	22	23	25					
1 × 12	12	14	16	18	20	22	24	26	28	30					
2 × 3	6	7	8	9	10	11	12	13	14	15	16				
2 × 4	8	9	11	12	13	15	16	17	19	20	21	23	24	25	27
2 × 6	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
2 × 8	16	19	21	24	27	29	32	35	37	40	43	45	48	51	53
2 × 10	20	23	27	30	33	37	40	43	47	50	53	57	60	63	67
2 × 12	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80
3 × 4	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
3 × 6	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
3 × 8	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80
3 × 10	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
3 × 12	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
4 × 4	16	19	21	24	27	29	32	35	37	40	43	45	48	51	53
4 × 6	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80
4 × 8	32	37	43	48	53	59	64	69	75	80	85	91	96	101	107
4 × 10	40	47	53	60	67	73	80	87	93	100	107	113	120	127	133
4 × 12	48	56	64	72	80	88	96	104	112	120	128	136	144	152	160
6 × 6	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
6 × 8	48	56	64	72	80	88	96	104	112	120	128	136	144	152	160
6 × 10	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200
6 × 12	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240
8 × 8	64	75	85	96	107	117	128	139	149	160	171	181	192	203	213
8 × 10	80	93	107	120	133	147	160	173	187	200	213	227	240	253	267
8 × 12	96	112	128	144	160	176	192	208	224	240	256	272	288	304	320
10 × 10	100	117	133	150	167	183	200	217	233	250	267	283	300	317	333
10 × 12	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400
12 × 12	144	168	192	216	240	264	288	312	336	360	384	408	432	456	480

THE TIMBER TREES OF NORTH AMERICA.

AMERICAN WHITE OAK

THIS tree derives its name from the pale-ash colour of its bark, and very noble logs of timber are produced from it. The wood is of a pale, reddish-brown colour, straight-grained, moderately hard and compact, tough, strong, and of fair durability. Being remarkable for its elasticity, planks cut from it may, when steamed, be bent into almost any form or curve, no matter how difficult, without danger of breaking or splintering them. It is considered by far the best foreign oak timber, of straight growth and large dimensions, for constructive purposes that has ever been imported. The American white oak timber, introduced in 1861, was used in the royal dockyards as a substitute for British oak, chiefly for beams, keelsons, and other works requiring large scantlings. At the moment of its introduction, however, the great change took place by which iron was substituted for wood in shipbuilding; consequently the demand for it fell, and very little of this wood has been placed upon the London market for employment in the private trade.

THE AMERICAN LIVE OAK

is an evergreen, and is found principally in the Southern States, near to the sea-coast. The wood is dark brown in colour, hard, tough, strong, heavy, and very difficult to work, on account of the grain being waved, or twisted. It makes good mallets for carpenters, and would be useful for cogs in machinery, and many other services where great weight is not an objection.

BALTIMORE OAK.

is so called from the shipments being made chiefly from Baltimore. The wood is of a reddish brown colour, somewhat darker than the white oak, and less hard and horny in texture. It is moderately strong, and the quality fair. It might be used with advantage for many minor fitments in ships, and for general purposes in carpentry, as it is easy to work and stands well after seasoning. It is not, however, recommended for use where great strength is required.

CANADIAN RED OAK.

This wood is brown in colour, has a fine, straight, clean grain, is somewhat porous, shrinks moderately without splitting, is easy to work, and stands well after seasoning. Large quantities are usually imported annually into London, and a far greater quantity into the Liverpool market for the use of cabinet makers and general dealers, who employ it for the manufacture of furniture and in the domestic arts, but as a building wood it is considered unfavorable, and unfit for works requiring strength and durability.

CANADIAN ASH.

The timber of this tree is often confounded with the American white ash also found in Canada. It attains good dimensions, and yields the timber of commerce in logs varying from 20 ft. to 40 ft. in length, by from 10 in. to 16 in. square. Our rafters are also produced from it. The wood is reddish-brown in colour, and considerably darker than the English ash. It is plain and straight in the grain, moderately hard and heavy, tough, elastic, and easy to work. It is very suitable for employment for oars to boats, and is consequently in great request for that service, while its economical uses are as wide and general as that of our native growth.

AMERICAN ASH, OR WHITE ASH.

The wood is light brown or whitish in colour, of very moderate hardness and weight, is tough, elastic, clean, and straight in the grain, and quite easy to work; it stands well after seasoning, and hence we get from this tree the best material for oars for boats that can be produced. The best quality wood has a clean, bright, uniform whitish colour.

CANADA ROCK ELM.

This wood is whitish-brown in colour, hard, tough and flexible, with a fine, smooth, close, silky grain; and, as it has only a small quantity of sapwood, it can be worked up closely and economically.

Rock elm is used for ladder steps, gratings, etc.; on account of its clean whitish appearance, and owing to its flexible character it is frequently used in boat building. It cannot, however, be used with advantage in bulk, or even in plank, if exposed to a dry current of air, as under such circumstances it is very liable to split with fine deep shakes from the surface. Large quantities of this wood are imported annually into London and Liverpool for coachmaking, turnery, boat building, etc.

AMERICAN WALNUT.

The wood of the American black walnut is whitish brown in colour, moderately hard, straight and plain in the grain, splits freely, and is easy to work; the heart is much darker, however, whence the name, and is very durable and handsome. The uses of walnut wood are chiefly for furniture and pianoforte making; it is also much used for gun stocks.

CANADIAN AND AMERICAN BIRCH.

There are several species of birch tree in North America. The wood is of a yellowish colour, moderately hard, straight and even in the grain, close in texture, and easy to work. It is imported into this country in logs varying from 6 ft. to 20 ft. in length by 12 in. to 30 in. The heart-shake is small, and the wood near the pith is, for the most part, solid. Very little loss can therefore arise from its conversion. It is used extensively for furniture, turnery, and in a variety of ways in the domestic arts. The canoe birch obtains its name from the use of the bark by the Indians.

PRESERVATIVES OF WOOD.

CONSUMERS of wood have always been troubled by the proneness of the material to decay, says a writer in the Lumber World. In most quarters of the world, timber is certain to rot rapidly, because of the cliamatic conditions. In a few regions the climate favors wood, so that it will last centuries, but on the whole wood is perishable material, and in all ages builders have wished to find means to render it more lasting.

It is a little singular the ancient Egyptians, who appear to have mastered the art of preserving the bodies of men, cats and other animals, have left no record to show that they ever attempted the preservation of wood. History records no serious experiments in the line of wood preservation until modern chemistry was developed. In the latter part of the eighteenth and the early part of the nineteenth centuries the chemists experimented on perishable woods with preservatives, and up to 1816 the record shows that the following substance had been used to impart lasting qualities to wood and other substances: Selenite, alumine, copper sulphates, iron sulphates, resins, mineral coals, charcoal powders, vegetable oils, charring, essential oils, barytes, quicklime, common salt, corrosive sublimate, sulphate of zinc, coal-tar nitrate of silver, carbonate of silver, arsenic and caustic soda. Some of these substances gave good results, but the first great advances in preserving wood were made after the year 1830.

Among the first valuable process of preserving wood was "kyanizing," so named after the inventor, Kyan, who patented his process in 1832. This process emloys corrosive sublimate. The next advance was made by Margray, who in 1837 patented a process employing sulphate of copper. In 1838 and again in 1848, Bethel patented the process known as "creosoting," in which cresote or coal-tar is used. Burnette in 1838 and 1840 patented the process called "burnettizing," using chloride of zinc.

Countless other processes have been brought out, using various other antiseptics, but the four named processes have led all others. At this time the chloride of zinc and the creosote process are extensively employed, while others have fallen into comparative disuse.

The timber is treated in several ways. The wood may be steeped for a given time in the antiseptic solution, or the solution may be fed to the tree while growing. Mechanical force, generally hydraulic pressure, may be employed to inject the solution into the fresh wood in the open air or in a closed vessel. Kyanizing is done by steeping the wood in the solution. The principal method now employed is the use of hydraulic pressure in a closed vessel.

Preservative treatment of wood has been reduced to something like an exact science. The process generally employed is as follows: The wood is placed in hermetically-sealed iron vessels, and for several hours subjected to steaming at a pressure of about twenty pounds to the square inch. The steaming liquefies the sap and raises the temperature of the enclosed air. The steam is let out, and air-pumps exhaust the air from the vessels. The sap is driven out of the wood, and next the preservative solution is introduced into the vessel. Hydraulic pressure is applied by pumps, and the chemicals are driven in to the sap-cells in the wood under a pressure of 50 to 160 pounds to the square inch. This process requires from three to twelve hours.

Creosoted timber for weather exposure receives from eight to ten pounds of creosote to the cubic foot, and for use in water where worms attack wood the quantity injected ranges from ten to twenty pounds to the cubic foot. Wood to be creosoted is cut to size before being treated. Creosoted railway ties last from ten to twenty years, and creosoted piles in the sea last from ten to twenty years.

Burnettizing is accomplished similarly to creosoting. In this process the chloride of zinc is introduced at the temperature of the atmosphere instead of being heated. Different woods vary in their capacity for absorbing solutions. Open-grained and porous woods are better for treatment than hard, close woods.

In the chloride of zinc process a too weak solution will wash out, while a too strong solution will destroy the wood. German burnettizers use a 1.9 per cent. solution of zinc, while Americans have used 3.75 to 5 per cent. solutions, which made the woods brittle.

Another process uses two solutions, the first one chloride of zinc mixed with a small amount of gelatin, and the second solution of tannin. These are injected successfully in the usual way. The tannin and gelatin form an insoluble compound, which blocks the pores and prevents the zinc from being washed out. Railroad ties treated in this double way have given satisfactory results. Germans mix chloride of zinc with about eight per cent. of creosote, making an emulsion that is preservative.

French experiments with saline solutions and electric currents enable the experimenters to do in one hour what would require from ten to forty hours to do with the solution alone. The electric currents are sent through the wood while immersed in the solution. The principal uses of wood preservatively treated are for piles in sea water were teredos abound, for railroad ties, and for conduits for electric wires underground.

AS EDITOR DEFEBAUGH SEES IT.

"ONE of the things that impressed me in my contact with Buffalo and Tonawanda lumbermen," says Editor Defebaugh, of the Timberman, "was the easily demonstrated demoralization of the trade in connection with lumber by reason of the recent change in the tariff laws as affecting the distribution of Canadian stock. It is well known that the high-class lumber product of Canada finds resting place on other shores, and the difficulty in the past has been to find a market for common grades. By a modification of the tariff laws, the Canadian manufacturers can come to Buffalo and the United States for their common stock in competition with similar lumber from this country, and have thereby greatly lessened the field of operations of wholesalers at the points mentioned. It does not take lumbermen whose business is located on the American side of the Falls long to allude to this subject in a discussion of lumber trade matters with newspaper men. Certainly the tariff question as a local issue is clearly defined, for in localities where Buffalo and Tonawanda have had little competition, and none from Canada, large inroads have been made by Canadian operators. And, mind you, our Canadian neighbors have other things to sell. They grow hay on the other side, and for purposes to which the dried grass is usually applied—that of furnishing lining for horses and cows—their hay is just as good and goes quite as far as the states-grown article, while the price is from $3 to $7 less per ton than the figures current before the freedom of the country was extended to our excellent neighbors."

NEW ENGLAND manufacturers lead the procession in the all-round, economical, general utilization of wood.

THE average logger may not dress like a dude, but he's always a "very chipper feller" for a' that and a' that.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

WARNING

Subscribers and advertisers are hereby warned not to pay money on account of this journal other than to our duly authorized agents, who are provided with our official form of receipt. This official receipt is the only one which will be recognized in the case of money paid to collectors.

A CANADIAN LUMBERMAN'S ESTIMATE CHALLENGED.

THE statement made by Mr. W. C. Edwards, M. P., of Rockland, and quoted by the government statistician in his monograph on "The Forest Wealth of Canada," that ten times the amount of forest wealth has been destroyed in Canada through fire than has been cut by lumbermen, is vigorously disputed by the Timberman, of Chicago. It says, that this is one of a class of statements too common among lumbermen, both in the United States and Canada, and seriously damages the cause of forest preservation.

Our contemporary, taking its own country as an illustration, argues in this manner. It is supposed that there is cut annually in the United States about 25,000,000,000 feet of merchantable lumber and timber. Assuming that the high average of 10,000 feet is found to the acre, this means 2,500,000 acres, or 3 906 square miles must be on the average burned over annually, or a stretch of country 400 miles long and 100 miles wide, destroying each year 250,000,000,000 feet of timber. If we restrict it to white pine only and assume that the products in the three states of Minnesota, Wisconsin and Michigan is 7,000,000,000 feet per year, by the same process we find 10,940 square miles burned over annually in those states, which to say the least are as susceptible as any to forest fires. This is equivalent to a territory more than 100 miles square. The most extensive fire in the history of the country occurred last year, when at a rough estimate 1,500,000,000 feet of timber was damaged or destroyed. According to Mr. Edwards' statement 70,000,000,000 feet were destroyed, not merely in such an extraordinary year as was 1894, but each year by fire in those three states.

It is to be remarked that Mr. Edwards in a letter written to the Commissioner of Crown Lands of Quebec some time since makes even a stronger statement than that quoted from his speech in the House of Commons. Referring especially to certain lumber districts in eastern Ontario and Quebec, he wrote: "I think I am safe within bounds when I say that in the region of country with which I am dealing 20 times as much merchantable timber has been destroyed by fire as has been cut and taken away by the lumbermen, to say nothing of the young and undersized pine destroyed at the same time, for fire destroys indiscriminately, while the judicious lumberman preserves the young and growing pine for future uses." Mr. Edwards' first statement was made on the floor of parliament in the hearing of a number of gentlemen engaged in lumbering operations, who also hold seats in the House, and he appealed to them for a verification of the statement he was making. No one contradicted it. The calculation of the Timberman places Mr. Edwards' figures in a peculiar light.

It is a hard matter to estimate how great has been the loss to Canada or the United States from the destruction of its forests by fire. But if we go back a little in history there will be found a time when this loss far outstripped the cut that was made by lumbermen from year to year. And in the aggregate this destruction of the past must have reached enormous figures. It would be lamentable, if in recent years, when lumbering operations have reached great activity, that the destruction of forest products by fire should exceed double, much less ten times that felled by the lumberman's axe. But viewed, as we can understand Mr. Edwards has viewed the question, it may be doubted whether, after all, his statement is an extravagant one. However, Mr. Edwards is quite able to make his own reply, and we shall be glad to hear from him in answer to this criticism from our Chicago contemporary.

WOOD AND METAL RAILROAD TIES.

THE railroads of Canada and the United States are among the largest consumers of lumber. Without making any reference to the consumption of forest products in car building, if we take the one item of railroad ties the figures assume large proportions. Mr. Geo. Johnson, government statistician, calculates that for the 18,590 miles of railway in Canada, for railroad ties alone, 3,340,000 acres will be required to supply the consumption with 530,000 acres for each year's demand.

An investigation, that has been made by the forestry division of agriculture of the United States, and embodied in an exhaustive report of nearly 400 pages, by Mr. E. E. Russell Tratman, A. M. Soc., C. E., shows that metal ties are, in part, supplanting wooden ties in many European countries. In Asia, 14,586 miles are laid with metal ties, where the total railroad mileage is not more than 22,000 miles. Africa has 2,041 miles of metal ties, out of 5,675 miles of railroad. In South America, Central America, West Indies and Mexico, 21 per cent of the railroads are laid with metal ties, or 4,416 miles out of 21,500 miles. In Europe only about 10 per cent. of the 137,000 miles of railroad use metal ties. Germany stands at the head of European countries building its railroads in this manner, the total being 11,605 miles. In the United States and Canada, though there is an increase of metal ties, the percentage is barely 18 per cent. of the entire railway mileage of those countries.

Railroad corporations on the whole favor wooden ties, and the policy is rather to employ methods of preserving the wood than adopting metal ties. Of the woods used oak takes the first place, represented by 60 per cent. of the total number of ties in service; pine 20 per cent.; cedar 6 per cent.; chestnut, 5 per cent.; hemlock and tamarac, 3 per cent.; red wood, 3 per cent.; cypress, 2 per cent.; various other woods 1 per cent.

Mr. Tratman observes that white oak is the best wood both for wear and durability combined. Pine is largely used in its numerous varieties, of which white and yellow pine are the best, although the preference is given to the former, as it is slower to decay. It will last from 7 to 8 years under heavy traffic or 10 years under light traffic, where yellow pine will decay in about 6 years, though it will resist wear for even 10 or 12 years. Hemlock is largely used, but its chief recommendation is cheapness. It gets soft under the rails and at the spike holes. Spruce is about the same, lasting from 3 to 7 years.

The suggestions made by Mr. Tratman as to the best time and methods for lumbering tie timber are valuable. Winter is the best time for felling tie timber, especially if it is to be used without seasoning, as it then contains less fermentable substance and seasons more slowly and evenly before the temperature is warm enough to cause fermentation to set in. Ties should always be left to season for at least six months, and a year is even better, as ties properly seasoned are far superior in efficiency to those used at once. The ties should be barked and piled rows of 8 to 12, the ties placed about 6-in apart and the inrows separated by two ties at right angles to them. Ties should be made from sound, thrifty, live or green timber, free from loose or rotten knots, worm holes, dry rot, wind shakes, splits or other imperfections, which effect their strength or durability.

It is only very recently that railroads have paid close attention to the importance of watching cost of renewal of ties. A few years ago the cost of renewals was but a fraction of the cost of rail renewals; now the figures are reversed, and tie renewals offer an opportunity for large reduction in expenses. Statistics are given, showing an increased ratio of tie renewals to rail renewals, ranging in 1890-91 to 100 for rails and 111 to 398 for ties. Caution is also exercised now in the removal of ties, it having been the case in the past that many ties in comparatively sound condition have been removed, through the indifference of those having the work in charge.

Valuable customers as are the railroads of the country for timber for ties, it would be unwise to suggest anything otherwise than the closest economy and the wisest care in the disposition of forest products for this purpose. Mr. B. E. Fernow, the United States forestry expert, in a word of introduction to Mr. Tratman's report, points out that it can be a question of only a short time when even wood for railroad ties will become scarce, and it behooves those interested in this branch of production to make themselves acquainted with the best process for preserving wood used for railroad ties. Fortunately this is a phase of the question that has been studied with a good deal of care, and there are to-day some excellent processes to be used for this purpose.

EDITORIAL NOTES.

THE Railway Review, published in the United States, raises an interesting discussion regarding lumber rates. It says: "While it is coming to be almost universally admitted, that the principle of charging what the traffic will bear is, when applied in its proper sense, the correct basis on which rate schedules should be formulated, it is also coming to be believed that without such a basis some method by which railroads can be protected from dishonest shippers on the one hand and equally dishonest associates on the other, must be provided. The theory that, aside from the question of risk, it costs no more for a railroad to haul a ton of gold than a ton of lead, or a bolt of silk than an equal weight of calico, therefor the transportation charges should be practically the same, now finds few advocates, but the railroad manager and the hardwood merchant who both admit that a case of high price shelf goods should pay a higher rate than an equal weight of iron bolts, find when they come to put the theory into practice there are dishonest shippers who will offer, and dishonest railroad men who will accept, a shipment of shelf hardware under the description of iron bolts and thereby defeat the object of discriminate theory. This subject is just now agitating lumber mill men who wish to obtain a market for their low grade lumber, which under the present basis of rates, is not only practically refuse stuff, but a nuisance as well as a constant source of danger. They understand full well that because of the possibilities inherent in the dishonest combination referred to that the railroads can safely issue a reduced tariff on such product, but they also know that properly handled that traffic would prove a source of revenue to both themselves and the railroads and at the same time put upon the market lumber that, for some purposes, could be employed where a more expensive grade was now being

used. Here is a problem in transportation that may profitably engage the attention of those interested. That it ought to be possible to market this product which is now going to waste is a self evident proposition, but how under present competitive conditions it can be accomplished is decidedly problematical." How Canadian lumbermen would relish a fixing of rates on the basis here suggested is an interesting question to propound. There is certainly an advantage in allowing poorer grades of lumber to be carried on a low rate, and this might have the effect of causing activity in lumbering in certain sections to day where the better lumber is cut away. But there is much to be said in another direction, and this would be, as Rudyard Kipling has said, another story. The matter in any case is suggestive, and we would be glad to have letters from our readers saying how the Railway Review's proposition strikes them.

AN illustration of how thoroughly the growth of Canadian communities has centered around the lumber industry is found in a review of the lumber trade of Belleville, published in the fine special issue of the "Daily Sun" of that city. We are told that the history of the lumber industry in Belleville is almost a history of the city itself. The growth and development of the lumbering interests was, for many years, a barometer of that city. And then when the decline of the industry set in the city reverted for support to the agricultural and dairy interests. To-day the lumber industry is represented by but one concern that makes a sole business of lumbering in all its branches. This is the business of Mr. C. P. Holton, who first established in Belleville in 1872. At the time he commenced business there were no less than thirteen mills in and around the city all within a radius of three miles and all in active operation. A prominent lumberman of the early days was the Hon. Billa Flint. At that time there were also the following well-known lumbering firms established in Belleville: H. B. Rathbun & Co., Buck & Stewart, Job Lingham, Geo. Hanwell, Jones & Vandusen, Page & Co., Lewis & Kerr, Alexander Sutherland, D. D. Bogart, Wm. Bleecker, Foster & Sutherland, W. A. Ostrum, James Ross, John T. Lattimer, Baker, Jones & Co., Jacob Sills and Pope & Andrews. When these establishments were all running a large export business was done, but at the present time trade is almost entirely of a local character. What has been Belleville's history has been the history of many other towns and cities in the province, and will be the history of others, as the forests become depleted and the available timber removed from the saw.

FROM the north, the south, and away off on the Pacific Coast, comes the one call for an advance in lumber prices. Seldom have we seen so generally expressed a desire that lumbermen in all districts should resolve on falling into line with the hardening of values in iron, steel, leather, wheat and other commodities, and secure an advance in prices. Lumber for two years past, at least, has been sold at most profitless prices. In some sections of the country these conditions have been more aggravated than in others, the greater recklessness, to use a term none too strong, being manifested on the Pacific Coast. But white pine men have no occasion to feel elated at the margin of profit that has been left to them of recent years. Yellow pine men have this time led in the van and organized themselves and fixed on better prices. Perhaps they had as great occasion as anyone to take this step, for everyone knows how prices in the south have been slaughtered for years. Others can now well afford to follow their example. In the natural course of commerce, it is expected that with a revival in business in almost every line, lumber must follow a like course. But after all, what is done will depend upon lumbermen themselves. If they are satisfied to let things drift and not move in the direction of better prices, they will be just that much longer in placing their business on the improved basis that, seemingly, is going to be the record with other trades. Let lumbermen in the different sections shove up their prices a notch or two and it will not be long before the trade generally will fall into line. For it is something everyone is waiting for, though no one seems to have the courage to take the first step.

THE town of Medford on the Wisconsin Central Railway was struck recently by a cyclone, which overturned buildings and uprooted trees but left intact a new hotel which was in process of construction, and this hotel it seems was framed with hemlock timber, which has a reputation for toughness. The circumstance has caused Wisconsin papers to raise a boom for hemlock lumber, and it has brought this wood before the lumber trades in a manner which was quite out of the regular history of hemlock. This wood is found in large quantities in Wisconsin, the bark being used extensively for tanning purposes. For some little time, however, hemlock has been coming more to the front, and the suggestion has been made more than once that the future would find it largely put to uses that hitherto had not been the case. And as white pine becomes scarce it may be expected that hemlock will serve as one of the substitutes. One thing is sure, that in those districts where hemlock is stripped for the sake of the bark the wood itself cannot be allowed to go to waste. In different parts of Ontario hemlock is to be found in considerable quantities, and it has been noticeable that in the reports throughout different parts of the country published regularly in the Weekly Lumberman, hemlock has been spoken of by a number of correspondents as being in growing demand. In the issue of June 12th Mickle & Dyment, of Gravenhurst, reported that hemlock is among the woods in largest demand. Geo. Thompson, of Wingham, tells the same story. The growing scarcity of white pine will force many different classes of wood to the front, and in this particular interesting changes will be made in the lumber business, which intelligent men will study with profit.

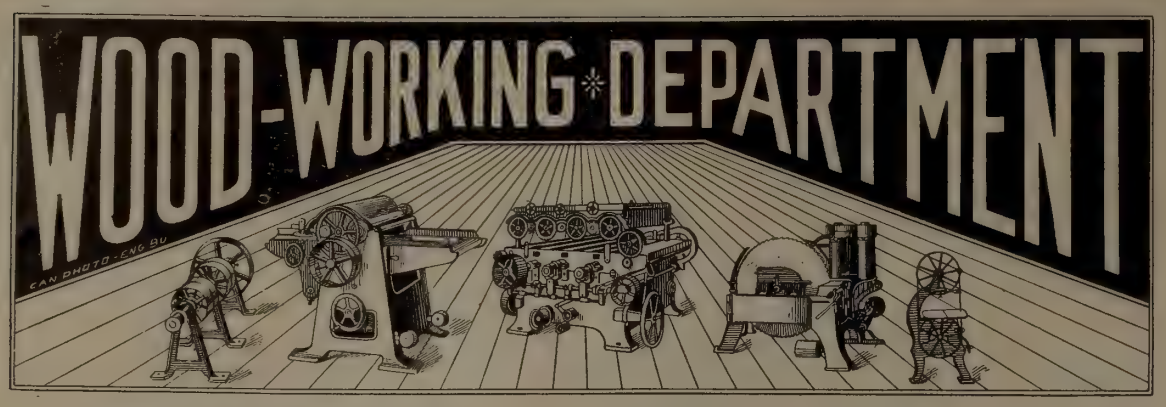
LUMBERMEN owe much to Mr. W. C. Edwards, M.P., the well-known Ottawa lumberman, for the persistent and intelligent manner in which he has agitated for greater care in the preservation of Canadian forests from fire. He has recently written a letter of length to the Commissioner of Crown Lands, Quebec, making many valuable suggestions on this matter. He speaks with a minutely familiar knowledge of the lumber districts of eastern Ontario and Quebec. His suggestion is that fire rangers be appointed, to be named by the lumbermen, the crown and the lumbermen each to contribute one half the payment of their salaries. An important matter, he says, would be the appointment of wise and judicious men who would create a good feeling among the settlers and impress upon them the great and important truth that the preservation of the forests and the continuance of the lumber trade is their salvation from two sources, namely, in supplying them with both work and markets for their produce and also averts to as late a day as possible direct taxation, which must surely come when the revenue from the forests ceases altogether or is lessened very much. He points out also another serious source of loss to Quebec, and at the same time a great wrong to limit holders, namely, the practice of buying lots in certain townships ostensibly for settlement, but really for the purpose of securing at nominal cost the standing timber. He says: "For instance, in our case, all the limits we hold are old limits, which were very greatly cut over before coming into our possession. In buying we were influenced in the price paid in nearly every purchase, by the quantity of other timber, apart from pine on the limits, but we find we are pursued both on the north Nation river and the Gatineau by men who are robbing both the crown and ourselves by buying up lots at nominal prices on which we have paid ground rent for years, doing us out of our just rights and at the same time getting quantities of timber from the crown for comparatively nothing." In certain states of the American Union, Wisconsin in particular, and some parts of Michigan, this policy has been pursued with the result, as was outlined to the CANADA LUMBERMAN a short time since by Mr. McBurney, of Callender, Ont., who had lumbered in that section, that valuable timber lands drifted into the hands of speculators, many of them who had themselves gone in originally and ostensibly for the purpose of taking up land, but with the ulterior purpose of simply carrying out the necessary settlement conditions, and then disposing of their lots at a fancy price, because of the great value contained in them through the rich timber which they grew. Better things had been expected in this country, and it would hardly seem possible that after this evil has been pointed out so fully and clearly by Mr. Edwards, that the Quebec government can do less than take firm and vigorous measures to amend their land policy.

SPRUCE NOTES.

As the business of pulp wood manufacture grows, it is to be expected that efforts will be made to utilize other classes of wood besides spruce. It has been a conviction with some that jack pine, despite the resinous matter it contains, can be utilized successfully in pulp manufacture. Recently a car load of jack pine was forwarded to the paper mills of William Barber & Bros., Georgetown, for the purpose of experimenting by Mr. A. F. Neuman, who holds the patents for this manufacture. In a letter to the CANADA LUMBERMAN, Mr. John R. Barber writes that the experiment has proven quite successful. He says, it is somewhat more difficult to work than spruce, but equally as good a paper making fibre. "We use the pulp in both news and book papers with equally good results." Word from Michigan contains information that Alpena business men are considering a project to erect a factory for the manufacture of jack pine pulp wood. A proposition has been made to the Alpena people, which, it is said, meets with the satisfaction of Mr. Neuman.

WE do not know that all the expectations of the recent organization, composed of leaders in the spruce trade in the Maritime Provinces and Maine, have been realized. There are reasons to believe that the standard of prices sought to be established by that organization are being shaded at times. These conditions, however, arise more through a lull that has taken place in trade and the necessity of small manufacturers, who are outside of the combine, realizing on their product. It is claimed by members of the Association that all circumstances combine to show that spruce will from year to year enhance in value, and that the lumberman who carries over a stock of logs into 1896 will find them worth from 20 to 25% more than the selling price in 1895. Such an advance would certainly represent a good interest on the capital invested in logs. It is sagely remarked by Secretary Geo. B. James that no more lumber is used when it is crowded into market at inopportune times than if sent along judiciously as required. The manufacturers have it in their own hands to control the situation by feeding the market as the appetite for lumber appears, not undertaking to force the dealers to eat six meals a day for one week and only one meal a day for another week. It is far better to supply them with three meals of good lumber per day. Then digestion will be ample.

THE reference made by our New Brunswick correspondent to the building of a new pulp mill in Miramichi is only one of many instances of the activity that prevails in this branch of business, which is so intimately related to the lumber trades. The pulp business will be developed to a large extent at Sault Ste Marie, Ont., manufacturing facilities there being of a very complete character, and encouragement being given to capitalists by recent legislation of the Ontario Government. The Keewatin Power Co., who are in possession of splendid water facilities in the Lake of the Woods district, may also be expected, and we believe it is their intention, to develop the manufacture of wood pulp. The rich resources possessed by Canada in this direction gives subject for comment to capitalists in and outside of our own country. The immense wood pulp mills at Appleton, Wis., and other concerns in that section, have incorporated what is known as the Pulp Wood Supply Co., to furnish the pulp wood needs at the various manufactories. And the Northeastern Lumberman is authority for the statement that this concern is looking to Canada for its supplies of the raw material. How the situation strikes our contemporary is indicated in the following sentence: "Canada would wake up some day and double up the present price of spruce stumpage, or put on an export duty that will make these pulp wood concerns squirm, who are dependent upon Canadian sources of supply for spruce wood."



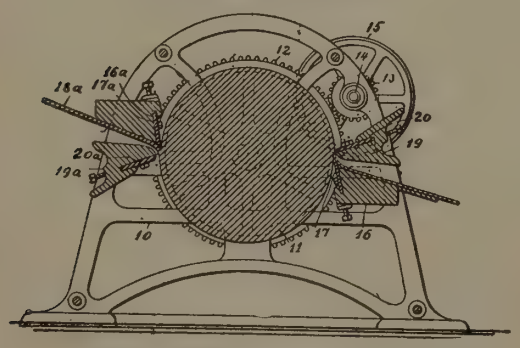
MARKET FOR WOOD-WORKING PRODUCTS.

THE boundary line of the Dominion, nor the 5,000,000 people who inhabit these provinces, do not necessarily mark a limit for the wood-working products of Canada. With the raw material in abundance, and means for providing the most complete equipment in machinery, there is no reason why those engaged in the wood-working business should not find a market for their products out of and beyond their own country. That this is being done, to some extent, is well known. The manufactures of the Rathbun Co., of Deseronto, find an extensive sale in Great Britain and other export fields. The same is the case with others. The field, however, is not nearly developed to the extent that it might be. New markets are to be secured by a careful study of commercial conditions, the world over, and it is safe to say that the wood-working manufacturer who makes a broad and intelligent study of the markets of the world will find various places where his product will be as acceptable as it is at home.

The field for manufacture is also to be extended by the ingenuity of the manufacturer. Because one has from generation to generation manufactured his wares in a certain way and of a particular kind, is no reason why he should continue to do so for all time. Nothing is more stimulating to business than to heroically get out of the ordinary rut into which the most energetic of men are apt to fall. The student of commercial history does not need to be told that the largest returns have come to those who, ascertaining the tastes and desires of particular people, have gone to work and produced those articles that have directly met their needs.

The same principle applied in catering to the market at one's own door will have the effect of increasing it. The complaint that the people of one's own country are too prone to seek other places to meet their wants, in place of patronizing home trade, is not always without justification. Not a little Canadian lumber is exported to the United States, and comes back again to our own country in the shape of furniture, because, so those in the furniture trade say, the home article is wanting in finish and perfectness of workmanship. These conditions can be changed if Canadian wood-workers only say so—and do.

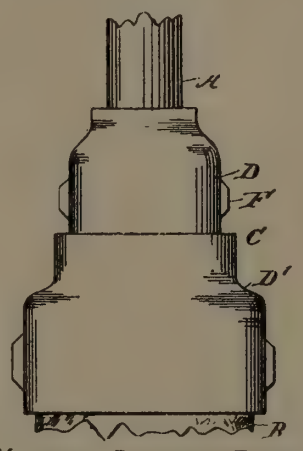
NEW CANADIAN PATENTS.



MACHINE FOR MAKING SHINGLES.

Patentee: The International Shingle Machine Co., assignee to Wm. F. Hutchison, all of New York, state of New York, U.S.A., 2nd of April, 1895; 6 years.

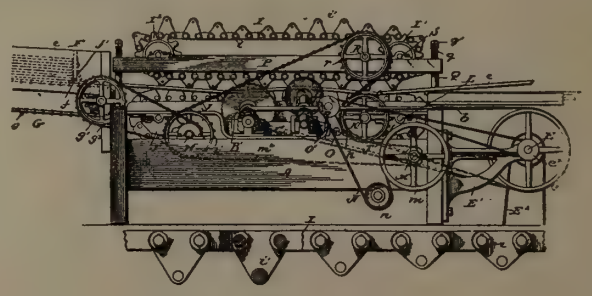
Claim.—1st. A method of making shingles, which consists in turning from a log a strip of veneer bevelled from edge to edge and then splitting the strip transversely to form the shingles. 2nd. Method herein described, which consists in feeding against a rotating log, knives have opposite pitch, whereby two bevelled veneer strips are turned with the thick edge of one strip opposite the thin edge of the other. 3rd. A rotary veneer-cutting machine, comprising the usual means of clamping, and also the customary means of feeding the knives, and a pair of knives arranged on opposite sides of the machine, the knives having opposite pitch and being adapted to feed simultaneously towards the log. 4th. One knife projecting upward and the other knife downward substantially as described.



METHOD OF PRESERVING TIMBER.

Patentee: John Simpson George, Newport, Oregon, U.S.A., 5th of April, 1895; 6 years.

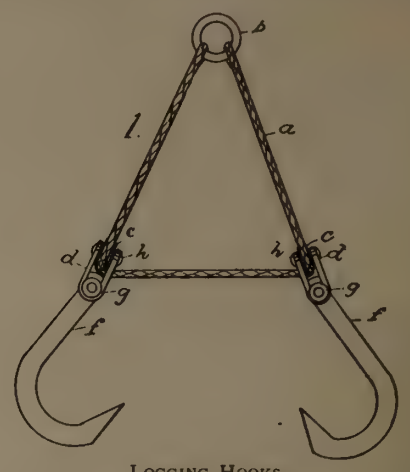
Claim.—The herein described process of preserving timber which consists in enforcing a solution of iron sulphate and camphor sulphate into the pores of the timber and afterwards passing a current of electricity through said timbers, substantially as described and for the purpose set forth.



STAVE-JOINTING MACHINE.

Patentee: The Pleukharp Barrel Machine Co., assignee of James Pleukharp and William K. Liggett, all of Columbus, Ohio, U.S.A., 11th April, 1895; 6 years.

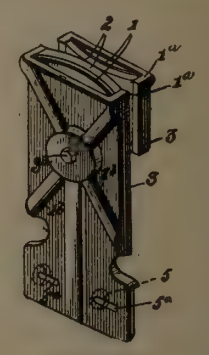
Claim.—1st. In a stave-jointing machine the combination of complementary endless chain formers, each former of the chain having a continuous convex outlined, and having a projection J, the links composing the upper chain formers being connected by pins, which have their ends projected beyond the sides of the links, rollers mounted on the projecting ends of said pins and beds to support the opposing portions of the chain formers against the tension of the blanks, the upper beds having portions to embrace the sides of the upper chain formers and receive the stress of the said rollers. 2nd. Jointing cutters of a bed J, located between the side bars of the links comprising the lower former, and a bed comprising side bards P to embrace the upper former. 3rd. Endless chain formers, to shape the other blanks and carry them between the jointing cutters, a frame carrying one of the formers, standards for supporting the said frames and provided with stops to limit the movement of the said frame in one direction, springs to hold the frames yieldingly against the said stops, and nuts for adjusting the tension of the said springs substantially as set forth.



LOGGING HOOKS.

Patentee: John M. Stewart, Vancouver, B. C., 5th April, 1895; 6 years.

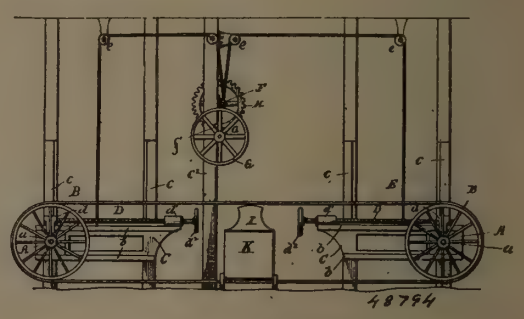
Claim.—1st. In logging-hooks the combination of the cable or chain A, with its two ends securely fastened to the ring B, and passing over pulleys C, mounted in block D, and made to operate substantially as specified. 2nd. The combination of the cable A, the ring B, connected by said cable A to blocks D and the hook F, pivoted thereon as and for the purpose set forth.



BAND SAWS.

Patentee: Joshua Oldham, Brooklyn, N. Y., U.S.A., 29th April, 1895; 6 years.

Claim.—1st. In a band-saw, the combination of a metallic semi-elliptic or convexed backing having a correspondingly shaped pad, and a holder or bracket therefor provided with a central adjusting screw engaging the concaved side of said backing. 2nd. Said holder or bracket also having laterally adjusting screws substantially as set forth.



BAND-SAW APPLIANCE.

Patentee: Joshua Oldham, Brooklyn, N. Y., U. S. A., 29th April, 1895; 6 years.

Claim.—1st. In a saw-manipulating appliance the combination of the carriage guides, carriages fitted to move therein and having means to provide for the straining of a band-saw thereon, and mechanism for bodily and simultaneously adjusting said carriage guides, with the carriages and saw vertically. 2nd. The combination of the carriage guides having longitudinal guide-ways, the carriages fitted to move in said guide-ways and bearing axles provided with pulleys or wheels, around which a band-saw may be strained, hand-screws bearing upon said carriage-guides and connected to said carriages, mechanism for effecting the simultaneous vertical movement of said carriage-guides and vertical guide-ways for said carriage-guides. 3rd. The saw-manipulating appliance for hammering purposes comprising the carriages or plates having mandrels or axles

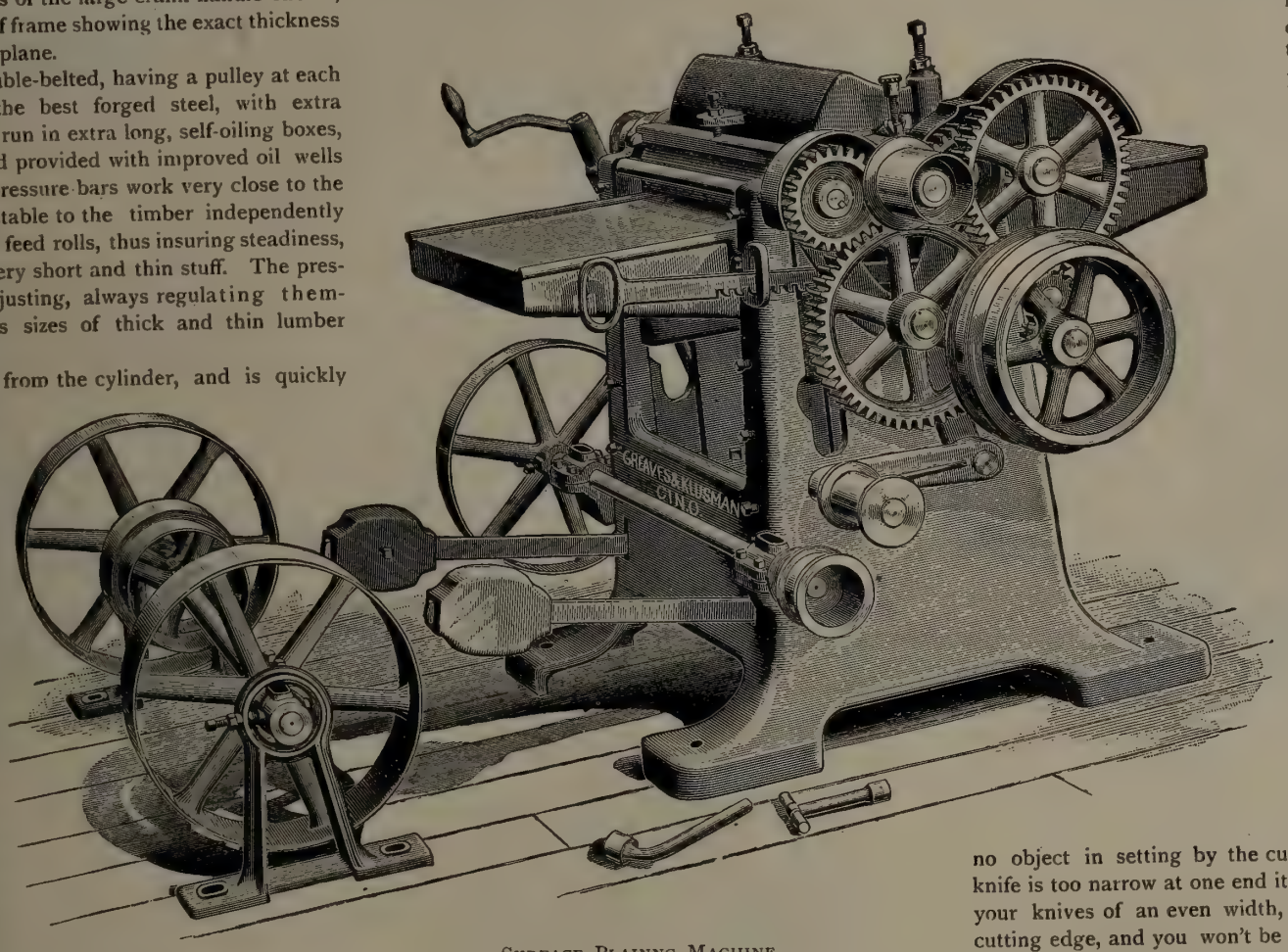
bearing pulleys around which is adapted to be stretched a band-saw, means for effecting the to and fro movement or adjustment of said carriages, the vertically adjustable guides or frames supporting said carriages and means for adjusting said frames, whereby the saw can be manipulated so as to present its relatively inner and outer surfaces or sides to a movably mounted anvil sufficiently elevated to permit the saw to freely pass thereunder, substantially as set forth.

SURFACE PLANING MACHINE.

THE engraving herewith presented represents a newly designed surfacer and planer, to plane 24½ inches wide and from one-sixteenth to eight inches thick on hard or soft wood. The frame is cast in one piece, wide at the base, very heavy. The table or bed is also cast in one piece, planed true, and is dovetailed into the frame, with extra long bearings, as wide apart as the width of the frame will allow, making the table as steady as if it and the frame were cast in one piece. Any wear can be taken up by means of gibs and set-crews. The table is raised and lowered by means of the large crank-handle shown, an indicator on side of frame showing the exact thickness the machine is set to plane.

The cylinder is double-belted, having a pulley at each end. It is made of the best forged steel, with extra large journals, which run in extra long, self-oiling boxes, lined with babbitt and provided with improved oil wells and oil cups. Both pressure-bars work very close to the knives, and are adjustable to the timber independently of each other and the feed rolls, thus insuring steadiness, even when planing very short and thin stuff. The pressure-bars are selfadjusting, always regulating themselves to the various sizes of thick and thin lumber being planed.

The feed is driven from the cylinder, and is quickly stopped or started by means of the belt tightener. The feed consists of four large steel rolls, powerfully geared. The feed rolls are set as close to the cylinder as possible and arranged to hold the board firmly to the bed. The upper in-feeding roll is fluted and held down by connected levers and weights; the out-feeding roll is held down by large coiled steel springs, making a strong and positive feed. There are two changes of feed—fast and slow.



SURFACE PLAINNG MACHINE.

SOME FACTS ABOUT PLANING MILLS.

IT is quite amusing, says a writer in the Wood Worker, to go around among the different planing mills in the country and see the different methods of getting out work and the different ways of putting up the tools. Some will insist that theirs is the only right way; others will be equally sure their way is correct. They may both be right, for in different localities the conditions vary and the different machines have individual peculiarities that should be humored in order to get the most out of them. Also the different kinds of timbers worked require a little different bevel to the knives at times, to do the best work without breaking out.

Speaking of knives, it is amusing to notice the different ways of grinding and "balancing" them. And let me say here that I think one of the worst failings in planing machines, and the one causing the most trouble in getting smooth work, is not having the knives properly balanced. There are a good many men who read this perhaps who were doing this class of work when I was a very small boy, and are still in the same business and balancing in the same old way their fathers did, who will say they guess they know how to balance a set of knives, still they probably never balanced a set of knives in their lives that were any where near a running balance; they may have weighed the same, but where was the metal distributed? Was it evenly through the width of the knife? I trow not.

It was my good fortune, or ill fortune, whichever you like, to run across one of these knife-balancing cranks who thought he knew all there was about the business and could not be convinced to the contrary, even with the strongest evidence. He used to grind his knives, then take them to the balance scales and try them. If one was somewhat heavier than the others, he took the heavier one to the drill press, put in about a five-eighths drill and drilled or started a hole about the center of the width of the knife and at whatever position in the length of the knife he thought heaviest, drilling out enough metal to bring the weight to the same as the others; perhaps he drilled clear through the knife, perhaps only an eighth of an inch. He was very particular to get just enough to balance evenly, then paired them up and laid them away for use.

Are they balanced, or not balanced? that is the question. I say most assuredly not, yet others will say that I am "way off," for don't the scales show that? I admit that, but let me ask, if you tie two pieces of iron, both of equal size and weight, to a cylinder, one with a string six inches long and the other with one four inches long, then revolve that cylinder at a pretty lively rate, would it run steadily and not tremble? Will not the one farthest from the center exert the most force upon the cylinder to draw it out of line? If both pieces of iron were an equal distance or in the same circle, they would run steadily. Now if this is the case, why should it not be so with planer knives? It looked wrong to me at the start to see them balance by drilling, for if you take out the metal in the body of a knife you get comparatively near the center of cylinder and the nearer you get to the center the less the centrifugal force. Does it have the same effect if you take the metal from the center of the knife that it does to take it off the cutting edge?

I will give my way of reasoning it out: Take a set of knives as they come from the maker.. If he is a good reliable man the knives are even in thickness, thoroughly balanced, and you put them on the planer. They run well, but perhaps after a week or two or three days' use they need grinding and are taken off, ground and tried on the scales. One of them is a trifle the heaviest. Now why is it the heaviest? Because it has been worn off the back, or is it because it is worn or ground too much at the cutting edge? I claim it is worn at the cutting edge. Perhaps one knife wears faster than the other, or is filed a trifle more. My way to make the matter right is to grind enough off the cutting edge to make them balance; then your knife is kept the same thickness throughout and retains its full strength, while if you bore from one to ten holes in the width of the knife, it weakens it. I have actually seen knives drilled so they pricked through the knife, the holes running the length of the knife from one to two inches apart. It strikes me that would be a very weak knife for heavy work.

Another thing I see many grinders do, is to set the knife on the grinder by the cutting edge. Where you use a machine as you do a matcher, for instance, sometimes only from four to six inches in width, of course they wear faster on that end of the knife. I believe it is a mistake to set by the cutting edge of such a knife. I have seen knives that were a half-inch wider at one end than the other. This is wrong, as there is much more weight at one end of the cylinder than the other, and when you revolve it about 5,000 times a minute it amounts to something.

I think the proper way is to set your knife by the back. Have some pieces of wood or metal of different thicknesses, two of each thickness. Slip one under each knife, choosing one thick enough to raise the knife to the proper height for grinding; then you have a knife the same width all through and the same thickness. A very little practice will teach you just when to stop grinding and have your knives evenly balanced; if one is a trifle heavy, put it on again and grind lightly until they balance. I can see no object in setting by the cutting edge, for when the knife is too narrow at one end it is thrown aside. Keep your knives of an even width, balance by grinding the cutting edge, and you won't be far from a good running balance. Your knives will look better, also, than if they looked like a wedge and were full of drill holes.

I don't pretend to be an expert in this line and have only given my way of reasoning in the matter. If I have reasoned wrong I shall be glad to be corrected and will take it kindly. It is perhaps in the same way that some men say a saw is no good unless it is hand-filed, but after seeing filers file saws until they were nearly a quarter of an inch out of round, I prefer a saw-grinder.

I call to mind a case where we had a saw that did fairly good work in soft wood, but one day some hard maple came in to be sawed and the saw did not seem to take hold right. I put it on a grinder as an experiment and ground one-half a day on it before I got every tooth pointed up. It worked all right then. Before there were not over five teeth that cut at all, so I am a convert to saw grinding. Of course there are filers who can keep their saws all right by hand-filing, but there are many more that can not.

There is a great difference in the bevel to give cutters. I find the best way to determine what bevel to use is to try them until you get the one that stands up best for your work and lumber, then keep it. One thing we should all avoid: don't get into a rut and think you have the whole thing down so fine you can not be taught any further.

J. M. NEILSON, Carberry.

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OFFICERS WESTERN RETAIL LUMBERMEN'S ASSOCIATION OF MANITOBA.—(See Page 3 for Sketch.)

CANADA LUMBERMAN

WEEKLY EDITION

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Weekly Lumberman, published every Wednesday. Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

Lumberman, Monthly. A 20-page journal, discussing fully and impartially subjects pertinent to the lumber and wood-working industries. Contains interviews with prominent members of the trade, and character sketches and portraits of leading lumbermen. Its special articles on technical and mechanical subjects are especially valuable to saw mill and planing mill men and manufacturers of lumber products.

☞ Subscription price for the two editions for one year, $1.00.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type, and no display is allowed beyond the head line. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue.

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CURRENT TRADE CONDITIONS.

ONTARIO.

ATTENTION during the past week in business circles has been directed to the annual bank reports, and the addresses of the leading bank managers that accompanied these, and are looked upon as reflecting the trade situation. Generally, so far as reference to the past year is concerned, the reports have been of a depressing character. Bank earnings have suffered with the curtailment of profits in every branch of commerce. Specific reference, as has been their usual custom, was made to the lumber trade by Mr. B. E. Walker, general manager of the Bank of Commerce, and Mr. Geo. Hague, general manager of the Merchants' Bank. Their views we have printed in another column. Business of the week has not shown any special development. "Some trade is doing," is the usual response in conversation with lumbermen, but it is not of large size. Enquiries from the States are rather better than earlier in the season, but these continue comparatively light. Local trade in Ontario is not of a particularly lively character, orders being small. Prices for better stocks keep firm, as there is no heavy stocks on hand at any point, but common grades are suffering a little. Mill men, as is the case with several who might be named, who have carried over large stocks from last season, would like to see things moving better, and feel tempted at times to shade prices to secure sales. The continued and unusual length of the dry season so early in the year, will have a hurtful effect on the log output. The general manager of the Bank of Commerce estimates that probably 15 per cent. of the logs will be hung up, whilst there are others who place the figure as high as 25 per cent. This drought is general the Dominion over, correspondence from the Maritime Provinces telling the same story as lumbermen of Ontario and Quebec.

QUEBEC AND NEW BRUNSWICK.

Despite the reported dullness in the British market, shippers this side of the Atlantic are sending forward large cargoes to the United Kingdom. The conundrum that faces Quebec and New Brunswick shippers is how far will there be a margin left for them when stocks have been paid for. It is believed, however, that some little improvement, at least, is manifesting itself in the lumber trade of the United Kingdom. And yet how deal importers feel, is indicated by a remark of an Ontario mill man the other day, who is cutting deals for several shippers, that he had been cautioned more than once to go as gently as possible with the output, as it was one thing to cut deals and ship them to Great Britain and another thing to sell them, and when sold to secure a price that would be paying. The past week in New Brunswick has shown the largest export of lumber, both to the British and United States ports, of the season.

BRITISH COLUMBIA.

Car shipments of lumber and shingles from Westminster and Vancouver to eastern points continue fair, but the competition at home, as also from Puget Sound mills, is having a baneful effect on profits. Orders in hand are numerous and manufacturers say that the demand warrants an increase in prices. Shipments to foreign ports by vessel are large. In fact the season is proving quite a successful one for vessel owners. R. P. Rithet & Co., Ltd., of Victoria, B. C., in their current monthly shipping report, say that the most encouraging list of lumber charters is presented this month, the business being fairly well distributed over the various consuming markets. The improvement in demand is now not confined to one quarter only, and it is permissible to hope that the advantage will be held.

UNITED STATES.

The lumber trade in the United States is being effected to no small degree by the crop prospects. With continued drought, jeopardizing the crop outlook in many leading states, current lumber trade is being restricted. Where in Illinois, Indiana and Ohio, it is expected that a fair trade would be done, with the crops looking poorly, orders are falling off. There is no doubt that present trade, and the situation in the fall, which lumbermen have been looking forward to with strong hope, will be effected favorably or adversely by the harvest. At Albany trade of the week has been slow, and whilst in Buffalo and Tonawanda there has been a little more activity, yet it has been of a limited character. Building operations in New York are not assuming the size that had been hoped for, and the lumber trade is effected accordingly, there being no steady business. Philadelphia is enjoying, apparently, a rational building boom and good quantities of lumber are going into consumption. The large demand for bill stuff is one of the encouraging features of trade, the railroads proving good customers this season. Yellow pine men in Arkansas are reported to be well filled up with orders, sufficient to keep them going for some months.

FOREIGN.

A rather cheerful view of the lumber situation in the United Kingdom is taken by Denny, Mott & Dickson in their current wood circular. They say: "The signs of improvement in general trade, noticeable in April, were accentuated in May, and although profits are still difficult to realize, holders of stocks have been doing a sound steady business, which promises to increase in volume as growing confidence serves to stimulate the market." Of Canadian timber they say stocks in the north are light for first-class waney pine; enquiries, however, continue quiet for pine, oak and elm. Allison, Cousland & Co., in their monthly market report, say of Glasgow business, that the month opened well and the amount of business transacted is proving satisfactory, though it has not kept up as well as it started out. Household building is brisk, and a good season's trade is anticipated in Glasgow, both among builders and ship builders. Cabinet makers have a fair amount of work on hand and the outlook with them is healthier. Reports from the West Indies and South America are of a depressing character, with more hopeful news from Australia.

HARDWOODS.

Sales of hardwoods are perhaps showing a slight decline as the month advances. Furniture factories are disposed to curtail the output somewhat. Reports from New York City tell of a quiet trade there, with nothing special to boast of in Buffalo or Tonawanda. The best business in hardwoods, as in other woods, at the present time, is being done in Philadelphia, a market in which Canadian lumbermen have a good interest. Mills are into the sawing season, and in some cases the stock is needed as dry stock is pretty well exhausted in certain lines. Oak, above all other woods, keeps in strong demand.

BUSINESS DIFFICULTIES AND CHANGES.

A large saw mill is being erected at Pointe aux Trembles, Que., for Dr. LaRue, one of the proprietors of Beauport Asylum.

The planing mill of Mr. G. Scott, of Mount Forest, Ont., was destroyed by fire a week ago. Total loss $3,000; partly insured.

The Cutler & Savidge Co. has shipped all its lumber from Leroy, and the iron is being taken up on its tram road. It is to be shipped by rail to Grand Haven and thence to the company's mill and lumbering operations in Georgian Bay. This removes the last vestage of one of Michigan's lumber concerns from the Wolverine state.

Hall & Murchie, it is said, will build a saw mill on the Tobique, six miles from Perth; and William Richard will build a mill on the Taxis, a short distance from Boistown.

Robert Renwick, Dromore, Ont.: "I would not like to be without the CANADA LUMBERMAN, and I appreciate your efforts in its publication."

STOCKS AND PRICES.

Smith & Patterson, of Port Hope, Ont., recently shipped a schooner of white pine lumber to Oswego, N. Y.

Quite a quantity of sawn lumber from mills between Roberval and Chicoutimi is now being shipped at the latter mentioned port upon vessels in the Saguenay.

The Pacific Coast Lumber Co., New Westminster, B. C., are shipping considerable quantities of shingles to the East.

The David Moore Lumber Co., Ottawa, have cut 150,000ft. of square timber on their Kippewa limits this year. This is about the same cut as last year.

Marks & Co., of Algoma, sent 6,000 cords of pulp wood to Michigan in rafts a few days ago. They anticipate sending large sized rafts to the same point every fortnight for the next six weeks.

The American barkentine Monitor, has left British Columbia with an export cargo of 199,300 feet of rough lumber, 63,380 ft. of dressed, and 27,000 laths, valued at $2,200.

Mr. Edward Jack states that as near as he can find out, the total cut of spruce, pine and cedar on the St. John river, N. B., this year, will be 130,000,000 feet; 5,000,000 feet will probably be hung up.

Over 109 car-loads of sawn timber were brought down to Chicoutimi last week from the mills of Mr. Jalbert at Lac Bouchette, and loaded on sailing vessels lying in that port by means of two bateaux from Quebec and the steamer Spray. The movement of timber in this way is an experiment, but is proving very successful. Mr. Scott will send down 500 car-loads of timber, and Mr. Jalbert enough to freight several more sailing vessels.

The following charters have gone out from St. John, N. B.: Per sch. Cerdic, for New Bedford, by Miller & Woodman, 380,000 laths, 822,000 cedar shingles. Per sch. Harvard H. Harvey, for Boston, by A. Cushing & Co., 481,000 laths. Per sch. Donald Cann, for New York, by L. M. Jewitt, 39,138 deals, 343,000 laths. Per sch. Tay, for Boston, by John E. Moore, 600 pieces piling. Per sch. Isaiah K. Stetson, for New York, by Randolph & Baker, 575,000 laths. Per sch. Sore, for Vineyard Haven, by Dunn Bros., 790,000 laths.

The Moiles Bros'. mill on John's Island in Georgian Bay has contracted to cut 10,000,000 feet for the Spanish River Mill Co.

The exports from St. John, N. B., for last week included 7 cargoes for British ports, aggregating 7,631,000 feet of deals, etc., 4,500,000 feet of long lumber, over 3,000,000 shingles, 2,500,000 laths, and 300 cords of wood, for United States ports.

The following shipments were made from the Port of Montreal during the week ending June 24th: S.S. Tritonia, J. Burstall & Co., 18,991 pieces deal ends; Dobell, Beckett & Co., 11,763 pieces deal ends; R. Cox & Co., 3,967 pieces deal ends, to Glasgow. S S. Canadia, Dobell, Beckett & Co., 293 pieces pine deals, to Hamburg. S S. Sarmatian, R. Cox & Co., 15,454 pieces deals and boards, to Glasgow. S S. Averley, Dobell, Beckett & Co., 25,773 pieces pine deals, 3,599 pine deal ends, 1,891 spruce deals, 1,962 pine boards, 193 pieces ash timber, 10 pieces hickory, 222 pieces elm, 117 pieces oak, to Newcastle, England. S S. Labrador, R. Cox & Co., 13,933 pine boards, 8,861 pine deals, 749 pieces deal ends, to Liverpool. S S. County Dacon, Dobell, Beckett & Co., 439 pieces timber, 43,030 pieces deals, 7,674 deal ends, to London.

Bliss & Van Aukin, of Saginaw, Mich., expect to cut 14,000,000 feet of Canadian logs this season.

THE SITUATION.

REFLECTED THROUGH CORRESPONDENCE OF "WEEKLY LUMBERMAN."

Alfred Dickie, Lower Stewiacke, N. S.: "Stocks are moving actively in this district. Spruce deals for shipment to British ports are in most demand. Several large cargoes have lately been sold in Liverpool., Eng., £5 15s per std. The stock of spruce lumber is not so large in Nova Scotia as last season; quality is good. The British market is firm and prices must eventually advance, as so much spruce is being diverted to the American market. We are now loading schooner Syanara, at Halifax, with a large cargo of laths, and 120,000 feet spruce deals, 6, 8, and 9 inches wide for New York. We will be sending several cargoes there within the next two months. We have six barques crossing the Atlantic that we will load in July for British ports."

Emile Dube, Riviere Du Loup, Que.: "Stocks in this district are moving slowly at the present time. Ships are a long time coming over the Atlantic—head winds. There are a fair number of enquiries for spruce, though no important sales have been made, except by contracts in England for spruce deals. Stocks will be about the same as former years. Prices in the United States are improving, but in England are about the same as for some time past."

Finley McDonald, Blackville, N. B.: "Business is active with a good demand for spruce deals and hemlock boards, though prices are low. Hemlock boards are in demand for the local trade, and spruce deals are going to foreign points. Prices are firm. There is quite a quantity of logs hung up in the streams this year waiting for rain."

BANKERS ON LUMBER.

It is the custom of several of the leading bank managers in their review of the trade situation at the annual meetings to devote some attention to the lumber industry. The Bank of Commerce is considerably interested in lumber, and Mr. B. E. Walker, general manager, in his address a week ago, spoke as follows: "We have little to report of interest in connection with lumber. Those who understand the business thoroughly and have sufficient capital, are thriving about as usual. In the Ottawa and other eastern districts, large sales of deals have been made at good prices, and the trade in thin lumber for the same markets continues to grow rapidly. At the moment the market in England is not very satisfactory to the middlemen, but on the whole, that branch of our lumber trade is fairly prosperous. The trade with the United States is not so satisfactory, for while many dealers have made large sales at average prices, there is undoubtedly some holding back by buyers until prosperity is more generally assured. Meantime our manufacturers are unwilling to make concessions in price, and stocks will doubtless move off a little slowly. Lumber in these districts has been produced at about the same cost as in recent years. There has been trouble again with low water, and estimates as high as 15 per cent. of the whole output have been made of logs which will not come down this season. The quantity required for sawing will be readily supplied, however. It is thought that the Ottawa and Nipissing cut will be about 660 million feet board measure."

General manager Hague, of the Merchants' Bank said, that with regard to the products of our forests it should be an aim constantly to have them sent out with as much of our own manufacture upon them as possible. "The exporting of saw logs is an unwise business, and I am not sure that we have sent out a vast deal to much of square timber in an unmanufactured state. It is certain that our logs and timber go through various processes of manufacture before they reach their ultimate destination. Why then when our unrivalled facilities for manufacturing wooden work, should we not do all this at home? Our various lines of manufacture in Canada have been as profitable as they have been either in England or the United States. Our manufacturers generally are getting to have a command of their business and a thorough understanding of its wants and conditions. But it is perfectly true here, as it is of manufacturers everywhere else, that unless a manufacturer can make a specialty or specialities of some kind and conduct his business with extreme attention to detail, he can scarcely hope to make a reasonable profit."

THE DRIVES.

Head winds and low water is greatly impeding many of the drives. Part of the Congor Lumber Co., has been got over little Blackstone Lake and into Blackstone harbor. The balance of the drive, including a small stock for Mr. Peter, is coming down the Blackstone river. Mr. Fortune has his drive for the Parry Sound Lumber Co., completed, and Mr. James Ellis has his drive for Mr. Peter running into Mill Lake. On the Magnettawan, Johnson & Beveridge's drive is making forced time, with Erwin & McCormick's, crossing Big Deer lake. On the Nascoutaong, the drives will soon be down. Part of the drives on French river are down, and several rafts have been sent to the United States, but it will be late before all the drives are down.

A report from Bay City, Mich., says that Canada logs in rafts in large quantities are now arriving at that point. Notwithstanding some heavy weather no rafts have thus far met with disaster.

The Sweepstakes is on the way from Spanish river with a raft of 32,600 pine logs, for Bliss & Van Aukin, of Saginaw, Mich., and the Winslow with 57,372 logs from Blind river, Ont., for the Central Lumber Co., of Saginaw.

Two rafts from the Georgian Bay have arrived at Saginaw for the Saginaw Lumber & Salt Co.'s mill.

The drives on the Tobique, N. B., this season are among the cleanest for some time. So far about 22,000,000 feet of logs have come out. Almost equal success is to be chronicled of the Corporation drives on the St. John above Grand Falls.

The drives of the late Robt. Connors are being brought to St. John, N. B., instead of being sawed up the river as in the past.

TRADE CONDITIONS IN THE EASTERN STATES

THE volume of trade does not keep up in New York. Low grade lumber is firm, but there is not much going out. A hopeful outlook is reported for the future, indicated by contracts made for a later period. Export trade from New York does not develop largely, though Australian conditions are reported to be more healthy, and one operator has concluded a deal of 100,000 feet of shelving for that market. Spruce holds a strong position, and some good sales are being made.

The trade in Buffalo are looking forward with greater confidence than before to the fall. Present business is fair and of a character that inspires hope. Receipts for pine by lake are represented by fair figures, the receipts last week comprising 8,607,000 feet of pine and 8,875,000 shingles. Pine is not any more than holding its own in the market. Collections are disappointing.

SHIPPING MATTERS.

The first ship of the season has arrived at Bathurst, N. B.

A steamship has been chartered to load lumber for Liverpool, Eng., at the rate of 33s 9d.

At Dalhousie, Bay Chaleur, N. B., 7 Norwegian barks were loading deals last week.

Freights from Bay City, Mich., to Buffalo are $1.25 and very little lumber offering.

SS. Alsetia has been fixed to load deals at St. John, N. B., for W. E. England, at 33s 9d.

At Alpena, Mich., by June 10, there had been shipped 32,055,000 feet of lumber, 3,625,000 shingles, 952,000 pieces of lath, 212,000 cedar posts, 157,700 railway ties.

Senator K. F. Burns, the well-known New Brunswick lumberman, is dead.

LUMBER FREIGHT RATES.

LUMBER freight rates for pine on the Grand Trunk Railway have been made a fixture, as below. Of any ntended change due notice will be given lumbermen.

General instructions in shipping by Grand Trunk are embodied in these words in the tariff schedule: On lumber in carloads, minimum weight, 30,000 lbs. per car, unless the marked capacity of the car be less, in which case the marked capacity (but not less than 24,000 lbs.) will be charged, and must not be exceeded. Should it be impracticable to load certain descriptions of light umber up to 30,000 lbs. to the car, then the actual weight only will be charged for, but not less than 24,000 lbs. The rates on lumber in the tariff will not be higher from an intermediate point on the straight run than from the first named point beyond, to the same destination. For instance, the rates from Tara or Hepworth to Guelph, Brampton, Weston or Toronto, would not be higher than the specific rates named from Wiarton to the same points. The rates from Cargill and Southampton to points east of Listowel and south and west of Stratford will be the same as from Kincardine, but in no case are higher rates to be charged than as per mileage table published on page 9 of tariff.

Rates from leading lumber points on pine and other oftwood lumber, shingles, etc., are as follows: From Glencairn, Creemore, Aurora, Barrie and other points in group B to Toronto, 6½c.; Collingwood, Penetang, Coldwater, Waubaushene, Sturgeon Bay, Victoria Harbor, Midland, Fenelon Falls, Longford, Gravenhurst and other points in group C, to Toronto, 6½c.; Brace, bridge to Toronto 7c.; Utterson, Huntsville, Navor-Emsdale, Katrine to Toronto, 7½c.; Burk's Falls, Berriedale and Sundridge, to Toronto, 8c.; South River, Powassen and Callender to Toronto, 9c.; Nipissing Junction and North Bay, 10c. Rate from Goderich, Kincardine and Wiarton to Toronto, 6½c. These rates are per 100 lbs. Rates from Toronto east to Belleville are 7½c. per 100 lbs.; to Deseronto, 9c.; to Brockville and Prescott, 10c.; to Montreal and Ottawa, 11c. The

rates on hardwoods average about from 1c. to 2c. per 100 lbs. higher than on softwoods. For rates on railway ties, mahogany, rosewood, walnut, cherry, and other valuable woods, application must be made to the district freight agent.

On the Canadian Pacific the rates on pine and softwoods may be illustrated as follows: Cache Bay, North Bay, Sturgeon Falls and Warren, to Toronto, 10c; Algoma, Cook's Mills, Massey, Spanish River and Whitefish to Toronto, 13c.; Ottawa to Toronto, 10c From Ottawa, Hull, Aylmer and Duchesne Mills to station on the Lake Erie and Detroit River, Erie and Huron, Toronto, Hamilton and Buffalo, and Michigan Central Railways, the rate is 14½c. per 100 lbs. Regulations apply as to minimum size of carload of 30,000 lbs., and an advanced rate is charged for hardwoods.

Lumber freight rates on the Canada Atlantic Railway are as follows: Ottawa to Toronto, 10 cents per 100 lbs.; Ottawa to Oswego, $1.90 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Montreal, $1.00 per M ft., (3,000 lbs. and under per M ft.); Arnprior to Montreal, $1.50 per M ft., (3,000 lbs and under per M ft.); Ottawa to Quebec, $2.00 per M ft.; Arnprior to Quebec, $2.50 per M ft.; Ottawa to Buffalo, 12 cents per 100 lbs.; Ottawa to Port Huron and Detroit, 14 cents per 100 lbs. Ottawa to New York, five carloads or over $3.00 per M ft.; Arnprior to New York, $3.50 per M ft.; Ottawa to Boston, Portland and common points, local 15 cents; exports 13c. per 100 lbs.; Arnprior to Boston, Portland and common points, local 17 cents; export 15 cents per 100 lbs.; Ottawa to Burlington, 6 cents per 100 lbs.; Ottawa to Albany, 10 cents per 100 lbs.; Arnprior to Albany, 12 cents per 100 lbs.; Ottawa to St. John, N. B. and common points, 20 cents per 100 lbs.; Ottawa to Halifax, N. S. and common points, 22½ cents per 100 lbs Minimum carload weight for shipment of lumber, lath, shingles, etc., is 30,000 lbs., and rates quoted above are in cents per 100 lbs., except when quoted per M ft. the minimum carload charged is 10 M ft., lumber not exceeding 300 lbs. to the M feet. Ottawa rates apply on shipments from Rockland and Hawkesbury.

MODIFICATION OF HARDWOOD RATES.

THE Grand Trunk Railway and Canadian Pacific have made the rates on hardwoods from certain points to Toronto and Hamilton as follows. The regulations are over the signature of Mr. John Earls, W.D.F.A., of the G. T. R., and given in reply to a letter from Toronto hardwood men:

"After careful consideration we have come to the conclusion that, on and after Jan. 1st, 1895, a modification will be made in the present arrangements for hardwood lumber, to the effect that the rate will be 7½c. per 100 lbs. from our Northern and Northwestern branches to Toronto and Hamilton. This rate, however, will not apply from main line points and the straight run between Toronto, Sarnia and Windsor; also that so far as rates on common lumber to points like Guelph, Galt, London, Woodstock, Ingersoll, etc., from all lumber shipping stations the rate will be the same on hardwood as on pine." On the old principle, we suppose, that half the loaf is better than none, hardwood men have something, possibly, to be thankful for, though there is no good reason why the rates generally on hardwood should not be as low as on pine. It is understood that the C. P. R. rate will be made uniform at 7½c. from same points.

CEDAR—ORDERS PROMPTLY FILLED FOR telegraph, telephone or electric poles, ties, posts, cedar shingles and cedar light wood; also hemlock dimension lumber—J. E. MURPHY, Hepworth Station.

MILLS

Having Brown Ash 12, 14 and 16 ft. firsts and seconds, inch Bass firsts and seconds 12 feet, or any other Hardwood Lumber, can sell same for cash by addressing

H. D. WIGGIN,
No 89 State St., BOSTON, MASS.
Inspection at mill.

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....MANUFACTURERS OF....
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HARDWOOD a Specialty
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Wholesale Dealers in Lumber, Lath and Shingles
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Wholesale Dealer in all kinds of
Bills cut to order.
Lumber shipped to all parts by rail or vessel.
Excellent quality of 18 inch Pine Shingles for sale.
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LUMBER : AND : LATH
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MANUFACTURERS OF LUMBER LATH AND SHINGLES
WE are open to cut White Pine and Hemlock Bill Stuff. Have for Sale a Quantity of Dry Mill Stocks and Sidings, also 16 in. Pine Shingles and 4 ft. Lath 1½ in. wide.
CORRESPONDENCE SOLICITED

Ottawa Lumber Co. Ottawa Canada
WHOLESALE LUMBER, LATH, SHINGLES, ETC.
Write for Stock List

The Pembroke Lumber Co., Ltd.
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DIMENSION TIMBER OF ALL SIZES AND KINDS, JOISTS, CAR DECKING, CAR SILLS, SHIP DECKING, AND ALL KINDS OF ROUGH AND DRESSED LUMBER.
Write us for Quotations on all Bills
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Is it Your Wish . .
To Purchase or Sell as quickly as possible
A PARTICULAR LOT OF LUMBER
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An Advertisement in the "Wanted" and "For Sale" Department of the . . . . .
CANADA LUMBERMAN WEEKLY EDITION
Will secure for you a Buyer or Seller, as the case may be. Address,
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Toronto, Canada.

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WE want to buy FOR CASH the following kinds of Lumber : : : : :
1, 1¼, 1½ and 2in. Plain RED OAK
1¼ and 2 inch SOFT ELM
1 inch and thicker BIRCH
EMPIRE LUMBER CO. - BUFFALO, N. Y.
Write us, stating what you have for immediate shipment, with full description of stock, etc.

OTTAWA & NEW YORK LUMBER LINE
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GENUINE GEORGIA LONG LEAF YELLOW PINE
Cut to order for FACTORIES, HOUSES, WHARVES, BRIDGES, TRESTLES AND CARS . . . . . .
Kiln Dried Floorings ATLANTA, GEORGIA, U. S. A.

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ROCK ELM
COMMUNICATE AT ONCE.— 7, 8, 14 and 16 feet, firsts and seconds.

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Silver Solder, P. W. Ellis & Co., Toronto.

Business Wisdom: "He that follows pleasure instead of business will shortly have no business to follow."

The Price Lists that here follow will be revised each week up to the hour of going to press, and in connection with these we would draw attention to the week's trade review under the heading of "Current Trade Conditions" on the first page, immediately followed with matter marked "Stocks and Prices," which presents the lumber situation of the week, together with a record of the week's sales and transactions.

PRICES CURRENT.

TORONTO, ONT.

TORONTO, June 26, 1895.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		2 30
XX shingles 16 inch		1 40
Lath, No. 1		2 00
Lath No. 2	1 80	1 85

HARDWOODS—PER M. FEET CAR LOTS.

Quality, 1s and 2s unless otherwise specified.

Ash, white, 1 to 2 in	$26 00	$28 00	Cherry, 1	1½	50 00	60 00
" " 2½ to 4	30 00	32 00	" 2	4	60 00	65 00
Ash, black, 1sts and 2nds, 1 to 1½ in	21 00	23 00	Elm, soft 1	to 1½	$14 00	$15 00
Ash, black, 1sts and 2nds, 2 to 4 in	23 00	25 00	" " 2	" 3	15 00	16 00
Ash, M. R., 1	1½	18 00	20 00	" rock 1	" 1¼	16 00	18 00
" " 2	" 4	20 00	24 00	" " 1½	" 3	20 00	2
Birch, 1	1½	24 00	26 00	Hickory 1½	" 2	28 00	30 00
" 2	" 4	26 00	29 00	Maple 1	" 1½	16 00	18 00
" sqrs. 4x4	8x8	28 00	32 00	" 2	" 4	18 00	20 00
Basswood 1	" 1¼	16 00	18 00	Oak, red, p'n 1	" 1½	28 00	30 00
" 1½	" 2	19 00	19 00	" " 2	" 4	30 00	32 00
" m. r. 1	" 1¼	14 00	16 00	" white " 1	" 1½	28 00	30 00
Butternut 1	" 1½	23 00	25 00	" " " 2	" 4	30 00	35 00
" 2	" 3	25 00	28 00	" quart'd 1	" 2	48 00	52 00
Chestnut 1	"	22 00	25 00	Walnut 1	" 3	85 00	100 00
				Whitewood 1	" 2	32 00	36 00

OTTAWA, ONT.

OTTAWA, June 26, 1895.

Pine, good sidings, per M feet, b.m	$30 00	35 00
Pine, good strips, " " "	26 00	30 00
Pine, good shorts, " " "	18 00	25 00
Pine, No. 1 dressing sidings, per M feet, b.m	19 00	24 00
Pine, " " strips, " " "	17 00	20 00
Pine, " " shorts, " " "	15 00	17 00
Pine, 10 s.c. and better stock, " " "	15 00	18 00
Pine, 8 s.c. " " " " "	13 00	14 00
Pine, " sidings " " "	13 00	15 00
Pine, " strips " " "	11 00	13 00
Pine, " shorts " " "	8 50	11 00
Pine, box culls " " "	9 00	12 00
Pine mill culls " " "	9 00	10 00
Lath per M	1 30	1 75

QUEBEC, QUE.

QUEBEC, June 26, 1895.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	16 @	22
For fair average quality, according to average, etc., measured off	20	26
For good and good fair average, " " " " "	25	30
For superior " " " " "	32	40
In shipping order " " " " "	36	42
Waney board, 18 to 19 inch " " " " "	36	42
Waney board, 19 to 21 inch " " " " "	38	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	40	49

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	22	30

BIRCH.

16 inch average, according to average and quality	21	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $40 to $43 for 3rd quality.

Bright spruce, according to mill specification, $40 to $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality. F.O.B. batteau.

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N. Y., June 26, 1895.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in	$47 00	50 00	No. 3, 1¼ to 2 in	16 00	17 00
2½ and 3 in	50 00	53 00	Shelving, No. 1, 13 in and up, 1 in	31 00@33	00
4 in	54 00	56 00	Dressing, 1¼ in	25 00	26 00
Selects, 1 in	38 00	39 00	1¼x10 and 12		26 00
1¼ to 2 in	40 00	42 00	1½ in	24 00	25 00
2½ and 3 in	47 00	50 00	2 in	26 50	28 00
4 in		52 00	Mold st'ps, 1 to 2 in	33 00	35 00
Fine common, 1 in	35 00	37 00	Barn, No. 1, 10 and 12 in	21 00	23 00
1¼ and 1½ in	37 00	38 00	6 and 8 in	20 50	22 00
2 in	34 00	35 00	No. 2, 10 and 12 in.	16 50	17 00
3 in		45 00	No. 3, 10 and 12 in.	14 00	16 00
4 in		45 00	6 and 8 in	13 50	15 50
Cut'g up, No. 1, 1 in.	26 00	28 00	Common, 1 in	16 00	18 00
1½ to 2 in	32 00	33 00	1¼ and 1½ in	18 00	20 00
No. 2, 1 in	16 00	17 00	2 in	19 00	22 00
No. 2, 1¼ to 2 in	22 00	23 00			

ALBANY, N.Y.

ALBANY, N. Y., June 26, 1895.

PINE.

Uppers, 3 in. up	$50	$52	Dressing boards, narrow	$19	$21
2½ in.	50	52	West India shipping boards.	16	17
1 to 2 in.	45	48	Box boards	12	14
4 inch uppers	50	52	10-in. dressing and better	26	30
Selects, 2½ in. up	40	42	10-in. common	14	15
1 to 2 in	36	40	12-in. dressing and better	25	32
Fine common, 2½ in. and up	38	40	Common, 1x11	14	16
1 to 2 in	34	38	No. 1 barn, 1x12		20
Nc. 1 cut, 1 to 2 inch	25	35	1x10	18	21
No. 2	18	25	1x8	16	18
No. 3	17	20	No. 2 barn, 1x12	17	19
No. 1 molding, 1 to 2 in	33	36	1x10	17	19
No. 2 molding, 1 to 2 in	25	28	1x8	17	19
Stained saps		20	Shaky or star clear, 1 to 2 in.	19	21
Bracket plank	30	35	Dressing	16	18
Shelving boards, 12-in. up	28	30	Common	11	15

LATH.

Pine	$2	25	Spruce	$2	00

SHINGLES.

Sawed Pine, ex. XXXX	$4 25	$4 30	Bound butts, 6 x 18	$6 00	$6 15
Clear butts	3 25	3 35	Hemlock	2 15	2 30
Smooth, 6 x 18	5 40	5 50	Spruce	2 20	2 30

NEW YORK CITY.

NEW YORK, N. Y., June 26, 1895.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply, rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$28 00	@ 40 00	Building orders	$26 00	@ 37 00
Decking	44 00	50 00			

SPRUCE.

6 to 9 in	13 00	14 00	10 to 12 in	15 50	16 00
6 to 12 in	14 50	15 50	Lath	1 85	2 00
9 to 12 in	15 50	15 75			

SAGINAW, MICH.

SAGINAW, Mich., June 26, 1895.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$45	00	Selects, 1in., 8in. and up wide	$38	00
1¼, 1½ and 2 in.	45	00	1¼, 1½ and 2 in.	40	00
2½ and 3 in.	50	00	2½ and 3 in.	45	00
4 in.	55	00	4 in.	50	00

FINE COMMON.

1 in., 8 in. and up wide	33	00	2½ and 3in., 8in. and up wide	40	00
1¼, 1½ and 2 in.	34	00	4 in.	45	00

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	25	00	2½ and 3in., 7in. and up wide	35	00
1¼, 1½ and 2 in.	30	00	4 in.	38	00

STRIPS. A AND B (CLEAR AND SELECTS).

1¼ in., 4, 5 and 7 in. wide	34	00	1 in., 4, 5 and 7 in. wide	32	00
6 in. wide	36	00	6 in. wide	36	00

FINE COMMON OR C.

1¼ in., 4, 5, in. wide	30	00	1 in., 6 in. wide	30	00
1 in., 4, 5 in. wide	28	00			

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24	00	1 in., 4, 5, 6 in. wide	23	00

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in	17	00	1 in., 4, 5 and 7 in.	17	00
1 in., 6 in.	18	00	1 in., 6 in.	18	00

NO. 2 FENCING OR NO. 4 FLOORING.

1 in., 4, 5 and 7 in	14	00	1¼ in., 4 to n	14	00
1 in., 6 in.	14	50	No. 3 fencing, 1 in., 6 in.	13	00

SHELVING.

No. 1, 1 in., 10 in. stocks	25	00	No. 2, 1 in., 7 and 8in. stocks	19	00
1 in, 10 in. and up wide	26	00	1 in., 10 in. stocks	21	00
1 in., 12 in. stocks	29	00	1 in., 12 in. stocks	23	00
1 in., 12 in. and up wide	30	00	1 in., 10 in. and up wide	22	00
1¼ in. 1½ and 2in., 8in. and up wide	29	00	1 in., 13 in. and up wide	25	00

BARN BOARDS OR STOCKS.

No. 1, 12 in.	19	50	No. 2, 9 in.	14	00
10 in.	17	50	8 and 7 in.	14	00
9 in.	17	50	No. 3, 12 in.	13	00
8 and 7 in.	17	50	10 in.	12	00
No. 2, 12 in.	16	00	9 in.	12	50
10 in.	14	00	8 in.	12	50

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$10	00	1 in., 13 in. and up wide	$12	00
1 in., 6 in. wide	11	00	1¼, 1½ and 2 in., 7 in. and up wide	12	00
1 in., 7 in. wide and up	11	00			

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9in. wide	17	00	1 in., 10 in. and up wide	17	00
1 in., 6 in. wide	17	00	1¼, 1½ and 2 in., 8in. and up wide	17	00

COFFIN BOARDS.

No. 1, 1 in., 13in. and up	20	00	No. 1, mill culls	9	00
No. 2	17	00	No. 2, or red horse	7	00

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23	00	No. 2	19	00
No. 1 (nearly clear)	21	50	No. 3	16	00

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16ft.	$ 8	50	Hemlock, 2x4 to 10. 12 to 16 feet	8	00
18 ft.	10	50	2x12	8	50
20 ft.	11	50	Add $1 to each additional 2ft. in length.		
22 and 24 ft	12	50			

SHINGLES, 18-IN.

Fancy brands, XXXX	3	25	Standard brands. river made, XXXX	2	90
Clear Butts	2	00	Clear Butts	1	90

WHITE PINE LATH.

No. 1	1	85	No. 2	1	35
			Hemlock	1	25

LUMBERMEN'S SUPPLIES

SUGAR.

	c. per lb.	
Granulated	4⅜	4½
Extra bright refined	4	4⅛
Bright Yellow	3⅞	4
Medium Yellow		3⅝
Dark Yellow	3⅜	3½
Raw		

SYRUPS AND MOLASSES.

SYRUPS.	Per gallon bbls.	½ bbls.
Dark	25	26
Medium	30	35
Bright	35	40
Very Bright	50	00
Redpath's Honey		40
" " 2 gal pails		1 25
" " 3 gal pails		1 50

MOLASSES.	Per gal.	
Trinadad, in puncheons	0 32	0 35
" bbls	0 36	0 37
" ½ bbls	0 40	0 40
New Orleans, in bbls	0 30	0 32
Porto Rico, hdds	0 38	0 40
" barrels	0 42	0 44
" ½ barrels	0 44	0 46

RICE, ETC.

	Per lb.	
Rice, Aracan	3½	3¾
" Patna		4¾
" Japan		5
" Imperial Secta		5½
" Extra Burmah	3⅞	4
" Java extra	6½	6¾
" Genuine Carolina	9½	10
Grand Duke	6¼	6½
Sago	4¾	5½
Tapioca	4½	5½
White Beans, per bushel	1	75

FRUITS.

FOREIGN.	c. per lb.	
Currants, Provincial, bbls.	3½	4
" " ½ bbls	3⅝	4⅝
" Filiatras, bbls	4	4½
" " ½ bbls	4½	4¾
Currants, Patras, bbls	5	5½
" " ½ bbls	5¼	5¾
" " cases	5	6½
" Vostizzas, cases	6½	7½
" " ½ cases	6¾	7¾
" 5-crown Excelsior (cases)	8	8½
" " ½ case	8¼	8¾
Dates, Persian, boxes	4½	5
Figs, Elemes, 10lb. boxes	10	12
" 7-crown	16	18
" Natural Figs, 28lb bxs		
Prunes, Bosnia, casks	4	4½
" " cases	5½	7
" " bags		
" Anchor C, bags		
" " E, "		
" " G & J, cases	5½	
Raisins, Valencia, off-stalk	4¾	
Selected	5½	6

CANNED GOODS.

	Per doz.	
Apples, 3's	$1 00	$1 10
" gallons	2 25	2 50
Beans, 2	0 85	0 95
Corn, 2's	0 90	0 95
" Epicure	1	15
Peas, 2's	0 85	0 95
" Sifted Select	1	45
Peaches, 2's	2 00	2 25
" 3's	3 00	3 25
Plums, Gr. Gages, 2's	1 85	2 00
" Lombard	1 50	1 60
" Damson Blue	1 50	1 60
Pumpkins, 3's	0 90	1 00
" gallons	2 10	2 25
Tomatoes, 3's	0 85	0 90
'Thistle' Finnan Haddies	1 35	1 40
Salmon, talls	1 25	1 35
" flats, No. 1	1 50	1 60

CANNED MEATS

(CANADIAN.)

Comp. Corn Beef 1lb cans	$1	65	$1	75	
" " 2 "	2	55	2	75	
" " 4 "	4	80	5	00	
" " 6 "	7	50	7	75	
" " 14 "	18	00	18	50	

COFFEE.

GREEN.	c. per lb	
Mocha	28	33
Old Government Java	25	35
Rio	20	22
Plantation Ceylon	29	31
Porto Rico	24	28
Guatemala	24	26
Jamaica	22	20
Maracaibo	24	24
Caffaroma, 1 and 2lb tins, asstd		33

DOMESTIC.

Apples, Dried, per lb	6	6½
" Evaporated	8	10

TOBACCO AND CIGARS.

British Consols, 4's; Twin Gold Bar, 's	59c
Ingots, rough and ready, 8's	57
Laurel, 3's	49
Brier, 7's	47
Index, 7's	44
Honeysuckle, 8's	56
Napoleon 8's	50
Victoria 12's	47
Brunette, 12's	44
Prince of Wales, in caddies	48
" " in 40lb. boxes	48
Bright Smoking Plug Myrtle, T & B, 3's	60
Lily, 7's	47
Diamond Solace, 12's	50
Myrtle Cut Smoking, 1lb. tins	70
¼ lb. pg., 6 lb. boxes	70
oz. pg., 5 lb. boxes	70

IT came in my way the other day to have a pleasant chat with Mr. W. H. Bromley, of the Pembroke Lumber Co., Pembroke, Ont., and a son of the well-known manager of that successful lumber concern. Mr. Bromley, jr., bad been making a short trip in western Ontario looking after the business of his concern. He says that the season's trade with them has been of a most satisfactory character, business of the past month being much ahead of the corresponding period last year. The Pembroke Lumber Co. make a specialty of dimension timber, and it has been their pleasure this year to furnish a good deal of timber of this kind to be used in the erection of elevators and the building of large warehouses. Prices, Mr. Bromley says, have kept up very fairly; at least, they have not been disposed to cut prices. This, he tells me, has not been the case with everyone, as with some concerns in the east prices have been shaded to the extent of one or two dollars this season from the fact that large stocks are held by some lumbermen. He takes the wise view that it is foolishness for lumbermen to sacrifice prices, especially of white pine. The time is coming when white pine will be a scarce commodity in this country, and to quote Mr. Bromley's words, "white pine is for this reason to-day as good as gold." Mr. Bromley comes from a part of the country where many of the pioneers of lumbering in Canada have found their home. From around about Pembroke has come the Mackies, Mr. Peter White, Mr. Hale, and others whose names will easily occur to the student of lumber history, as the men who operated in the forest in the Ottawa district, when there was lots of forest to cut. Wonderful have been the changes in that section of the province since the days when Ottawa was best known as Bytown, and could not boast of the favored conditions that exist to-day. Mr. Bromley remarked that with lumbermen, as with men engaged in other lines of trade, it is not everyone who has been in the business for years and acquired a rich competence and therefore have no reason to trouble themselves about material affairs, who keep closely in touch with conditions as they change in every business, and have changed in the lumber business, from decade to decade. Having come from Hamilton, where he had met Mr. Robert Thomson, he did not hesitate to name him as one of the lumbermen of the country, who seemed to-day, though he had been lumbering for years, to be as keen and interested in every development of the business, as he undoubtedly was in his younger days.

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A MONTH ago I let Mr. McBurney, a well-known Canadian lumberman, tell something of the methods of drawing logs by rail in Michigan and Wisconsin, where he has been cutting timber lately. As one studies this question it is seen that important changes are taking place in logging methods. The railroad, in recent years, has cut seriously into the schooner and barge as a lumber carrier, shown by the Marine records in many places, and especially noticeable in the decline that has taken place in the vessel trade in Michigan. It looks as though the rafting of logs would in time become largely a method of the past, the railroad taking its place. Nearly half of the logs banked on the Upper Mississippi and its tributaries last winter were hauled by railroad. Logging roads are being extended into the interior in many different parts of the country where lumbering is carried on. A lumberman of Maine is quoted as saying: "It won't be many years, we hope, before this waiting for the spring drives of logs will be a thing of the past. How much better it would be to load them on to a car at the lake in the morning and have them at the mills within two days, if not within one. Now you put a log into the lake and wait two years for it, and you are lucky if you then get it intact, for frequently it is broken or left high upon the shore of the receding freshet," It is calculated that you can get about 5,000 feet on a log track, or in other words, a train of ten cars would haul 50,000 feet. In lumbering, as with so many other vocations, the ingenuity of the times will soon take all romance and adventure away from many branches of business.

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IT is needless to say, that like everyone who aims to possess an intelligent knowledge of lumbering conditions, I read carefully the review of trade conditions, that is so important a feature of the Weekly Lumberman. Here, I have no doubt, is reflected very clearly the state of the markets from week to week. Making frequent calls myself upon lumbermen, I have been struck with this fact, so far as the commercial side of the business is concerned. The lumber trade is divided into at least two distinct branches, namely the mill man, who manufactures the lumber, and the wholesaler, who sells it. I will have a chat with my friend Col. Davidson, of Davidson & Hay, or Mr. Warren, of the Imperial Lumber Co. and naturally they talk from the side of the manufacturer. They are in the business to sell lumber. There is little use in their getting out large quantities of logs each winter, driving these to their mills and cutting them into lumber, if they cannot sell the product. It is to be expected that these men will take a little different view of the situation to Ald. Joseph Oliver, of Donogh & Oliver, and other wholesale lumbermen. Whilst they too have lumber to sell, and through these a very large part of the lumber of the country is distributed, yet they are always in the market to buy. And, I do not know, when playing this part, that they will want the price of lumber, and the conditions that would tend to increase prices, too favorable. At another time I will strike Mr Thomas Meaney, of Robt. Thomson & Co. His concern occupys the position of wholesalers, aswell as large manufacturers, and just how nicely a man is obliged to balance the situation, under these circumstances, I will leave readers to judge. There are Bulls and Bears, I suppose, in the lumber trade, not to so great an extent as in the grain business, but in a degree at least. One only gets at a real concensus of market conditions by carefully weighing all the pros and cons that enter into the situation, and I suppose this is the place of one, whose particular duty it is to write of trade conditions, and intelligently, fairly, and fully size up the situation.

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A Michigan correspondent of the Northwestern Lumberman is quoted as saying that Georgian Bay timber, not to exceed 15 per cent. of all the timber in that district, would run better than common. Though referred to as one who is himself largely concerned in the timber of the district, he is quoted as expressing wonder how the man who puts money into it can get out whole. The way he figures is this: "Georgian Bay logs have been held at from $10 to $11; it costs $2 to bring them across the lake, and figuring interest on capital and saw bill at $2, there is not much margin in selling the manufactured product at $14. Of course, now and then a lot will bring $16, and the man who owns the timber and puts it in has a little better show over his white alley. He paid $2 to $3 stumpage, $1 crown dues, and it costs probably $3.50 to $4 a thousand to cut and put in the timber." This, it must be confessed, sounds somewhat illogical, coming from a gentleman who is credited with being well informed, and who has backed up his information by becoming a large holder of Georgian Bay timber. Every little while some statement of this kind is given currency to through the lumber journals across the border. And not only every little time, but quite frequently, the lumbermen of Michigan and other states keep increasing their investments in Georgian Bay pine. I don't believe that business men, as a rule, when there is no particular occasion for it, enter into business ventures that they are satisfied beforehand are going to give them some trouble to get their own out of. Messrs. Bliss, Hurst, Fisher, White, Loveland and scores of others have become investors, it seems to me, in Georgian Bay pine, because they know there is money in it. They have not done it from patriotic motives, I am sure, for their lot is cast under the Stars and Stripes, and not under the Union Jack, much as they may love the mother country, as everybody does. They have not locked up their money in this way just for the fun of the thing, or because there is no place where they can place it in their own country. They are into the lumber business in Canada, rest assured, for the long green stuff there is in it, and nothing else. Our contemporary wants to call down those correspondents who talk rubbish like that which we have just quoted.

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It is as true of business as it is of individuals, that the situation is largely effected by surrounding conditions. I hear complaints, when talking with lumbermen, of the disposition among buyers to break prevailing prices. A good deal of dickering is frequently indulged in. But the trouble is, the buyer cannot always control circumstances, and as the dictates of his good business sense suggest. I was in the office of a lumber concern a week ago, when the case was put to me something like this. Here is a letter from a manufacturer who wants certain classes of lumber, and the order is stated in the letter, but the qualification is, that there is no use in shipping this lumber unless the price can be made so and so. "We get a good many letters, and personal enquiries along this line," said this lumberman. "And when I have pressed for an explanation of this method of buying, the answer has been just this that manufactured stock to-day is brought down to so low a figure, a result largely of the keen competition, that unless the raw material is bought at a certain figure, the manufacturer cannot make up stock that will carry with it even a semblence of profit." Again, I have had the situation put to me from the standpoint of the builder. He has accepted a contract to erect one or more buildings in which will be used a certain amount of lumber. He has got his price down so fine, that he is forced to do a deal of bantering with the lumbermen, if in so doing he can get a shading of prices on his lumber. Now I know there is some truth in this, for it came in my way not long since to make enquiry among builders as to the condition of trade, and I learned that one of the worst aspects of the building trades to-day is the recklessness that characterizes the present system of contracting. In turn this inflence quickly disorganizes prices among supply men. It occurs to me like this, that the lumber trade will be doing a good thing commercially for themselves, for the builders, and for the welfare of the country generally, if they could turn a deaf ear to all efforts on the part of buyers to secure a cut in standard prices. If the lumberman cuts his price, he is puting himself in the same position as the builder and the manufacturer, selling his product without a profit, for be it remembered, that in these days of high stumpage, and increased cost of lumbering, unless a certain price is secured for the forest product, it is simply a losing business. There is wanted at the present time an intelligent effort to effect a hardening of values in all lines of business. And good times are not going to return until business men in all classes determine that there is no business in doing business for nothing.

QUERY FOR QUEBEC LUMBERMEN.

A SUBSCRIBER to the CANADA LUMBERMAN asks, why the tamarac, or red spruce, is all dying in Quebec limits, particularly on the Gatineau. It seems, he says, to "dry up." Who will answer?

THE TRADE IN SAWDUST.

IN New York City there are about five hundred vendors of sawdust, having a capital of $200,000 invested and doing a business of $2,000,000 annually. Forty years ago the mills were glad to have sawdust carted away; twenty-five years ago it could be bought for fifty cents a load; now it brings $3.50 a load at the mills. It is used at hotels, eating-houses, groceries and other business places. It is wet and spread over floors in order to make the sweeping cleaner work. Plumbers use it a great deal about pipes and buildings to deaden the walls and floors. Soda-water men and packers of glass and small articles of every kind use it, and dolls are stuffed with it. Yellow pine makes the best sawdust, as it is the least dusty and has a pungent, healthy smell. But any light wood will do. Black-walnut sawdust will not sell, and is burned.

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE sawdust trouble has been remedied by the introduction and second reading by Mr. Costigan of a bill to amend the Fisheries Act. He said that previous to last session the dumping of sawdust and mill refuse into any navigable stream was forbidden. The power to grant exemption was reserved to the Governor-General-in-Council. By the act of last session that power was withdrawn and the present bill proposed to restore it for two years longer. In the meantime the whole question might be dealt with in a more practical way than was possible at present. A commissioner had visited most of the mills east of Ottawa, but his enquiry was not yet completed, for it was necessary to visit not only the mills but the streams on which mills are now situated or may hereafter be constructed In reply to criticism of the bill by some members, Sir Chas. H. Tupper replied that it was not a question of granting political power to the Minister of Marine. The lumbermen, regardless of politics, had united in a presentation on the subject, and made out a case to the entire satisfaction of the Minister. This was simply a proposal to adopt the best means by which a sudden loss and sudden interruption of business to parties who may be considered to some extent to have acquired vested rights in this regard, may be averted. The discussion was taken part in by Messrs. Edwards, Sir James Grant, Bryson, and a number of others who have a practical knowledge of the needs of the lumber industry.

J. R. Booth is adding two band-saws to his mills, and is now making improvements upon the site of the burned mill, which will enable him to place them in running order.

William Mason & Sons' saw mill, since the new machinery has been put in, has been running steadily, principally cutting deal lumber and dimension timber. It will increase the sawing capacity of their mill about 50 per cent. They estimate their cut this season to be in the neigborhood of 15,000,000 to 20,000,000 feet.

The Bronson & Weston Lumber Co. are making extensive improvements in their match factory over in Ogdensburg, N.Y. They expect to manufacture about 250 gross per day, and will all be made from board ends from their Ottawa mill, which will be a new departure. Until recently they had to use these ends for firewood; owing to improved machinery they can now use them for this purpose.

A lively discussion took place in the House of Commons a fortnight ago, when Mr. Bennett, member for East Simcoe, and who is a strong advocate of protection to the Canadian lumber industry, scored Mr. Charlton for the part he took in securing a certain amendment to the Wilson bill in the United States Congress. Mr. Charlton defended himself with his usual energy, and contended that what he had done had been for the best interests of the lumber trade of Canada. This did not allay the opposition, which came hot and fast from members of the government party.

OTTAWA, Can., June 22, 1895.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN].

BUSINESS has continued active throughout the month, and lumbermen are commencing to feel the benefit of the change in the lumber tariff. Large quantities of lumber are going to the United States.

K. Shives has put into his mill a slab-slasher to convert the slabs and edgings into wood.

Flett's mill at Nelson on the Miramichi is running night and day. The same is the case with the mill of Senator Snowball.

A fire in the saw mill owned by D. & S. Goggins, Penobsquis, was fortunately discovered before any great damage was done.

Alex Gibson has decided to make some improvements in the furnaces at the mills at Marysville, so that he will be able to use for fuel a large quantity of sawdust that now goes to waste.

It is expected that Messrs. Andre Cushing and Co. will erect a new saw mill at Fredericton. A representative has been there examining the site, and is believed to have reported favorably.

The sch. Thurston, loaded with deals for Parrsboro, has gone ashore on the rocks at Diligent River and is badly damaged. She is a new vessel, only launched about two months ago, and insured.

A. H. McLane's gang mill, on the Saw Mill Creek, has been shut down for the summer after a good season's sawing. The crew will go on the stream shortly to repair dams and fit things up in good shape. A new driving dam will be put in.

The death is announced of Mr. B. Haliburton Teakles, for the past twenty-five years a member of the civil service in Ottawa. The deceased was a son of the late William Teakles, and at one time an extensive lumber merchant at the Portage, in the parish of Cardwell.

The mill of G. G. & W. C. King, at Chipman, is running day and night. The Messrs. King intend to furnish light to the mill by electricity. Work on the mill of Stetson, Cutler & Co., at Indiantown, has been pushed ahead with energy, and it is hoped will be in running order before a great while.

It is believed that the project to establish a large pulp mill at Miramichi is very certain to go on. The business will be conducted under the name of the Masterman Sulphite Fibre Co., with Mr. W. H. Masterman, of Montreal, president. The general manager will be Mr. Thos. Allison. The site is at Mill Cove, about a mile and a half above Chatham, on the opposite side of the river. Splendid water facilities are found there, especially adapted for pulp mill purposes, and altogether the site is the most favorable one for the business proposed. The expectation is that the mill will be ready to operate by the end of the year.

ST. JOHN, N. B., June 21, 1895.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

WHATEVER others may think, it is plain to the very ordinary observer that Duluth lumber is going to become a very familiar figure, if I may so put it, on the markets of Michigan. W. B. Mershon & Co. are among large purchasers of Lake Superior stocks, and other Michigan men are following in their walk. Pine is a rich resource in the Duluth district, and lumbermen there have evidently laid themselves out to push their product near and far, and Michigan, as also Buffalo, Tonawanda, Albany and all through the eastern states, will soon make its acquaintance.

A large purchase of pine, amounting to 400,000,000 feet, near Duluth, has been made by Messrs. Tirney & Davidson, of Bay City.

The Canadian drives of Colonel A. T. Bliss are at the lower end of Big Island, French River, and will be nearly a month behind last year's record, because of low waters.

The factories are doing a fair business, though lumber trade generally has lagged this season. Shipments by rail are increasing, whilst, on the other hand, the lake movement is light.

Comstock Bros., of Alpena, own 200,000,000 feet of pine in the Georgian Bay region, which they will have rafted across the lake, and manufactured into lumber, per contract made with Churchill Bros.

The Ontario Government, it is said, has six men on the French River boom, to count the logs being rafted there. They are camped on the trip and work a force day and night, counting the logs as they pass over the Tramway rapids. They use two locomotive head-lights for night work. The step is taken to overcome complaints that were made to the government last year as to certain sharp practices that were practised.

Mills here that rest upon Canadian logs for their supplies, are now receiving these in good quantities. The low water in Georgian Bay streams had hindered the movement earlier in the season, but recent rains have removed this trouble. The Central Lumber Co., the Saginaw Lumber and Salt Co., Eddy Bros., and a number of others at Saginaw, and also Albert Pack and others of Bay City, have commenced to receive some good-sized rafts.

The demand for bill stuff at Bay City is reported to be very large; car sills are in big demand.

Mr. John Charlton, M. P., was among recent visitors at Bay City. He feels somewhat sore over the treatment he received in the House of Commons a week or two since, believing that anything he did was for the best interests of his own country. With others Mr. Charlton is having logs rafted to Bay City to be manufactured there for his American trade.

The Nester Estate has purchased about 75,000,000 feet of standing pine in Ontonagon and Houghton counties, from S. O. Fisher, of Bay City.

An effort is to be made in Bay City to raise $6,000 to pay off the incumbrances on the McLean property to induce Esty & Calkins to locate their hardwood planing mill there.

Recent rains in Northern Michigan have been of value to the Diamond Match Co. As a result of the forest fires the Match Company was forced to cut in the last year's logs, a cut which would not have been made at the present time in the ordinary course of business. Low waters in the mills gave rise to the possibility that these logs could not be floated to the mills, but rains within the last few days have enabled the lumbermen to get all these logs in the water and save them from the danger of being injured by worms. The last of the logs were gotten into the water a few days ago. This timber will now be cut into lumber at the Company's mill, and will make upwards of $3,000,000 worth. The better demand for lumber will make it possible for the company to market a considerable portion of the cut this year. There will be, on the whole, a profit of something like $1,000,000 above the cost of the stumpage.

SAGINAW, Mich., June 22, 1895.

PINE TREES NEED LIGHT.

ACCORDING to the novelists and other superficial observers, the pine tree is always gloomy, and the forest is always dark. They make a midnight tree of the pine, but it is really a midday tree and requires a good deal of light to bring it to full development. The most luxuriant part of the pine is always its top, for that part of it is in the open light. Wherever the pine is shaded, its foliage is thin, scraggy and scrimpy. The pine growing in the open field is full and luxuriant in foliage to the base, while those in the crowded forests are full foliaged only at the tops. One Maine essayist says that trees which grow up in the natural forest and must in the earlier years have been densely shaded show far less growth, both in height and diameter, than those which grow up after fire or on clear land. The great majority of the trees cut in the largest pine operations on Penobscott waters this year were from 200 to 225 years old, while trees of similar dimensions cut in the city of Deering ran from 130 to 140 years. Starting all alike, and with no obstruction between them and the sun, the growth of the latter was very rapid. Many of them yearly grew more than a foot in length and a half-inch in diameter during their early life, while in later years a thinner deposit of wood on a larger area produced a far greater accumulation of material. In recent years these trees, now about two feet at the butt, had been growing an inch in diameter in from eight to twelve years.

FRENCH FORESTRY LAWS.

FRENCH forestry has been reduced to what may be called an exact science. Formerly France was swept by forest fires like those that now sweep the United States and Canada. So destructive were these conflagrations in France that the government in 1870 enacted a 20-year law designed to prevent forest fires. It succeeded, and in August, 1893, the present law was enacted. Americans are directly interested in the provisions of this new French law, which briefly summarized are as follows: The first provision prohibits during June, July, August and September all fires in forests or shrubby waste lands, or within a distance of 600 feet from their boundaries. Among the fires prohibited during the close season is the so-called "petit feu," by which strips of undergrowth were carefully burned every six or seven years in the cork forests. Another clause directs landed proprietors who have adjoining lands with woody growths on them, to keep a strip of land, from 60 to 300 feet, between the two estates entirely free from shrubs or conifers. Another clause enacts that similar bare strips 60 feet broad shall be kept up along all lines of railway through a wooded area, and that these strips in adjoining property shall be kept clear at the expense of the railway companies. All proprietors whose woods are cu down in clearing these strips are to obtain indemnities. This is a new provision and is aimed in favor of the extension of railways. In the handling of fire, if a counter fire is started to head it off, no indemnity arises for woods burned under such circumstances. The fires heretofore in France have been frequently caused by sportsmen or poachers during the dry season, and this has led to the delay of the shooting season until the September rain sets in. The construction of a network of roads greatly facilitates fire protection by making the forests accessible and by increasing their value, and the government offers a bonus of $1,000 a mile for roads constructed in the forest districts. Severe penalties are exacted where the forest law is transgressed, and if the railway companies do not clear the fire lines on their roads, the French forest department clears them at their expense. The law of 1870 cut down the forest fires in France over a half, and it is expected that the law of 1893 will practically put an end to these destructive conflagrations in that country.

AUSTRALIAN HARDWOODS.

IN a lecture on Australian hardwoods and their uses, delivered before the London (Eng.) Imperial Institute recently, Mr. C. R. Fenwick, A. M. I. C. E., said: "In those colonies there was a very large extent of land growing timber that came under the general denomination of hardwood. Of the eucalyptus alone, for example, there were some 120 varieties, and of the acacia over 300. South Australia was the only Australian colony that had reason to complain of not being well off in timber. The colony was dependent on its neighbors for supplies of the article, but was taking steps to correct the deficiency by extensive planting. In Tasmania the forest trees were mostly fruit trees. In Western Australia there were two varieties of eucalyptus not known elsewhere. Some of this wood was used by native tribes as incense for propitiating the gods, and much of it was used for engineering purposes, while iron-bark was found good for paving. String-bark, which was found plentifully in Queensland, New South Wales, Victoria and Tasmania, was useful for jointing, planking, and other purposes. The blue gum grew extensively in Victoria, towards Cape Otway, and there were two varieties of it—the true and the bastard. The difficulty and cost of transport by rail was a great hindrance to the exportation of much of these woods. These hardwoods were very valuable as piles and sleepers. Great discrimination had to be observed in making selections of the timber, as the quality of the wood varied very much in different districts, and the same name was often given in different districts to different kinds of wood. Blue gum resembled string-bark when it came to be dealt with. The paper went on to give instructions which should be observed in selecting timbers for commercial purposes, and one of these enjoined the necessity of inquiring as to the quantities in which they should be obtained and the facilities of obtaining them. This point was all the more important as in some of the Australian colonies the question had been raised whether the exportation of some of those woods should be encouraged. There was, in fact, a probability of the supply of them becoming scarce, but there was still no question of there being an immense superabundance of timber in these colonies, which left a large margin for exportation. Western Australia enjoyed a great advantage in its more favorable geographical position for exporting purposes over the eastern colonies." The subject is one that is engaging considerable attention in Great Britain, and Timber, of London (Eng.), says: "Among the more valuable varieties of eucalyptus are the ironbarks. These yield very good timbers, some of them being unrivalled for strength, elasticity and durability combined. Sleepers made from the narrow-leaved ironbark have been taken up perfectly sound after twenty-four years' continual use. The tallow-wood, so called from the greasy nature of the timber when freshly cut, is one of the best for use in bridge construction, also for decks of ships, and is readily worked with saw or plain. The black-butt, when properly selected and seasoned, is invaluable for piles, sleepers, decks of ships, bridges, carriage work, etc. The spotted gum, when the sapwood is removed, is often equal in industrial importance to the ironbarks. The red or flooded gum is largely used for street paving, also, when free from gum veins, for railway sleepers, retaining its soundness for many years. The grey or white box, a common variety of eucalyptus, possessing considerable strength and elasticity, is largely used for telegraph poles, wheel-spokes, shafts and railway sleepers. The forest mahogany, not being readily attacked by the toredo, and lasting well when underground, is much preferred for piles, also for rafters in buildings, being found in excellent condition after fifty years' use. The swamp mahogany, which derives its name from thriving most readily in swampy ground, is useful for shipbuilding purposes, also for railway sleepers. The blood-wood, which resists both white ant and damp, is used principally for piles and sleepers. There are other kinds of eucalyptus of a similar serviceable character. Most of the timbers above mentioned possess all the requisites for the construction of sound and durable roads and pavements.

"Among other hardwoods is the blackwood, which has been found suitable for the construction of railway carriages, also for a variety of purposes, such as the interior fittings of buildings, furniture, and engineering and architectural construction. The turpentine tree resembles the tallow-wood in some of its properties, and furnishes an excellent timber for wharf construction and fencing. It is difficult to burn. The rosewood is much used for cabinet work, turnery and shipbuilding. The white beech, which resists the white ant, is one of the best outdoor flooring woods known, and is largely employed for verandahs and ships' decks. The negro-head beech is utilized for furniture making, window sashes, doors and joinery work. It takes a beautiful polish. The red cedar is one of the most valuable of the New South Wales timbers; its combination of lightness and durability causing it to be largely in request for fittings in buildings, furniture, etc. It is identical with the Moulmein cedar of India. In some of the oldest buildings in Sydney, dating from the earlier days of the colony, the cedar woodwork is often found in almost perfect condition."

AN EVIL WITHOUT A REMEDY.

THE part played by the scalper in the lumber industry is discussed as follows by the St. Louis Lumberman: Everybody but the scalpers themselves concede that their presence in the lumber trade—probably in other trades as well—is a thing to be deplored. They are in the business, but not of it, in the sense that they fail to conserve the real interests of any department outside their own operations. They are a tax upon both buyer and seller, without performing for either a service of real value. The risk of their dealings falls upon the producer or wholesaler from whom their stock is received, but in return he receives no compensating benefit since the profit on any transactions they make is absorbed in the "scalp," little or none of it comes to those whose capital and credit furnish the real basis for them.

At various times legitimate operators have undertaken to restrict the work of scalpers, and diminish to some extent their power to injure the business, but the efforts in this direction have not, it must be admitted, been attended with any success. If any scalper has been driven out of business because of speeches and resolutions against him, the fact is not known.

On the contrary, in spite of anything done or attempted, operators of this class have rather increased, some of them even thriving to such a degree that they have been able with accumulating means to abandon the methods of the scalper and to adopt those of the legitimate dealer, with capital invested and a basis of credit. The scalper is evidently so far rather master of the situation.

It is likely that he will continue to occupy this position in a greater or less degree. Much as his methods may be disliked, so long as he lives up to his contracts and pays for what he buys, there will be no lack of stock which he can obtain on about his own terms.

With many mill men the problem of selling is the most difficult their business presents, and through lack of skill, experience, or the means to employ better methods, they are practically forced to put themselves into the hands of scalpers as the only way of getting their stock quickly into market. To sell promptly is a necessity the scalper takes advantage of to make a bargain of which the best end always comes to himself. He is, in fact, the product of conditions which have brought into the saw mill trade many operators whose capital is so small in proportion to the amount of business they aim to do, that a steady sale of their product is necessary to keep them going.

If this proposition is true, there is no remedy for scalpers while the small mill men remain an important element in the trade. So long as there is money to be made in handling the product of these small mills at the expense and risk of the maker, there will be no lack of men to take up that line of business, no matter how much they may be discredited by operators on a higher commercial plane.

Upon the principle that it is wise to modify, and as far as may be control, an evil that cannot be remedied, should it not be the policy of the lumber trade to frankly acknowledge that scalping cannot be eradicated, and to use such measures as may be available to diminish its depressing and disturbing influence upon the business?

Individually the scalper is often—perhaps in a majority of cases—a capable business man who is simply trying to get a start by the shrewd use of other people's capital. If he can avoid the numerous dangers that beset his pathway, he will eventually work out of scalping methods into a more legitimate manner of doing business.

Is there not some way by which the scalpers who mean to be honest may be distinguished from the sharks, so that manufacturers may know whom they deal with in this fraternity with this risk?

If the efforts of the trade could be turned in this direction instead of being wasted in mere denunciatory resolutions which effect nothing, the chances of accomplishing some improvement would be vastly increased.

Scalpers are evidently a permanent feature of the lumber business, and as they cannot be removed, the only thing to do is to get along with them as well as possible.

ROCK MAPLE.

IT has become a habit among the lumber papers to devote a large amount of space to a few of the showy woods, such as oak, cherry and birch, with poplar as a subject on which something can always be said. This is hardly fair to other woods and their manufacturers. It may possibly be true that oak demands all that is said of it, for the wood is hardly out ranked in real importance by any other on the continent, hard or soft, although there are others which run up into higher figures in total value of annual product. But the manufacture of poplar is practically restricted to three or four States, and in amount of feet of annual product it ranks far below several others. Its value, however, gives it a certain position warranted by nothing else.

White ash, or the four species commercially known as such, has occupied a most prominent place, both as regards amount produced and value. But is now waning in favor, and its use is becoming greatly restricted, because of its growing scarcity. Hickory occupies about the same position, while rock elm is, to a certain extent and for many purposes, usurping the place of both.

There are several woods which are generally spoken of in a sort of casual way, which really deserve much more extended mention. The most noteworthy of these is, perhaps, rock or hard maple, which is one of the most widely diffused woods on the continent, and in humble ways has at all times been of great value to the country. The casual reader would probably get the impression that the principle, if not the only, use of this wood is for flooring. But great as its use for this purpose, and valuable as it thus is to the building world, there are other uses where its value is many fold greater.

Go into any great carriage, wagon or agricultural-implement factory and something can be learned of these uses. Many times more millions of feet of hard maple are used thus than for flooring, great and important as is that trade. The ordinary heavy wagon and agricultural-implement builder would hardly know what to do without this valuable but unpretending wood. But the greatest consumers of hard maple are the chair and furniture makers. In these lines of manufacture it may truly be said to be the poor man's friend.

For actually low-priced, substantial, honestly made, fairly good-looking goods, there is no wood that grows that can take its place. Again it is worth repeating, in the furnishing of the poor man's home, there has nothing yet been found to take its place; it is the poor man's household friend. Flooring takes millions of feet of the honest old tree, but the workman's furniture and household utensils, his tool handles and the like, take billions. Of this amount it must not be forgotten that household utensils consume a large quantity, and what a long list of them, all most useful articles, the housewife can make.

In addition to these, it would probably surprise the public to know how many pairs of wooden shoes are annually made from hard maple, even in the United States. Then there are shoe lasts and boot trees, and a lot of other things for similar use.

Maple has been called an honest wood, and so it is for a fact, for there is no other wood which takes so unkindly to all attempts to stain it or disguise it as some other more showy species. Do what you will it shows up last for just what it is, honest old rock maple.—Hardwood.

THE NEWS.

—Cameron's mill at Hawkesbury, Ont., was recently gutted by fire.

—The Booth lumber mills, recently destroyed, at Burlington, Ont., are to be rebuilt.

—A saw mill is being erected by Mr. E. G. Lavalle at Notre Dame des Anges, Que.

—The Burrard Inlet Red Cedar Lumber Co. have opened a lumber yard at Oak Bay, B. C.

—An electric light plant has been installed in Graham, Horne & Co,'s mill at Fort William, Ont.

—Considerable damage was done recently by the breaking of a band saw in Howry & Son's mill at Fenelon Falls, Ont.

—Joseph Shurr's planing mill and shop at the village of Kohler, were destroyed by fire recently. Loss, $5,000; no insurance.

—The destruction of Barnes' mill at Cockport, N. B., together with 150,000 feet of deals and boards, is reported. No insurance.

—Considerable damage resulted in Train's mill at Burke's Falls recently, due to the sawyer reversing the carriage before the saw had passed through the log.

—The Rapid City Spectator states that Mr. E. F. Stevenson, Crown Timber Inspector, recently visited that place to seize all spruce timber in sight for non-payment of dues.

—J. G. McIntosh, and G. A. Edwards, of Carleton Place, and Henry Gillies, of Braeside, passed the recent cullers' examination at Ottawa, for the Province of Quebec.

—The Gillies mill at Braeside, the largest in the Ottawa Valley, has started up with a new engine of 1,600 h. p. capacity, and two new band saws in addition to its former equipment.

—The Dominion Export Co., comprising American and Canadian capitalists, with headquarters at Montreal, has been organized to work three million acres of timber land in Nova Scotia. The capital of the company is $5,250,000.

—Mr. Geo. Cushing is reported to have sold his interest in the firm of A. Cushing & Co., St. John, N. B., to his partners, Allston and Richmond Cushing, who will proceed at once to re-erect a new mill on the site of the one recently burned.

—On 25th of May last Mr. Malcolm McKinnon, of South Falls, Muskoka, cut in the shingle mill of Mr. Geo. Kielty, with a Gravenhurst Boss machine, 76,000 shingles in 10½ hours run (this time includes all stoppages during the day). He would like to hear from other shingle sawyers as to their ability and if they can beat this cut.

—Before the Grand Trunk acquired the Northern Railway, all the forest produce from Huntsville and Gravenhurst was sent over that line to Toronto and there distributed to eastern and western points. Now all the square timber is shipped to Belleville; one crew brings the train to Lindsday, a run of 98 miles, where another crew is in waiting to take it on to its destination.

—The forest trees that grow in Manitoba are the maple, elm, oak, basswood, ash, birch, black and white poplar, spruce and tamarack; sometimes the willow becomes a tree but is more generally found a bush.

GATINEAU NEWS.

[Occasional Correspondence CANADA LUMBERMAN.]

A FEW small creeks are stuck; but the logs will not suffer any damage, as they will be in the water.

Mr. Charles Logue's fine raft of waney pine, made in 1893 and 1894, in the Kakabongo District, will be in Quebec in a few days. It will be put in shipping order at Cap Rouge, Quebec. The Quebec merchants who are in the market purchasing waney logs, will do well to inspect this raft. We have no doubt Mr. Logue will get a good figure for his timber. Mr. Logue has another raft of waney pine on its way down the Jean de Terre river made in 1894 and 1895, which he expects to get out this season, although the drive from Kakabongo is a very long one. There are years when no trouble exists to bring the timber down to the Gatineau boom in one season. This is the only timber for Quebec market from the Gatineau river.

Mr. Edwards' Upper Gatineau drive is finished.

Messrs. Gilmour & Hughson Co., Ltd., are very well pleased with their new investment, the steamer Baskatong (alligator boat), for towing logs on the Baskatong lake.

Although a great scarcity of water the drives have been fairly well handled this year.

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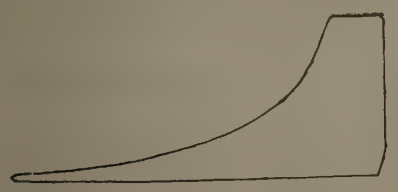
QUESTIONS AND ANSWERS.

"Constant Reader" writes: 1. What is the loss of pressure in a 3-inch pipe, 100 feet long, at 100 lbs. pressure per square inch, supplying steam to an engine doing 50 horse power? 2. What would be the loss in the same pipe supposing there were four elbows and two globe valves in it.

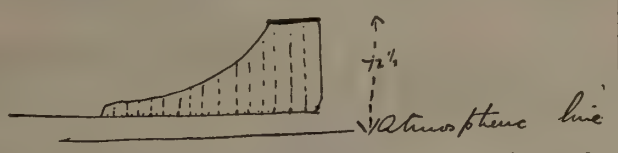
ANSWER: 1. Loss of pressure in steam pipes is due to three causes: (*a*) The pressure required merely to overcome friction in the pipe. (*b*) The pressure required to produce the required discharge of steam through a pipe of given diameter. (*c*) That loss of pressure which is due to the difference in temperature of the steam at opposite ends of a long pipe, caused by radiation of the heated pipe surface into the surrounding atmosphere. With the data given, the combined losses of pressure due to the two first causes will be, with a straight pipe, about one-third of a pound per square inch; the globe valves will make no difference practically; the entire drop due to friction of pipes and bends and velocity through same would be one-half a pound per square inch. The drop due to difference in temperature is likely to be more appreciable, but with the data given it is not possible to more than approximate to it. Assuming 100 lbs. pressure at boiler; 100 feet of 3-inch pipe, bare pipes, and an atmospheric temperature of 60°—there would be a difference of temperature of about 10° Fahr., corresponding to a loss of pressure of about 15 lbs. per square inch. What the actual drop is, depends on the material with which the pipe is covered, and upon the actual temperature of the outside air.

"Fireman" writes: Please explain to me how to find the mean pressure on this card, also what horse power is the engine if the card on the other end is the same.



Steam, 72½; revolutions, 94; spring, 40; cylinders, 13"x30".

ANSWER.—The mean steam pressure of an indicator card can best be found by running a planimeter round the card If you have not such an instrument, then divide up the horizontal line representing the length of the stroke, into a considerable number of equal parts; draw from each point of division a vertical line cutting the steam line. Then add the lengths of the verticals between the stroke line and the steam line together, and divide by the number of division. To this result



add the vertical distance between the stroke line and the atmospheric line (which you have not shown), and the figure you get will represent mean pressure in lbs.

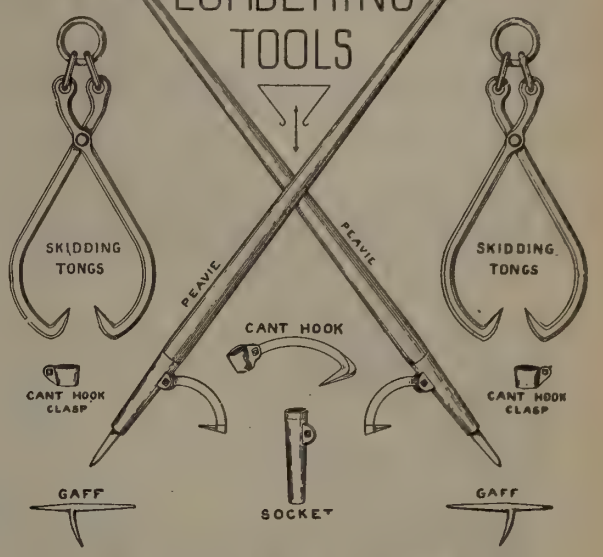
A MODERN SAW MILL.

IN the old-fashioned saw mill each man worked for all he was worth, wrestled with logs and packed lumber out of the mill. Things are somewhat different to-day; in setting up a mill the machinery should be so arranged that the log is not touched by the man's hand after it enters the mill. It is rolled, carried and handled entirely by machinery; and after being cut into boards, dimension stuff or timber, it is automatically carried out of the mill and separated into lengths, widths, and thicknesses each side being put by itself outside the mill. Success or failure in the lumber milling business depends largely upon this point; it is then in order to arrange the mill so that it will be as nearly automatic as possible.

THE Argentine capay tree furnishes a richly veined and very fragrant wood, fitted for cabinet purposes.

IN the forests of Paraguay and Misiones is found the famous evergreen tree, *Ilex paraguayeniis*, which produces the yerba-mate, the general beverage of the natives, the duty on which affords the national revenue of Paraguay, the government having the exclusive monopoly of the trade.

THOMAS PINK
MANUFACTURER OF LUMBERING TOOLS



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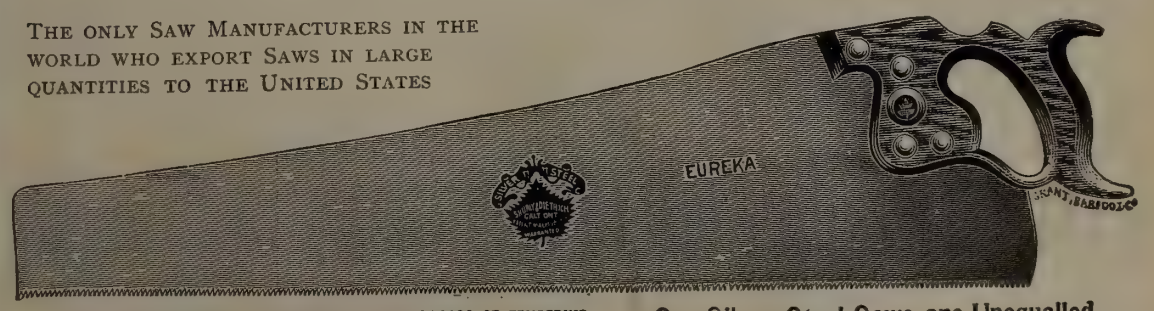

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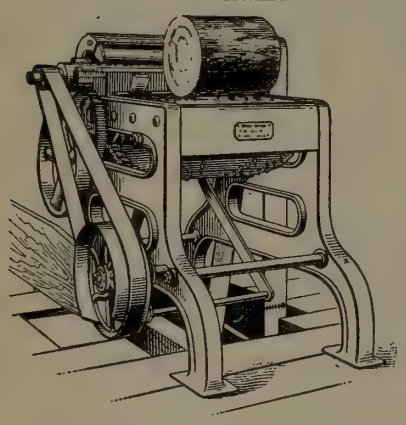
Patent Rossing Machine



Why you should use this Rosser. . . . .

It will do double the work of any other.
It is the only machine made that will peel Cedar Shingle Blocks.
It will peel dirty blocks without taking the edge off the knives as they cut from the clean bark or block out.
It is a self-feeder, and very easy to operate.
It requires less power than a face wheel.
All iron and steel, very simple and durable.
It will ross knotty and uneven timber without waste.
It occupies about the same space as an ordinary planer.
You can have a chance to try a machine before buying it.

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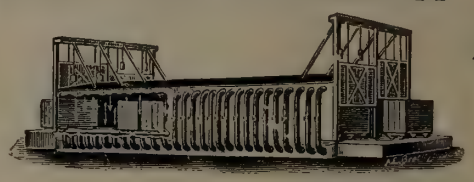

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Rear View No. 5 Carriage—Opens 50 in. from Saw; 8 in. Steel Girders; 14 in. Steel Wheels; Cut Steel Rack and Pinions.

The First to Start Up of the 18 Allis Bands Sold in Canada this year.

Burk's Falls, Ont., April 19th, 1895.

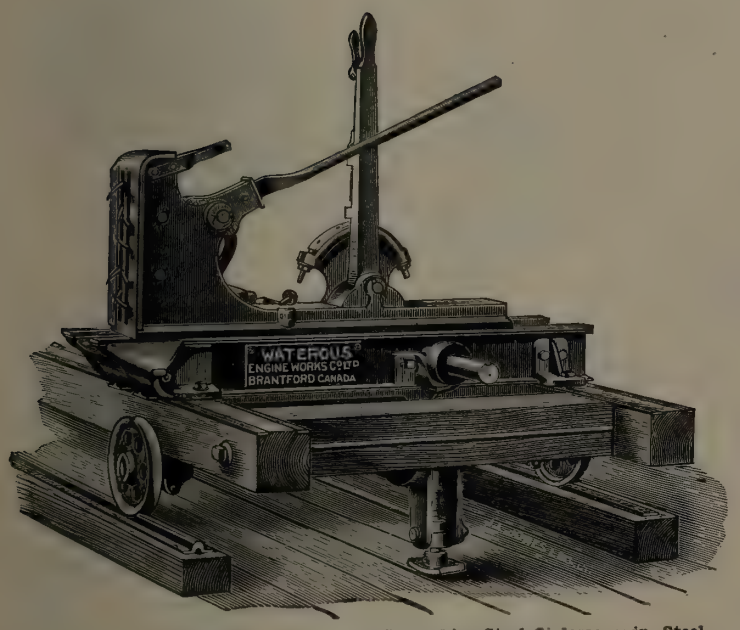
THE WATEROUS ENGINE CO., (Ltd.), Brantford, Ont.

Gentlemen,—We have now tried the No. 3 Allis Band purchased from you. It has been running for the last eight days, and is giving us good satisfaction. It don't seem to take any more power than the circular saw did. We are sawing Birch, and there is quite a lot of frost in it, but it is making splendid work. We have not broken a saw so far.

The trial that we have given the mill is sufficient, and we accept the mill as per our agreement with you. We will have much pleasure in recommending the mill to anyone who may contemplate putting in a band.

Yours very truly, T. G. S. TRAIN.

MR. TRAIN USES WATER POWER



No. 4 A—Front View—Opens 36 in. from Saw; 6 in. Steel Girders; 10 in. Steel Wheels; Cut Steel Rack and Pinions.

Two More No. 3 Bands Just Started

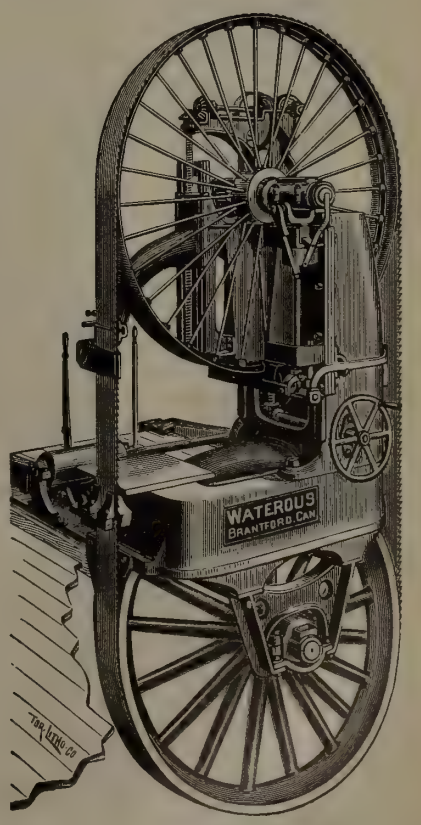
Ottawa, May 10th, 1895.

The Waterous Engine Co.,
Brantford, Ont.

Gentlemen,—This is to let you know that your Mr. Grant has been here since Thursday last, and has hammered and put in order all the saws, except one, that we have here.

We have much pleasure in stating that so far both the mills and the saws on them have given us the best of satisfaction, and if they continue to do as well as they have done, the few days we have been running them, we will be very well satisfied indeed.

Yours truly,
WM. MASON & SONS.



LEFT HAND FRONT VIEW, ALLIS BAND.

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WHY BAND SAWS BREAK

SIXTEEN REASONS, AND HOW TO AVOID THEM

Being instructions to filers on the care of large band saw blades used in the manufacture of lumber.

A book filled with valuable information on the care of band saws. Giving the reasons for breaking; analyzing each reason; giving instructions to dispense with the causes as laid down in each reason; and full details on filing and brazing. The proper styles of hammers to use are illustrated and described, and views of blades showing the blows of the different styles of hammers form an important part of the illustrations. Improper and unequal tension are then treated, and the manner of properly setting irregular teeth is described. In connection with the treatise is a history of the invention, manufacture and use of the saw from its origin to the present time. The work in whole makes an accumulation of information such as has never before been published.

The book is printed on fine paper, good clear type, and is handsomely and substantially bound in cloth. It will be sent to any address on receipt of the price, **ONE DOLLAR.**

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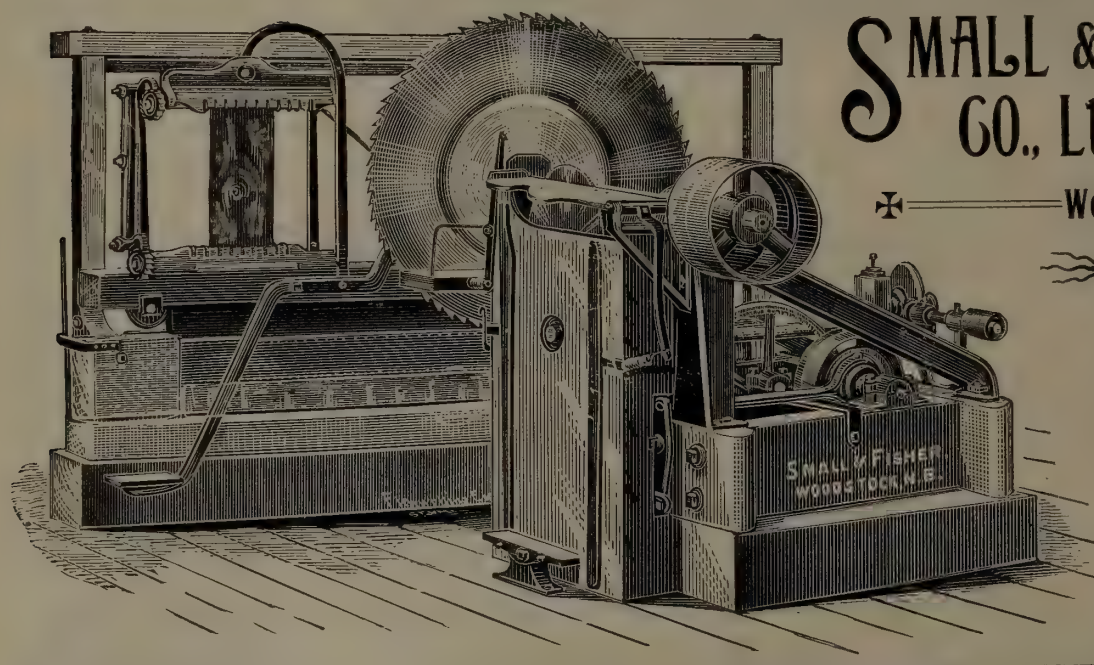

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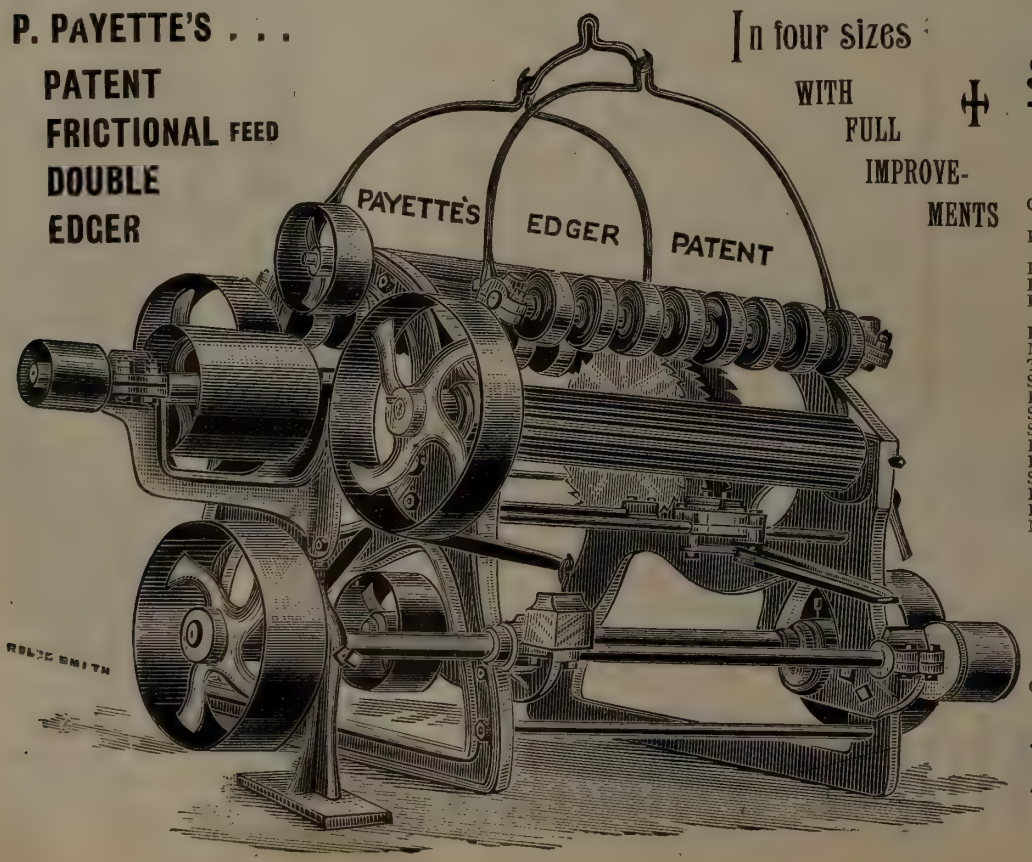

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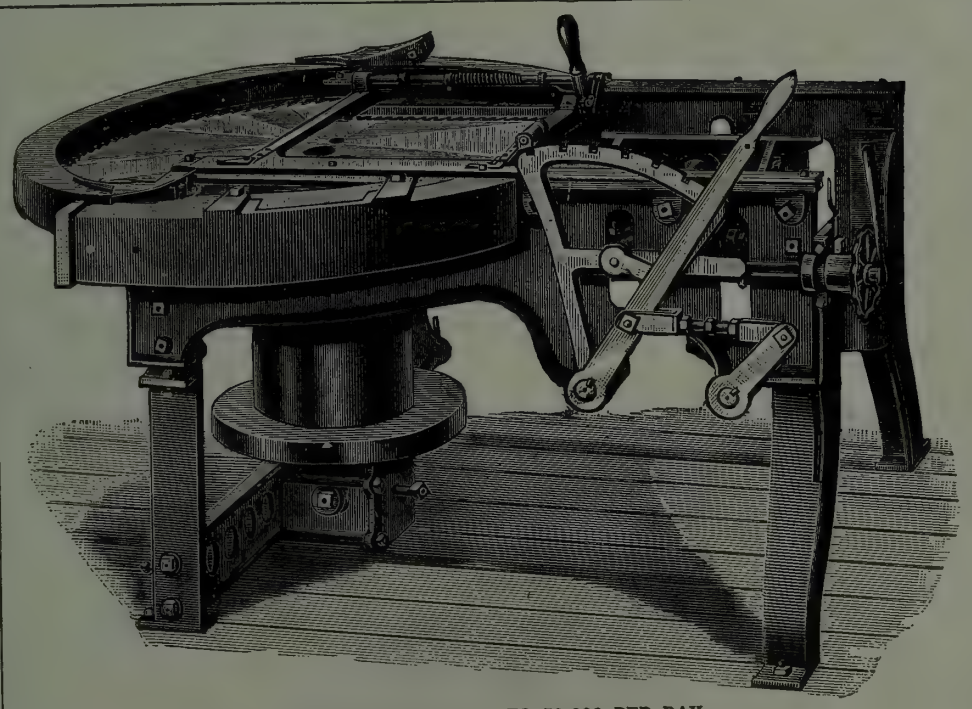

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Yours truly,

(Sgd.) W. J. & H. W. FOWLDS.

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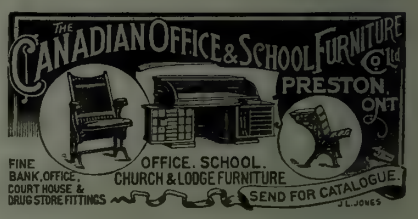

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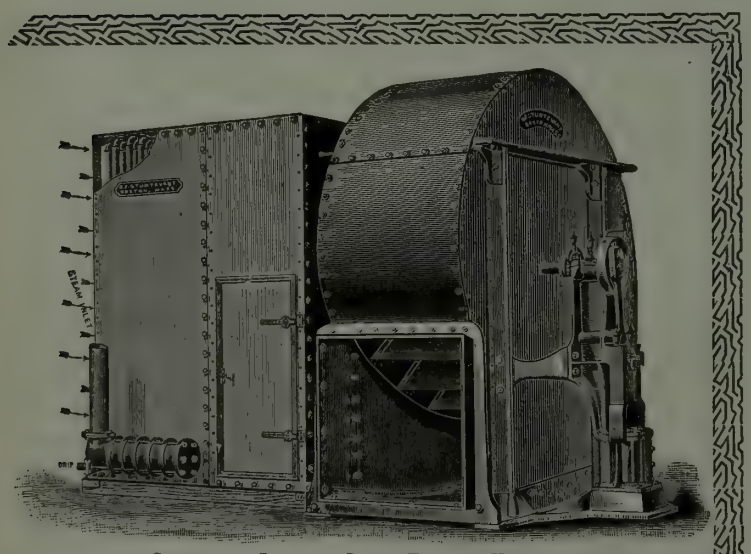
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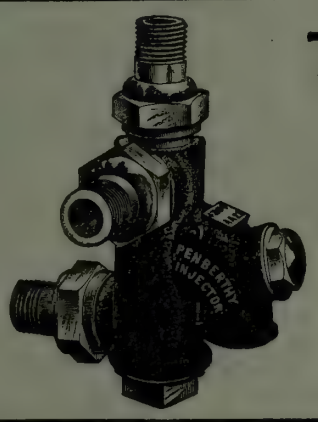

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THE NEW PRESCOTT

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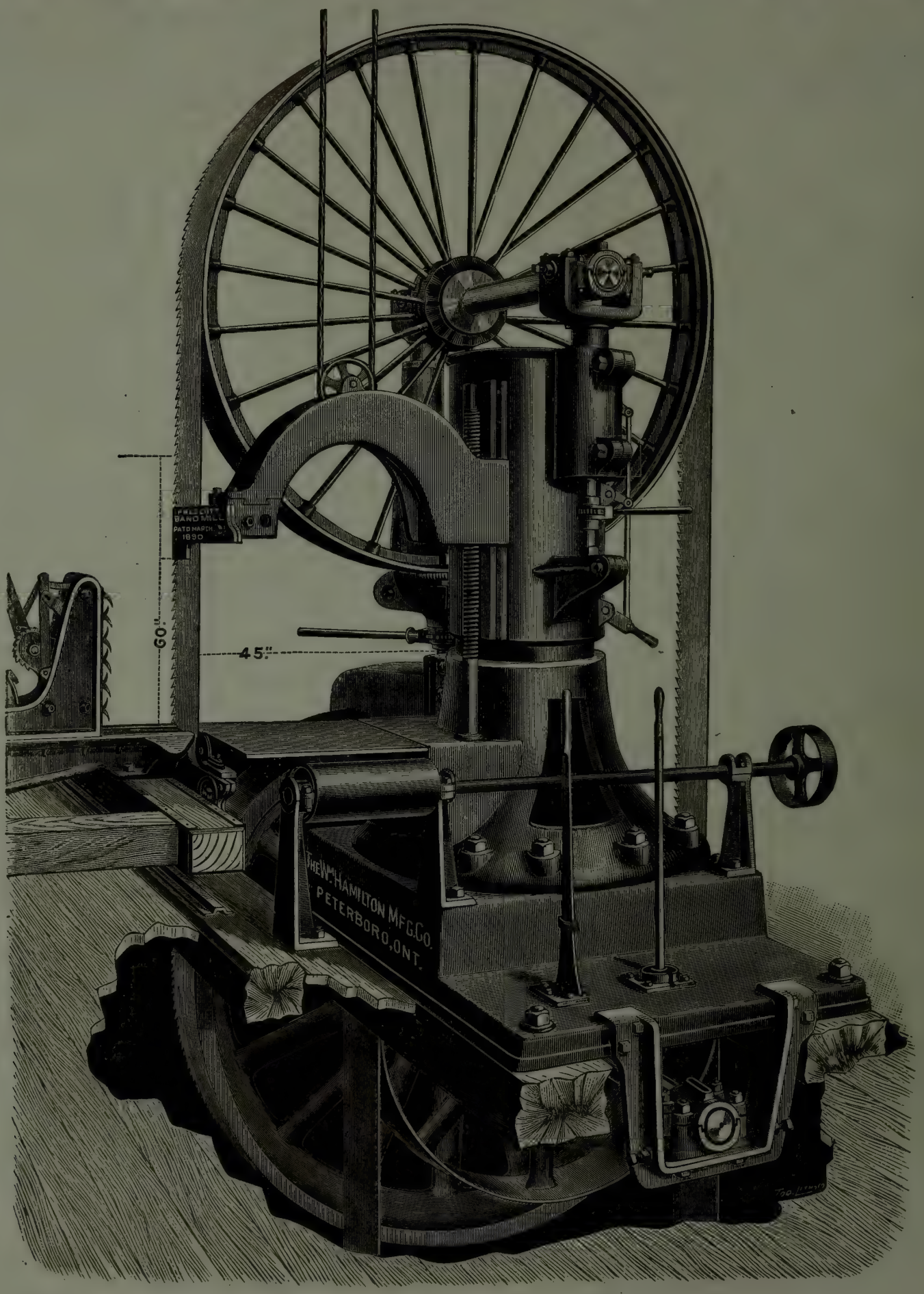

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THE CANADA LUMBERMAN

VOLUME XVI. NUMBER 8. TORONTO, ONT., AUGUST, 1895 TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

THE ORIGIN OF THE WORD "LUMBER."

THE word lumber, says the Timberman, which has an essentially American origin as applied to manufactures of timber, was first used in Boston in an official way in 1663. It is a most comprehensive word, and other countries have no expression for it that covers the ground so completely. In Great Britain, for instance, each item of lumber has its name, as with us; but, if they were speaking of manufactures of wood as a whole, about the only term which they have that covers the case is "wood-goods," which is an awkward expression at best. The word lumber was coined in Boston. A recent writer in the Boston Journal states that the word has not had full justice accorded to it. From 1630 for nearly one hundred years Boston was the chief lumber market of the world, and that industry was one of the principal foundations of Boston's wealth. Other Boston staples were fish and leather, but in magnitude of transactions lumber was in the lead. The site of the old state house, known as Market Place, was formerly a lumber yard. The men of Boston got to calling sawn timber lumber because the ships that brought that article of commerce to Boston used to lumber up the wharves and streets with their product. In 1663 the police regulations of Boston provided that the wharves and all streets "that butted upon the water" must be kept free from all "lumber and other goods." Boston lumber carried in Boston ships went to all parts of the world and laid the foundation for Boston wealth. It is said that the first cargo returned by the Pilgrim Fathers to England was a cargo of pipe staves, and for the reason that Europe could not produce as good an article, it was a profitable venture, netting the shippers five hundred pounds. In that industry the Puritans were satisfied that all Europe could not rival them. The term lumber included masts, staves, clapboards, shingles, boards, planks and timber. Although Boston is still a large lumber market and has continued so through all these years, it did not long maintain its supremacy in this country, being early overshadowed by New York and many other markets, and now all of these are inferior to the great city of the West, Chicago.

ANCIENT WOOD HOUSE IN JAPAN.

JAPAN possesses what is probably the oldest wooden structure in the world. It contains the art treasures of the Mikado and is situated in Nara, which for some years was the imperial residence. The building is oblong in shape and is built of triangular logs of wood. It rests on piles. The wood used is of native growth and shows extraordinary lasting power, considering the trying climate which it has had to endure for over 1,200 years. A peculiar feature about the logs of which the building is constructed is that, in the parts most exposed to the weather, the logs are thinner by several inches than in those in a more sheltered position, the wood having gradually worn away. The treasures which the storehouse contains are of great antiquity and have been seen by Europeans during only the last three years. They consist of rare and beautiful fabrics of Persian, Indian, Chinese and Turkish manufacture and ancient articles from all parts of the world. Among the objects of interest is the earliest known specimen of Japanese printing. Even to-day many of the words are easily decipherable. The treasures have remained undisturbed in the same building for 1,200 years, and despite the troublous times through which it has been in existence, it has never been injured or disturbed. Many of the treasures are still packed up in the storehouse chamber underground, where they have lain for hundreds of years, and when they are brought to view some new light may be thrown upon the early history of the country.

THE LATE SENATOR KENNEDY F. BURNS.

IN the death of Senator K. F. Burns, of Bathurst, N. B., a few weeks since, the lumber trade has lost one, who, for many years, had been prominent in its ranks.

Mr. Burns was a native of Ireland, having been born at Thomaston, County of Tipperaray, Jan. 8th, 1842. He came to New Brunswick when a boy and his education was obtained in Halifax, N. S., and St. John, N. B. In 1857 he became a resident of Chatham and in 1861 settled in Bathurst. In 1878 he formed a business partnership with the Hon. Samuel Adams, and his brother Mr. P. J. Burns, the new firm going extensively into lumber, and erecting a fine saw mill at the mouth of the Nepisiguit river, opposite the town of Bathurst.

On the retirement of Mr. Adams the business was carried on under the name of K. F. Burns & Co., until May, 1890, when it became merged in the St. Lawrence Lumber Co., Ltd., with mills at Bersimis, Que., Bathurst and Caraquet, N.B., and offices in London and Liverpool, Eng. Considerable English capital was invested in the business, and apparently a profitable trade was done for some years. Within the present year, however, the

THE LATE SENATOR KENNEDY F. BURNS.

company became financially embarrassed and at the present time it is in course of liquidation, Mr. Burns having been one of the liquidators.

Mr. Burns was a public spirited man, having represented Gloucester in the House of Assembly for several years. In 1882 he became a member of the Dominion House, as representative for Gloucester. Later on he was appointed Senator by the Dominion Government.

Personally the deceased possessed in a generous measure the elements that give success and popularity in life, and in his death a blank is created in the business and social walks of the Maritime Provinces.

SHIPPING LUMBER.

IN loading lumber, especially timber, upon flat railroad cars, says the Tradesman, some provision must be made for holding the top end of the stakes firmly in position so that they may not bulge outward or break off owing to pressure of the lumber as it shifts about in going up or down grades or round curves. Some shippers nail pieces of board across from stake to stake. This method is not accepted by some railroads, as it is claimed that the nails may break off. Other shippers put sapling poles across and spike the poles to stakes. This method is open to the same objection as the first. Still another way is to put telegraph wire across from stake to stake; half a dozen strands of wire thus strung across forms a very stout and handy method of tying the sticks together, especially as a twister can be inserted in the middle of the car between the strands of wire, and the stakes drawn into the required positions. The great trouble with this method is that the wire is rather expensive. Some enterprising shipper has been sending me timber with a combination of the wire and sapling methods. He puts in sapling stakes, places a sap pole across from stake to stake, notches the ends of both stake and pole and then wires them together with a few short pieces of No. 8 wire. Very little wire is used and the job is as strong as where the all-wire connection is made.

THE SEASON FOR CUTTING TIMBER.

THAT there is a right season for felling timber, and that the value of timber for building purposes largely depends on this season being chosen, are generally admitted facts; yet the practice of different people and districts, says the Carpenter and Builder, is found to vary most essentially. Thus, while the time for cutting timber for building is largely fixed in Germany in the months of November, December and January; in the Alpine districts of Switzerland and Austria the best and most durable timber for building is considered to be that which is felled in the summer. The reason of this is that the wood of coniferous trees—fir, pine, etc.—contains least moisture in May and June, and as the felled timber is left on the ground till the following winter, it becomes well dried before it is taken away. However this may be with the coniferous trees of the mountainous districts, it is certain that the trees in the plains require different treatment. The question has been subjected to a series of tests in Germany, and the result is sufficiently conclusive. In one case the experiment was with four beams of equal length, breadth and thickness, sawn and shaped in the same fashion, cut from trees of the same kind growing close to one another, and kept on the same dry spot, the only difference between them being that they were cut in four different months. The timber felled in December was the strongest of all; that cut in January was 12 per cent. inferior to it in point of strength or of power of bearing pressure; that cut in February was 20 per cent., and that cut in March 38 per cent weaker than the December timber. In another experiment entire pine trees were buried in a moist damp soil; one sort had been felled in December, the other in February. It was found that the latter had turned rotten in eight years, while the former was sixteen years before it decayed. A similar experience with deal planks showed that those sawn from trees felled in March decayed in two years, while planks from December timber last six years.

SAWING PATTERN LUMBER.

BETTER patterns, says a writer in an exchange, can be made if the lumber be sawed with a rift or quartered saw, as frequently termed. It may be something new for the pattern maker to use "quartered pine," but the patterns he makes of that lumber will stay in place much better than when sawed off the log in the usual manner. An old pattern maker of my acquaintance, whenever he is called upon to make a particularly nice pattern, always splits out his pattern stock with an axe, taking a log of sufficient length to make the desired pieces. He splits this log carefully in the middle, then splits each half into quarters, and hews out from these quarters the required shapes to make his patterns. Quarter sawing comes very near to the effects secured by the hand axe pattern maker alluded to above. The foundry worker has long been aware that quartered oak stays in place much better than cant sawed oak, which means sawing off one side of a log, then beginning over and sawing the other side.

Moffatt & Co., of Renfrew, Ont., are building a large addition to their wood-working establishment.

BY THE WAY.

THE British Columbia Board of Trade has made the suggestion that a system of grading to standard specifications should be followed by the lumbermen of that province. This much has been learned by lumbermen in different sections of the Dominion, and elsewhere, that trade is very much facilitated the nearer its members can get to a good system of grading and inspection. In fact, it is a difficult matter to do business with foreign countries, or distant parts of ones own country, if some system of inspection has not been adopted; and some of the difficulties that lumbermen in Ontario have to encounter is through want, especially in pine, of a uniform system of grading. With export trade on the Pacific Coast growing into large figures, and wide in its extent, the suggestion of the Board of Trade would strike us as practicable and desirable. As indicating the volume of lumber trade in British Columbia the following estimate may be quoted: 524,573 acres leased to millowners are estimated to contain at least 20,000 feet of timber per acre. During 1894 13,730,764 feet were taken from these leased lands, which, together with the timber taken from crown lands, timber limits and private property, make the total of timber cut during that year 67,499,277 feet. The exports during the same period were 46,290,000 feet, or about two-thirds of the whole.

× × × ×

WHERE there is no force in the objection made against paper manufactured from wood-pulp when used simply for newspaper and current magazine publishing, because it possesses no durable qualities, there is much force in the charge when book publishing is considered. The newspaper or magazine is of to-day. Within the covers of the best books on our library shelves are supposed to be preserved the thoughts of the ages, and if it is to be shown that books made from wood-pulp paper would in a few years crumble to pieces and pass out of existence, it means a blotting-out of the literature of the ages. Tests have been made to prove the falsity of these objections. The first book made of ground wood paper has recently been placed in the Berlin testing office for examination. It is said to be in good condition. As it was printed in 1852, very nearly half a century ago, the argument that wood paper has no durable qualities appears to be seriously shaken. With the wood-pulp business growing apace lumbermen have a vital interest in the lasting success of the business. The fact here stated is one in favor of wood-pulp and wood pulp lumber. En passant, it may be remarked that British Columbia is asserting its position as a district suited for the building of wood-pulp mills, the spruce of that country, it is claimed, being an excellent wood for this purpose.

THE ONLY TEST OF MERIT.

THAT the people are quick to appreciate a good thing when they see it is abundantly shown by the phenomenal record of the Toronto Industrial Exhibition. The Fair which begins on the 2nd of September next is the seventeenth of the series. It has grown steadily in popularity and yearly attracts increasing numbers, which is the best possible proof of its superior excellence. This season the display will be more complete and varied than ever. The number of entries is unusually large in all departments. Already every foot of space in the building is taken up through additions, and re-arrangements have been made to accommodate the increased number of exhibitors. Great improvements have been made in the accommodations provided and all arrangements for public convenience are as nearly perfect as possible. An attractive and diversified programme of entertainments is offered. All railways will give low rates and special excursions will be run from many points, presenting an opportunity of which all should avail themselves.

PUBLICATIONS.

IN its particular line it would be hard to find a journal that so completely meets the bill as The Ladies' Home Journal, of Philadelphia. The editor, Mr. Edward W. Bok, has obtained much fame for the success that has reached his journal, the circulation now climbing up to something like a million. Mr. Bok is possessed of that important faculty in an editor of judging what is best liked by his readers, and knowing where to lay his hands on such matter. The current issue of The Ladies' Home Journal is one of the best that has been issued.

PRINCIPLES OF MANAGEMENT.

BUSINESS principles are like other principles—rules with exceptions. If a business man is able to manage his affairs in a way that does not show evident inconsistency in acts or views, he must be considered a man of principles, even if the rules he tries to enforce in his life have many exceptions.

Without principles, no system; without system, poor management. This is a truth inside and outside a saw-mill plant. One of the principles that seem to be of the greatest importance in the management of a concern where many different men are employed, is what might be called the tracing principle, the method by which the manager at any time, and on any occasion, is enabled to find the responsible author of an act, whether the act be of advantage or disadvantage to his business.

If a car-load of lumber is not properly loaded, the inspector is responsible; if a stack of lumber is destroyed by careless stacking, the yard foreman is responsible; if ten per cent. of the daily output from a saw-mill is miss-cuts, the saw-mill foreman is responsible. But the tracing system does not stop here; it will investigate the matter farther, if the system is more than superficial. The inspector will know who placed the lumber in the car, the yard foreman who stacked the pile and the saw-mill foreman who made the miss-cuts. Of course this circumstance does not relieve the bosses from their responsibility, but it gives them the means to prevent such damage in the future, if they keep their eyes open; and just because they had the opportunity to apply the tracing principle themselves, they are inexcusable for the loss their carelessness has caused their employer.

Especially in a saw-mill, the irresponsible machinery is too often blamed for mishaps that ought to be traced back to some responsible person. If a box runs hot, and the mill has to stop for 15 minutes, causing 20 or more men to stand idle, nobody is blamed but the box; if a saw runs off and bursts all to pieces, nobody is blamed but the saw or the wheel; if a belt breaks, it was only the belt that broke. But when the manager knows that the conditions of the box, the well and the belt only represent the work and degree of care of some responsible individual, he will soon find the cause and this individual, and by holding him responsible in every instance, he can prevent the bad luck a hundred times easier than he can fix up the broken material. The material is all right, it is always the man who is wrong.

Let us try the principle on the yard. The inspector is shipping a car-load of saps; he finds the greater part of them black and mouldy, partly because they have been stacked with rotten strips, while the sap side has been turned upwards, and the boards have been laid too close together; partly because the air course is too narrow and the foundation too low on the damp ground, or through a poor roof of mill culls the rain has been pouring down upon the upper courses, leaving them wet for months. It takes the inspector all day to load his car, as two-thirds of the saps have lost in value, even to the limit of shipping culls, and there is consequently hardly any profit on the lumber. The manager commences his investigation; he goes to the yard foreman, who is responsible for the good condition of his stock, and he, who has, or at least ought to have, his yard divided up among his stackers, immediately knows who built the stack, and by gross carelessness caused a loss to the concern. The cause of the evil will be removed, and the cut thereafter will show some bright saps.

And now let us look inside the saw-mill. A large percentage of the daily output shows up as miss-cuts. What causes them, or rather who makes them? The sawyers blame the filers, and they duly return the compliment; the case is laid before the foreman, who suggests some fault in the machinery, and finally acquits the culprits by giving mysterious hints in regard to the carriage track or set blocks; of course nobody is to blame but the machinery. The manager applies his tracing principle; a careful examination proves that the machinery is not at fault, and to find out who is, he gives the off-bearer at the one saw a piece of crayon and orders him to mark every board coming from this saw; at the same time the roll grader is ordered to lay out all the miss-cuts in separate piles of marked and unmarked boards. By quitting-time it is easily seen which saw made the miss-cuts. As the sawyer is still blaming the filer, he is himself transferred to the other saw, and if his saw still keeps on making miss-cuts to an unreasonable extent, he is to blame; if not, probably the filer on his side is to be blamed, which can be found by transferring him and watching the result. In this way the tracing principle is applied, until the cause of making miss-cuts is found out, and probably removed by somebody's resignation.

If the examination of the machinery has brought out the result that it was really out of order by not being in line, or similar serious causes, the foreman may be to blame himself, either for his ignorance of the fact or for not using his knowledge to his employer's advantage—if he really had a chance.

The tracing principle is not only a handy method, but it is absolutely necessary in the management of a saw-mill plant, and if there ever was a rule without exceptions, at least practically, it ought to be this: The machinery is all right, it is always some individual who is wrong.—O. C. Molbech in Hardwood.

A NEW ABRASIVE.

SOMETHING new is offered to metal-workers and others in the shape of an abrasive called "krushite." This consists of minute chilled cast metal shot, varying in size from powder to clover-seed size, which is chilled to intense hardness without becoming brittle, a fact proved by striking it on an anvil, when the latter will be indented. It is claimed to be superior to sand, emery or corundum for stone-cutting, polishing and similar work, the action between the blocks and saw-blade or "rubber" being a crushing one, and the balls do not lose their spherial shape. The wear and tear on the rubber is considerably lessened, and the power required is reduced one-half. Krushite is especially adapted for sawing blocks of granite, for the sand-blast and a substitute for diamond drills in boring. One ton of krushite is said to be equal to three tons of the sharpest sand.

PERSONAL.

The Hon. J. K. Ward, the well known lumberman of Montreal, is at present with his family on a visit to Europe.

Mr. William Margach, Crown Timber Agent for the Rainy River district, is at present on a short visit to Scotland.

Mr. John I. Davidson, of the firm of Davidson & Hay, the well-known lumbermen and wholesale grocers, is likely to receive the appointment of Senator.

Miss Clara C. Tait, daughter of Mr. Andrew Tait, lumber merchant of Orillia, Ont., was recently married to Mr. W. Carrs, of the firm of W. Carrs & Co.

The death is announced at London, Ont, of Mr. William Willis, who for upwards of fifty years has been engaged in the lumber business in that city. He was 78 years of age, his father being one of the pioneers of this country.

TRADE NOTES.

The E. R. Burns Saw Co. have issued an illustrated catalogue and price list of their special silver steel and cast steel saws, and other goods manufactured by them. The book also contains many useful hints for saw mill men.

The attention of lumbermen is called to the advertisement of H. P. Eckardt & Co. This firm is making a specialty of furnishing supplies for camps and is in a very favorable position to enable them to do this class of business right.

The machinery business carried on for many years at Toronto and Montreal by Mr. A. R. Williams has been transferred to the A. R. Williams Machinery Supply Co., with which has been incorporated the Machinery Supply Co., of Brantford.

The Magnolia Metal Co. of New York and Chicago advise us that their business during the month of May has been the largest during the past two years, and that they have abundant evidence of a general revival in business. As their business is largely with mills and manufacturers in all parts of the country, this is one of the best indications of the improvement which has been so long looked for.

Attention is directed to the advertisement appearing in this number of Mr. Thos. Pink, of Pembroke. Mr. Pink is the manufacturer of a patent saw mill carriage cant hook, with which he has supplied some of the most prominent lumbering firms throughout the Dominion from the Atlantic to the Pacific. Mr. Pink has been in business at Pembroke for 30 years past, during which time he has built up extensive business in his particular line of manufacture.

THE BAND SAW.

A BAND saw will saw probably four times as fast as a jig saw, and it works quite as smoothly, requiring no blower to keep the sawdust away. The jig saw has the great point in its favor that it is able to do inside work, so if possible have both a jig and a band saw, but if only one can be used take the band saw every time.

On pattern work, to saw a place having no connection with the outside, simply saw boldly in on a straight line until the inner design is reached, then saw around it, and draw the work away from the saw by means of the cut first made. Now glue in a thin piece of wood the width of the saw kerf, and when the pattern is finished it will not show if black shellac is used.

It is possible, (although not always convenient,) to do anything by means of a band saw that is commonly done on a circular saw, except rabbeting and dadoing pieces that are over a foot or 15 inches in length, so if it were not possible to have more than one saw for ordinary machine pattern work, the band saw would be the last to be parted with, because it covers the widest range of usefulness.

I am the champion of the band saw, for it is a noble tool when properly treated, but if not the results are poor enough, for no machine tool will realize its capabilities without proper attention. A band saw should be kept sharp, with enough set to prevent its binding on a curve, and no straggling, ragged teeth, which are worse than dull ones. It is also necessary to have the saw properly secured between guides to insure precision.

The breakages are caused oftener than any other way by crowding stock against a dull saw, or by suddenly wrenching it sidewise. Very frequently a saw about to break will give a warning thump every time the weak tooth passes through the work. When this sound becomes too pronounced, it is better to stop the machine and remove the saw, breaking it by hand before using. A saw that thumps generally has the weak spot where the joint was brazed. No one can predict, as a general thing, when a break will occur; the unexpected often happens, and sometimes when the machine is started up the blade will snap before the workman even touches it with the stock, and also sometimes when the shipper rod is shifted to stop the saw, the blade will break before the workman reaches his bench. This is apt to happen when a saw has been used for a long time.

An even tension of the blade is an important point. Some saws are provided with an index to register this, while others are not, and the workman turns the hand wheel which tightens the blade by guess, and the saw is at the mercy of the man's muscle, probably never being strained to exactly the same tension to successive times. Anyone not acquainted with band saws when entering the pattern room and looking at one, is almost sure to ask, "Do they ever break?" and when being answered in the affirmative, the next thing is, "Do they hurt anybody?" the idea in their minds seeming to be that they would wind around one like a python in case of a breakage. This idea is erroneous. There is not one chance in one hundred of being hurt, but it is a decidedly startling sensation the instant the snap comes, and it makes one jump.

I have seen many saws break, but was never even scratched save once, and then only slightly on the fingers. When the snap comes, it instantly releases all tension and also any onward motion of the saw, the ends simply throwing themselves outwards and seldom scratching one. If the wheels are not rightly adjusted the blade will not keep its proper position as it revolves, and I have known a saw to fly off the rim a number of times when in motion without breaking. Once one came off in this manner and encircled the workmen as it dropped. This is a rare instance, and the man was, above all things, little expecting to be lassooed by a band saw.

The nack of folding saw blades is hard to catch, even when watching one do it, if it is done quickly. If done slowly, and one watches carefully enough to remember each motion, it can be acquired quite easily. Whether a person who has never witnessed it can accomplish it from any description of mind, is a question I will not try to answer.

Grasp the saw in both hands at about arm's length, standing where there is plenty of room, and having the blade resting on the floor about a foot and a half from the feet. Now take one step backwards, at the same time bringing the arms together until the hands are about a foot apart. The saw is now divided into four curves, which we will call A, B, C, and D. Curve A points downwards, in front of the body, and C also in the same direction, resting on the floor. B points upward, and is governed by the right hand, and D exactly the same, only governed by the left hand. Now try to do three things at once; bring the hands together, so that curve B will cross curve D above it, and curve D take the same relative position in the opposite direction beneath it, while curve A is folded under them both. Now drop the whole affair directly over curve C, which rests upon the floor, and the saw is folded into three circles, ready to hang up. This is the common number of folds used, and they should not be increased unless for the purpose of getting the saw into a small compass for shipping purposes.

A saw can be brought into a very small compass, namely, nine circles, by taking it folded as just described, and considering it now as an entire saw, next folding it again, following the same movements on a reduced scale. This is quite difficult to do.

A better way to increase the folds above three circles is to hold the folded saw in the left hand, and with the right pull the blade out into one large loop, still retaining the folds in the left hand, and proceed as at first, only, of course, it is on a reduced scale, and throw the circles in the left hand in together with the others at the instant the saw is dropped.

A person can fold a blade just as small as he wishes by following these same movements over again for a few times.

The ends of the saw for brazing must lie upon each other, similar to the lap in an endless belt, and should each be filed back for the distance of two teeth, and then the saw placed in the brazing clamps. Do not have any two adjacent *half* teeth, as we might express it, come together pointing in different directions as to the set, but before filing the joint, take one end of the saw in each hand and place them by each other the length of two teeth, and notice if the bend in each tooth in the joint comes properly. If not, break or cut off one tooth from one of the ends, and then the trouble will be remedied.

Brazing clamps are furnished with band saws, and simply serve to hold the saw in position while being fastened. After giving the final turn with the thumb screws, be sure that the under edge of the saw is exactly in line where the joint come, and then proceed with the brazing. This can be done by using thin sheet brass, silver solder, or coin silver, and probably with other substances also, and acid or bora can be used in connection with them, together with hot blacksmith's tongs or a brazing lamp. For material I would advise silver solder and powdered borax, or if silver solder is not convenient to procure take a 10-cent piece and pound it out flat on an anvil fintil it is quite thin, say, 1¼ inches in diameter or more. Now take a piece of the silver about the size of the lap, and moisten it, together with the halves of the joint; cover the solder with powdered borax, and the joint also, both inside and out, and place the solder carefully between the overlaping ends of the saw. The moisture makes the borax stick nicely. Next apply heat.

If tongs are used, they should have thick ends or jaws and should be brought to rather more than a red heat, that is, bordering on a white, and the joint should be nipped by them for a moment, until the solder flows freely, and then be carefully removed so as not to open the laps. Next sprinkle water over the brazed part, so that the joint will not be too soft. A little practice in in this is needful, for if too much water is dashed on when the joint is still red hot it will make it so hard that there will be trouble in filing, but if this should happen it is very easy to hold the saw over a flame and draw the temper.

A good brazing lamp is much neater to use than tongs, and will save a journey to the blacksmith's forge to do the neating, and also the carrying of saw and clamp as well. In whatever manner the saw is brazed, the heat ought to be concentrated just as much as possible on the joint, so as to prevent its spreading, for heating the saw will not do it any good. If a joint is nicely made the saw should break in any other place just as readily when the time comes.

After the soldering or brazing just described, the joint must be filed and the excess of solder removed, and be sure that the blade at this point is no thicker than at any other. I consider a band saw about as easy a saw as I know of to file, and at the same time about as tedious. The teeth should be filed straight across, both on back and front, and the front should be slightly angling or hooking, so that the saw can take hold of the work to the best advantage. Machine filers and setters are coming to the front, and a really good one is an actual necessity, in a shop employing many men, simply in the time saved, but for the benefit of those who prefer to do it in the old way, I can say that I doubt if the actual results are much better than by careful hand work.—John M. Richardson, in American Machinist.

VINES DO NOT ALWAYS KILL TREES.

POPULARLY and erroneously it is believed that vines always kill the trees to which they attach themselves, but investigation shows that the belief is not confirmed by facts. The only cases of injury to the trunks of trees are when woody vines twine around the trunks. When vines travel perpendicularly in the same direction with the trunk, they may be a benefit rather than an injury. Nature has to make special provision in each tree for getting rid of useless bark, and the roots of vines like English ivy all help nature to get rid of this useless dead bark, and the shade which the leaves of the English ivy afford is a direct benefit to the living bark. These remarks apply to all vines that grow perpendicularly up tree trunks. When these vines reach the tops of the trees and spread over the branchlets, shading and in any way interfering with the healthy development of the tree foliage, then they are injurious. The English ivy seldom does this, but the American ivy, the Virginia creeper, or *Ampelopsis Virginica*, will often grow so vigorous as entirely to crowd out the leaves of the tree on which it grows. The grape vine will also do this, and so will many other climbers. It is only when they reach this mature state that vines injure trees.

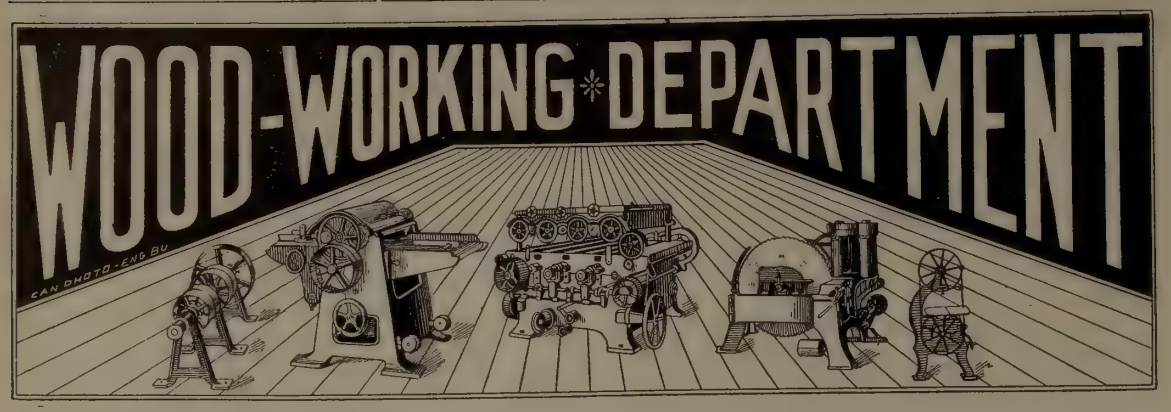
AUSTRALIA AND CANADA.

Will They Exchange Their Timbers?

MR. J. E. ROUNDING, of Sydney, New South Wales, in a letter on the possibilities of commercial development between Canada and Australia, has this to say:—"In timber, as in most other products of the soil, nature has given Australia an article exactly the antipodes of the Canadian product. As the latter has vast forests of the finest soft woods, so has Australia immense supplies of hardwood unequalled in the world. By a mutual reciprocal arrangement the one could be exchanged for the other and mutual benefit ensue. Our hardwood has been proved to be the best known for paving purposes, and should be the means of solving a very vexed problem of Canadian municipalities, viz., that of the best paving material. Already the City Council of Vancouver has decided, upon my recommendation and offer, to lay down Australian hardwood blocks on the street leading to and from the Canadian Pacific railway station and wharves, probably the place where there is the most traffic in that city. For veneering purposes and furniture making our hardwoods are unequalled."

GROWING PINES.

MANY students of trees assert that, when an oak forest is cut down, pines spring up, and that oak follows pine, and so forth, but this never really occurs except where the two kinds are not far from each other. In localities where but one kind exists, that kind succeeds itself. An intelligent Nevada observer notes that, where the pine timber was cut away 20 years or so ago, fine young pine trees, apparently about fifteen years old, now cover the same area. They grow so slowly when young, she says, that few observe them, but after a few years they grow rapidly. It is about the sixth or seventh year before they start on the rapid growth.



TRADE IN WOOD-WORKING LINES.

A STUDY of the figures contained in the report of the Department of Trade and Commerce, for the fiscal year ended June 30th, 1894, now published, furnishes some suggestive thoughts as to the possibilities of extending Canadian trade in wood-working lines.

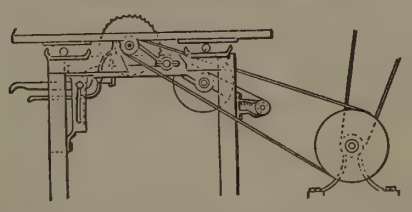
The export trade in doors, sashes and blinds during the past five years has grown at a satisfactory rate, the business for 1894 being more than double that of 1890. The figures are as follows: 1894, $158,196; 1893, $130,349; 1892, $123,144; 1891, $86,450; 1890, $69,474. Let this increase continue in the same proportion for another five years, or why not at a greater ratio, and the trade will have assumed a very considerable size.

The difficult matter in building up an export trade is to obtain entry into foreign markets, but having done this then time will establish the merits of the goods imported. Furthermore, it takes some years for manufacturers to ascertain just what class of goods particular localities require, and this now done, the business in doors, sashes and blinds of Canadian manufacture ought to grow apace. It is unnecessary to remark that no goods in these lines are imported into Canada, showing that the home goods are of a class that meet fully the requirements of our people, even those who may be deemed specially fastidious in their tastes, or who consider it the proper thing to look abroad for what is wanted.

If reference is made to the trade in mouldings it will be learned that the exports in this direction have since 1891 grown largely. The figures are: 1894, $36,558; 1893, $23,164; 1892, $7,083; 1891, $5,153. There was imported during 1891, mouldings to the value of $31,745. The question may be asked: Why the necessity for imports, reaching almost the size of exports?

Figures bearing upon the manufacture of furniture are not so favorable. In 1894 Canadian furniture was exported to the extent of $144,702, whilst there were imported goods to the value of $276,909, on which a duty of $93,104.11 was paid. It is a complaint among furniture dealers that for the finer classes of stock they are compelled to look to the United States. There hardly seems to be any reason for this. The raw material is here in abundance, and as a matter of fact Canadian lumber is shipped to the United States and comes back to us in the shape of furniture. Factories can easily equip themselves with the best in machinery, and there is a wide enough field for goods so generally in demand as furniture to encourage the manufacture of the finest class of stock.

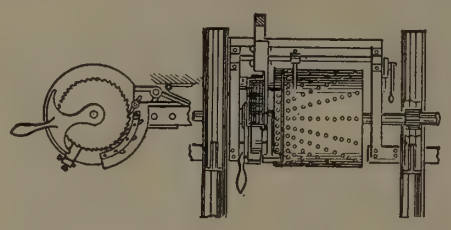
NEW UNITED STATES PATENTS.



CIRCULAR SAWING MACHINE.

Patentee: Henry L. Beach, Montrose, Pa.; Filed Jan. 30, 1895; serial No. 536,687; dated April 16, 1895.

Claim.—1. In circular sawing machines, the combination, with a revoluble frame having arbors adapted to receive saws, of a support for said revoluble frame, adjustable in vertical planes, and a driving belt passing over revoluble frame to a pulley on one of the arbors, and receiving the revoluble frame centrally between its folds, said belt having its tension automatically adjusted with relation to the kind of work to be performed, by the adjustment in vertical planes of the support for the revoluble frame. 2. The combination, with a frame revoluble about a certain axis, and carrying at each end an arbor adapted to receive a saw, of a frame pivotally secured and having the revoluble frame mounted within it whereby the cutting plane of the saws carried by the revoluble frame is adjustible in vertical planes by the movement of the supporting frame, a driving belt receiving the revoluble frame between its folds, and adapted to drive a pulley on one of the arbors of said frame, and means for locking the revoluble frame and pivoted frame in their adjusted positions. 3. The combination, with a revoluble frame carrying arbors adapted to receive saws, of a frame pivoted at one end and having its opposite end free, said frame supporting the revoluble frame and its adjuncts; a spring arm carried by the pivoted frame, having a means for engaging and locking the revoluble frame in position, means for locking the pivoted frame and means for operating the saws.



AUTOMATIC RECEDING SAW-MILL SET-WORKS.

Patentee: Algernon S. Pettigrew, St. Louis, Mo.; filed Aug. 6, 1894; serial No. 519,522; patented in Canada Sept. 1, 1894, No. 46,918; dated April 23, 1895.

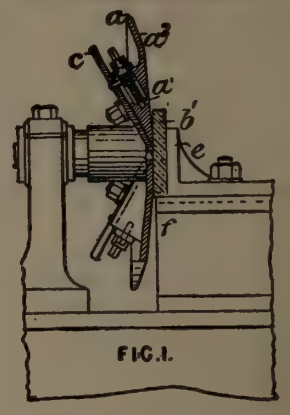
Claim.—In a device of the class described, the combination of a segmental lever, a series of pawls each mounted on said lever on the same pin or bolt, another series of pawls mounted all on another pin or bolt and carried by the same lever, a separate series of pawls mounted on a stationary pin or bolt, a suitable reversing spring, a segmental pawl-trip provided with an outwardly projecting flange and handle, said outwardly projecting flange adapted to engage upon the rear ends of the stationary and moving pawls, thereby disengaging the points of the pawls from the ratchet-wheel and allowing the wheel to reverse its motion.

ATTACHABLE SAW-TOOTH.

Patentee: James E. Emerson, Beaver Falls, Pa., assignor of one-half to E. C. Atkins & Company, Indianapolis, Ind.; filed Sept. 17, 1894; serial No. 523,275. Dated May 28, 1895.

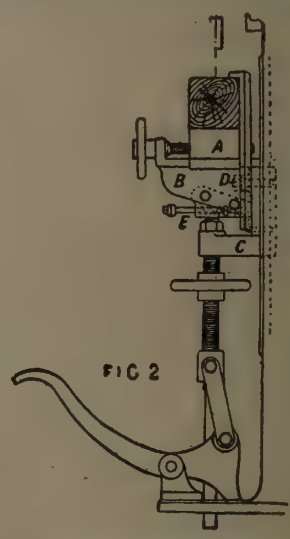
Claim.—1. An attachable saw-tooth whose entire thickness is in excess of the thickness of the body of a saw and provided with a groove in the back of the tooth and with flanges fitting the sides of a permanent tooth of a saw. 2. An attachable saw-tooth whose entire thickness is in excess of the thickness of the body of the saw and provided with flanges fitting the sides of a plain permanent tooth, in combination with suitable means for securing the tooth to a saw. 3. An attachable saw-tooth whose entire thickness is in excess of the thickness of the body of a saw and provided with a groove in its back equal in width to the thickness of the saw and with flanges fitting the sides of a plain permanent tooth of a saw, in combination with an attachable throat-piece whose entire thickness is in excess of the thickness of the saw and provided with flanges to engage the sides of the saw.

NEW ENGLISH PATENTS.



RELATING TO ROTARY CUTTER.

The following patent has been granted to J. Wheeldon, Stockport, Cheshire. It relates to a rotary cutter for wood-planing machines, consisting of a disc *a*, Fig. 1, on which two or more plane irons *c* are mounted with their cutting edges projecting sufficiently from the face of the disc. In the case illustrated, the face of the disc has two bevels a^1 and a^2 with different inclinations. The rough cut is made by the iron on the bevel a^2, and the finishing or smoothing cut by the iron on the bevel a^1, which extends to near the centre of the disc. To secure uniform thickness, the wood b^1 is fed between the disc and an adjustable guide *e* bolted to the table *f*. In a modification, separate narrow irons are fixed on the bevel a^2. The rotary cutter may be driven by a lathe or in the usual manner, by manual or motive power.



MORTISING MACHINE.

Patentee: Nicholas, D., Laurel Villa, Stroud Road, Gloucester.

Relates to an attachment to enable the table of a mortising machine to be canted to any required angle. The table A, Fig. 2, on which the wood is carried, is mounted on a bracket B, on which it can slide for horizontal adjustment. The bracket B is pivoted at D to the slide C, and the bracket with the table can be tilted at different angles and held in position by a spring peg E which is inserted into one of the several holes in the framework. The slide C can be raised or lowered by a pedal connected as shown.

DRIVING BELTS.

BELTS for driving woodworking machinery should by preference be made of leather, except when used out of doors, or where likely to be wetted, when the use of vulcanized india rubber or india rubber cloth is advantageous. Belts are sometimes made of cotton, and we have recently seen one made of paper, which after twelve months' wear appeared in capital order. It was of American manufacture. Leather, from its strength, pliability, and durability, is especially to be recommended for narrow belts, or those running at short centres and high velocities. In calculating the transmission of

speed allowance must be made for "slip." The strength of the best ox-hide belts used for belting has been calculated at about 3.086 lbs. per square inch of section. This is reduced at a riveted joint to 1.747 lb., and to .960 lb. at a laced joint. One third of these figures may be given as a safe working tension.

As driving belts necessarily vary considerably, the following table, in pounds per inch width of safe working tension, may be of use :—

Thickness of Belt.	Working Tension.	Thickness of Belt.	Working Tension.
in.	lb.	in.	lb.
3/16	60	1/2	160
7/32	70	9/16	180
1/4	80	5/8	200
5/16	100	11/16	220
3/8	120	3/4	240
7/16	140		

For driving woodworking machinery belts should be used about one-third wider than is found necessary in machines running at a slow speed ; they should be of uniform thickness, and kept as pliable as possible. After repeated experiments, we can recommend that driving belts should be run with their outside or smooth surface to the pulley, which is directly contrary to the practice now usually pursued, it being the custom to run the rough or flesh side of the belt on the pulley. It will be found that if a belt is evenly made, and smooth on its face, it bears equally over the whole face of the pulley, and not at certain points, as in the rough surface of the flesh side of the leather. With the smooth surfaces of the belt and pulley coming together the air is almost entirely excluded, and the "grip" or driving power of the belt is thus considerably increased.

Twisted belts should be avoided as much as possible ; but if it is found necessary to connect by belt shafts that are not parallel, care must be taken that the belt is always in the plane of rotation of the pulley to which it is approaching, without regard to the retiring side, which may be deviated from that plane without affecting the belt. If this rule is borne in mind, little trouble by belts running off the pulleys will be experienced. When belts are required of greater width than 9 in., a double belt is preferable to a single one, and will run truer. As regards joining belts, many still pursue the old plan of lacing ; we have found the double T belt fasteners expeditious and economical, especially for narrow belts, where the tensile strength is not great.

Very considerable trouble is often experienced in saw-mills in keeping the bearings and loose pulleys of the higher speeded machines in order, the friction and strain being in some cases excessive. They should, in the first place, be made of certain proportions ; but no hard-and-fast rule can be laid down, owing to the varying and special conditions under which they are employed, and practical experience can be the only guide. Very great care should be taken in fitting them accurately to their various spindles, and when the strains are very great, they should be made of phosphor bronze.

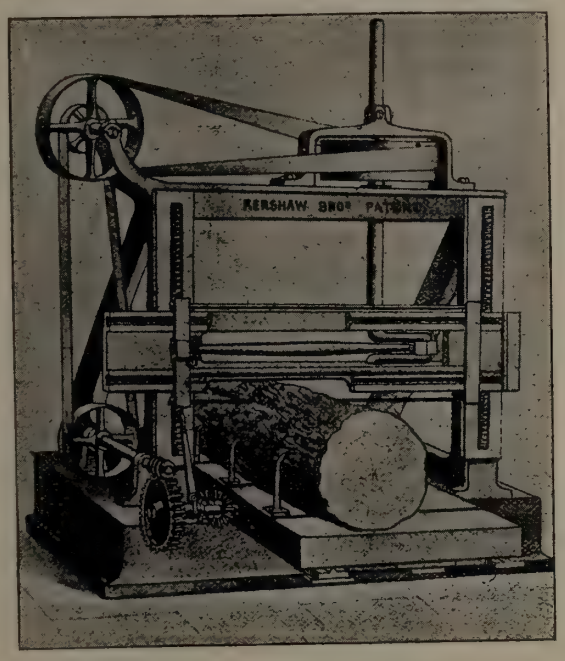
Should the bearings "fire" or "seize," they should be removed and the faces let closer together, the whole of the abrasions being removed by a scraper ; the bearings should then be accurately re-bedded on the spindle by means of red lead. The spindles should run easily without being loose, and should run at a dead level. All bearings should be guarded from dust as much as possible, and efficient means secured for their lubrication. Where the bearings are large and the pressure on them considerable, sulphur, black lead, or plumbago, reduced to a fine powder, and mixed with oil or tallow, retains the lubricating qualities of the unguent, and reduces the friction considerably. Soapstone is also highly spoken of as a lubricant for high-speeded spindles when reduced to a fine powder, and all gritty particles removed, and the powder mixed with unguents.

"Footstep" bearings, or those on which the lower ends of a vertical spindle rests, should have both lateral and vertical adjustments, and a recess for oil having direct communication with the bearing surface should be formed in the pedestal in which the bearing is fitted. Should a bearing "seize," pour cold water on it till thoroughly cool. If conical bearings are used care must be taken that the spindles are allowed no end play.

With machines having a reciprocating motion, such as saw frames, steam mortising machines, etc., it is of the utmost importance that firm and substantial foundations are provided, or, owing to the excess of vibration, the quality of the work turned out will be damaged. With machines working on the rotary principle, little difficulty is experienced, as most of the vibration is absorbed by the framing, assuming it to be well proportioned and the working parts truly balanced and fitted. To reduce the depth and lessen the cost of foundations, saw or swing frames should be connected to the crank shaft by two rods, one on either side of the frame. The reciprocating parts should be counter-balanced, and the crank shaft arranged as near the base of the machine as possible. The vibration is also considerably lessened by the introduction of a sheet of lead or a thin piece of hard wood between the base of the machine and crank shaft plummer blocks and the masonry.—Carpenter and Builder.

PATENT HORIZONTAL SAWING MACHINE.

WE give herewith a rough sketch, taken from a model, and a few particulars concerning a Patent Horizontal Sawing Machine of English manufacture. The objects the inventors have in view are the reduction of space required for the machine, and a higher speed than can at present be attained by the ordinary horizontal.



Patent Horizontal Sawing Machine.

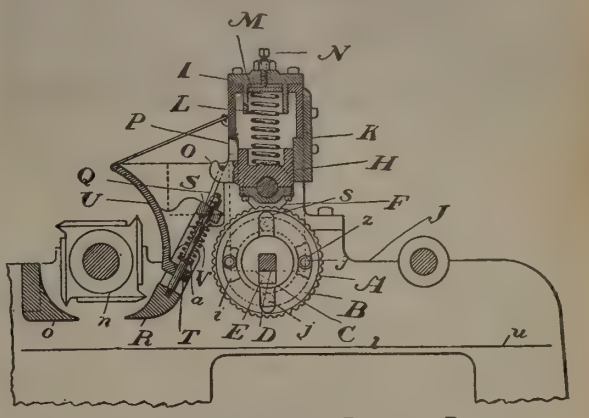
They state that the crank, being vertical, requires no balancing, and therefore vibration is reduced to a minimum. The slide of the machine is on an improved principle, the frame for carrying the saws being driven by a bell crank working vertically between the standards and the slide. The crank shaft is driven from a countershaft, which is fixed to the machine. The same shaft works the feed, and thus makes the machine self-contained. The pulley on the crank shaft has an extra long boss, which works in a pedestal fixed to the top of the machine, the crank shaft sliding up and down a long fixed key in the pulley. The table is worked on the same principle as the ordinary horizontal—a variable feed, and has a quick forward and return motion. The slide is raised by power, and everything is brought within easy reach of the operator. The machine will take up no more room than the length of the slide.

NEW CANADIAN PATENTS.

Saw Set.

Patentee : Mrs. Lydia Moyer, assignee of Samuel S. Moyer and Alvin W. Moyer, all of Berlin, Ont., 13th May, 1895 ; 6 years.

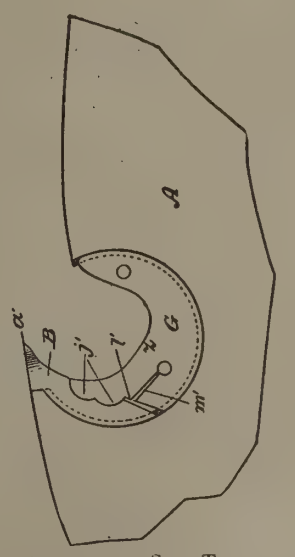
Claim.—1st. A saw set, comprised of levers A and B, lever B having a cavity D, with a spring F secured therein, a disc K with a series of holes L, niches M and cavities O in niches, said disc secured to lever B by a thumb screw H, a steel pin P secured in jaw d of lever A, substantially and for the purpose set forth. 2nd. In combination with levers A and B, disc K, thumb nuts and spring F, substantially as described.



Sectional Feed Roller and Pressure Bar for Planers.

Patentee : MacGregor, Gourlay & Co., assignees of Thomas Cumming Robertson, and James McElroy, all of Galt, Ont., 21st, May, 1895 ; 6 years.

This is a patent in which there is a feed roller comprising a series of sections capable of rotating freely on sleeves carried by a fixed shaft and adapted to move vertically thereon ; in combination with a pressure bar constructed in sections suitably supported and each connected with a corresponding section of the feed roller so as to move simultaneously therewith. In a feed roller is found the combination of the following elements : A series of feed roller section having grooves formed in each end thereof, a series of sleeves supporting said sections, a fixed shaft on which the said sleeves are vertically movable, a series of rings located between the sections of the rollers, a pair of studs connected to one side of the rings diametrically opposite to one another, a pair of studs connected to the opposite side of the rings at point intermediate of the other pair, the said studs entering the grooves in the ends of the adjoining feed roller sections and means for imparting motion to at least one section of the roller. In connection with the feed roller are also embodied other features that will give practical value to the invention. In a planer, a pressure bar comprising a series of shoes or independent sections sliding on lugs formed on a stationary bar in combination with adjustable springs suitably arranged to impart a downward pressure to the said shoes or sections, and spring pressure rollers suitably carried in vertically movable bearings and having hooks formed on the back of their bearings with which the said pivoted links engage, substantially as and for the purposes specified.



Removable Saw Teeth.

Patentee : Philias Bertrand, St. John, N. B., 20th May, 1895 ; 6 years.

Claim.—A removable saw tooth composed of two parts, namely, the bit or cutting part B, having formed in it the two circular recesses e', and point f' and the key part G, having the two circular projections j', holes h' and i' shoulder l', and slit m', all substantially as herein shown and described.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS AND MILLERS' GAZETTE

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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

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THE FUTURE OF PINE VALUES.

THE question of low prices of pine lumber is being discussed by lumbermen and in the lumber press. The apparent paradox presents itself, that with the growing scarcity of pine forests the prices of pine lumber continue low, with little tendency to stiffen. It is pointed out that whilst there was a period in the history of this continent when its pine forests assumed great proportions, yet these possessed comparatively little commercial value. Then there came the time when the country was opened out, railways were built, communities were established, and large cities grew apace. Building operations, under these conditions, became active, and pine, more than any other lumber, entered into consumption.

The value of white pine commenced to make itself apparent to shrewd observers. It was learned that no other timber filled the place that it did, and was so useful for many and various purposes. The demand grew. Capitalists saw a good investment in standing pine timber. Competition for possession of these lands was soon made manifest. As has been remarked by another, there is no value in stumpage unless a certain demand has been created for the lumber. This value had been created and stumpage values advanced rapidly, until within the past year or two, in our own country, these have reached a figure that makes it absolutely necessary that a reasonable price be obtained for the felled tree, if the capital invested is to be made pay a fair margin.

Here the question is raised, whether lumbermen who have paid high prices for the standing timber of to-day, will not experience difficulty in realizing nearly the same profit as had come to those who were owners of limits in the earlier days. Can the fortunes of the older lumbermen of this country be repeated? Some believe so. It is contended that white pine has become, and is becoming, scarce enough to give it a premium among the woods of the continent. The position seems safe, that in better grades of pine generous prices will prevail. In the older, and also the newer pine districts, the point has been reached, however, where the felled trees will not cut in any large part to first grades of lumber. With a preponderance of common stock on the market prices in these grades are likely to depreciate.

To the extent that lumbermen who have bought standing timber at high prices must hold this to secure a paying price, will consumers be forced to look around for substitutes, costing them less money, and this is being done in the present day. Yellow pine is made a substitute for white pine to no small extent, where price is a consideration. Duluth lumber is coming on to the market, and as a new district, anxious to secure trade, the inducement of lower prices is being held out.

Other causes will enter into the conditions that will influence the price of pine. It is being remarked, that with an improving taste, and desire for better things, and better times will help largely in this direction, maple of second and third quality is being used now-a-days for flooring, where pine had been used before. Iron and steel are entering into building operations in an increased manner of late years, and any large growth in this direction will have its influence on the consumption of lumber. Substitutes in other directions, it may be expected, will take the place of lumber, and all these causes will go in a general way to regulate the price.

And so, after allowing for what has been said as regards pine stumpage and kindred considerations, it is, as a contemporary has remarked, "The prices of lumber will be determined by less occult causes, the importance of the supply in relation to the amount of the demand, the competition among different varieties of wood and among purchasers of wood under consideration, the effects of agitation and co operation, of values, and a hundred other causes, which are only indirectly related to any such alleged cause as that advanced."

INTERPRETING THE LUMBER TARIFF.

THAT our readers may have a clear understanding of the ruling given by the United States Board of General Appraisers, touching the question of dressed lumber, we print the exact wording of the decision:

The merchandise consists of dressed boards on one side, with the edges planed or jointed and tongued and grooved. It was assessed for duty as a manufacture of lumber at 25 per cent. under Section 3, Act 1894, and is claimed to be exempt from duty as dressed lumber under paragraph 676.

From the evidence in the case it appears that the trade distinction of dressed lumber is lumber that is planed or surfaced on one or both sides, and brought to an even thickness. When it is further advanced in manufacture, by having the edges planed or jointed, it is no longer known as dressed lumber, but sheathing, casing, or by other names descriptive of the uses for which it has been prepared. When it has been subjected to the further processes of tonguing and grooving or beading, it is known as flooring, sheathing, ceilings, etc.

We find that the merchandise had been advanced beyond the condition of dressed lumber, and that it is a manufacture of wood. It is provided for under paragraph 181. The protest is overruled.

[Signed] { WILBUR F. LUNT, THAD. S. SHARRETS. J. B. WILKINSON, JR.

The question was raised by the exacting of 25 per cent. duty ad valorem on a shipment of lumber entered at the customs at Ogdensburg, N. Y. The lumber was planed on both sides, jointed, matched and beaded, and was classified by the customs officer as out of the free lumber list, and on the dutiable list.

No good will be accomplished by viewing this question other than in a liberal and equitable light. It is natural, perhaps, that a certain section of the lumber trade of the United States should hail the Appraisers' decision with delight, and in the current lumber journals letters are published from various lumber concerns and lumber districts, commending this decision. But this does not settle the matter, and the final settlement, we presume, will be through the United States Circuit Court, as was the case with the red cedar of British Columbia, judgment in which case is published in another column.

There are points in the decision of the Circuit Court re. red cedar that throw light on the present question of dressed lumber. There it is stated: "It was clearly the intent of Congress to exempt from duty all the cheaper grades of wood when rough, unmanufactured or partially manufactured, and to levy duty only upon the boards, etc., of the finer and more expensive woods used in cabinet work. This was the broad scheme of the Act of 1894." A measure like that of the Wilson tariff can only be interpreted and made workable when taken in the broad and liberal spirit suggested by the words of the Circuit Court judgment.

The clauses of the Wilson tariff referring to lumber do not stand alone as the wording of the Act itself shows. They are dependent upon parallel clauses in the Canadian tariff, and to quote the Minister of Finance, when amending the lumber tariff, so as to meet the changed interpretation given of dressed lumber by the United States Appraisers, "In the preparation of the tariff last year the Canadian government had had the idea of reciprocity in respect to all articles on which this could be done and more especially in regard to lumber. For many years all had agreed that if it were possible to have reciprocity in lumber it was advisable to have it." This view is clearly endorsed by the Circuit Court, in their decision in the red cedar case in these words: "Again, it is apparent from the Act (par. 693) and similar provisions in the Canadian Act in the same year (section 13, par. 739, of customs tariff Canada), as well as from contemporaneous history, that the legislation of 1894 on this subject was entered into on both sides in a spirit of reciprocity. Neither country was to impose duty upon the coarser woods imported from the other."

The lumber press of the United States, when the tariff became law, so understood, and interpreted, the Act in the manner here stated, and it has only come in this case, as with red cedar, for a customs officer at a border point to call the Act into question. Judge Daniels, who was one of the most vigorous opponents of the Wilson tariff and especially watched the lumber clauses as they were passing through Congress, said, after the bill had become law: "When the bill was in conference I endeavored to get them to put an ad valorem duty on planed, matched, grooved and tongued lumber, but they did not pay the slightest heed to the arguments showing the necessity of such duty in order to protect our lumber manufacturers from the inroads that will be made upon them by the Canadian people."

Thus, of the intent of the law, there would seem to have been at the time of its making, no doubt whatever. The nice question raised now is, what constitutes dressed lumber? Or, in other words, where does dressed or finished lumber end, and manufactured lumber begin? The decision of the Board of General Appraisers states that "dressed lumber is lumber that is planed or surfaced on one or both sides and brought to an even thickness. When it is further advanced in manufacture, by having the edges planed or jointed, it is no longer known as dressed lumber, but as sheathing, casing, or by other names descriptive of the uses for which it has been prepared." Against this interpretation let us take the answer of Mr. G. W. Hotchkiss, of Chicago, the veteran lumberman and writer. In answer to a query of the Northwestern Lumberman, "What is dressed lumber," and what should be understood by "manufactures of wood," referring specially to the decision of the customs department of Ogdensburg, classifying flooring, etc., as manufactures of wood, he says that the legends and customs of the trade would not sanction such a decision. "If we go back," says Mr. Hotchkiss, "to the introduction of the planing machine, we shall find that the term "dressed lumber" was applied to every variety of its product, whether the simple surfacing or tonguing and grooving, and this continued to be the universal nomenclature down to the days when the retailer of this city (practically the first to do it) introduced the various divisions and subdivisions in quality or grade into which his stock has since been divided, necessitating in the case of dressing, various terms to signify the character and extent of the dressing. Although flooring, ceiling, etc., are now ready for use in the main, they have yet to go through the manipulations of the carpenter, must be sawed to square end, and fitted to the place they are to occupy in the work, and cannot be called "wholly manufactured" until thus fitted. From the earliest history of the trade the designation "dressed lumber" has been applied, and the terms S 1 S, S 2 S, are but mere technical descriptions of the extent of the dressing. I remember that under the reciprocity treaty with Canada, 1855-1865, some of our customs officials for a time made claim that while "saw-jointed" shingles were admitted free, "knife-jointed" shingles were dutiable. Proper representation to the head of the department secured an

abrogation of this claim, as the shingle was no more a manufacture of lumber when trimmed with a knife than when trimmed with a saw, and was ready for immediate use in either case. Would a tongued and grooved (not surfaced) plank be "manufacture of wood" subject to duty as "dressed" lumber? I think not, and yet I have handled large quantities of it which was for the use intended just as much as a manufactured product as if it had been surfaced. The ordinary meaning of "dressed" lumber as defined by customs, includes flooring, ceiling and wainscoting as well as facing, which is but one degree of dressing, while others are carried a degree or two further. A manufacture of wood would be a finished product either in whole or in knock down, requiring no further manipulation in the way of fitting except the final finish of paint or varnish." Mr. Hotchkiss winds up his argument with the remark that if the term "dressed" had been defined by the authorities of the law to be confined to "surfacing," it is probable that the simple term would have been used; but in the use of the term "dressed" they but conform to the custom which has prevailed in the lumber trade from time immemorial. The present is the first time in an experience dating from 1847 that Mr. Hotchkiss says he ever heard it claimed that "flooring and the like was not properly classed as "dressed," rather than as a manufacture of lumber.

Manufacturers in Canada, who, like J. W. Howry & Sons, and others, have equipped their mills with special plants for dressing and finishing lumber, have reason to protest against the Appraisers' decision on the ground of vested interests, as well as from an intelligent and generally accepted interpretation of the law itself, as is pointed out in our remarks above. The very fact that the Messrs. Howry, a Michigan concern, should have made heavy investments in planing mill equipment in Canada, is good evidence of what was intended by the Wilson tariff. It is not easy to conceive that, as shrewd men of business, they would have made such an investment, had they not reason to believe that the tariff meant just exactly what Mr. Hotchkiss has stated it must mean. And so it is with others.

The hope is, as the Minister of Finance has stated, that in introducing a retaliatory clause into the Canadian tariff, it will be the means of promoting a friendly consideration of the case and a friendly settlement.

TRADE WITH FRANCE.

With the commercial treaty affecting the relations between Canada and France in respect of their customs and tariff now fully ratified, the Chambre de Commerce, of Montreal, is doing excellent work, in specially examining into the possibilities of development in all lines of trade between these countries.

Where France has been a fair customer for Canadian lumber, she has yet purchased under the old tariff, but a small percentage of her annual consumption. The exports of wood and manufactures of wood from this country to France in 1894 were as follows: Spruce and other deals, $84,122; deal ends, $6,902; planks and boards, $14,168; lumber, $2,279; square timber, $7,318, and other miscellaneous manufactures of wood, $2,893, or a grand total of $117,682. The report of the Chambre de Commerce, giving in detail the importations of lumber to France in 1892, show that these amounted to $40,000,000, and of these $33,000,000 are represented in what is termed common timber, as distinct from cabinet woods, the class of timber that Canada is well able to supply.

From what source does France receive her lumber supplies at present? The question is answered in the report before us in these words: "As for instance the Scandinavian states, especially Sweden, heads the list with 50 per cent. of the whole; supplies with Russia nearly the totality of the imports of the English channel. Canada figures also with its paltry quantity. The same Sweden and Norway with Russia via the Black Sea supplies the ports of the Mediterranean, but this time in company with Austria, Hungary, Italy and the United States. Bordeaux and the ports of the Atlantic are supplied nearly exclusively by the hands of the last named country. Germany, a part of Austria, and Switzerland enter by land of the east frontier and supply the balance of the needs of the market in this district and in portions of the centre."

In the past there have been difficulties in the way of a large trade in lumber between France and Canada. The methods of doing business there are different to other countries, and especially Great Britain, with whose ways Canadian lumbermen are intimate. But this is simply a case of adopting methods suited to the country. The terms of the treaty place Canadian lumbermen on a perfectly equal footing with those of other countries. "It guarantees," to quote from the report of the Chambre de Commerce, "a reduction varying from $1.25 to $1.95 per 1,000 feet, B. M., and if by the efforts of interested parties direct and regular communication by steamer between the two countries can be secured, it would be ridiculously foolish not to profit by the circumstance, and abandon cheerfully, on account of a few difficulties that might be encountered at first, a vast and rich field of exploitation on the only ground of these being foreign competition."

We have on a previous occasion referred to the opinion expressed by Mr. J. B. Snowball, of Chatham, N. B., who said in his lumber report at the first of the year: "Twelve cargoes were shipped from this port to France during the past season, all to Marseilles, in the face of the disadvantage we are under as regards the import duty; but now that Canada is about to enjoy the favored nation clause under the recently ratified treaty a large revival of our exports to that country is looked for." And the Brooklyn Eagle of the 2nd Jan., 1895, alluding to the sale to an American syndicate of 860,000 acres of timber limits in Nova Scotia, said: "Agencies will be continued by the company in England, and new ones will be opened in the United States and in France and in South America."

The new treaty not only applies to France, but also to its colonies, and there is reason to believe that a good trade may be done with these also.

SOME LUMBER FIGURES.

If we take the statistics of the lumber trade of Canada, as shown in the last report of the department of Trade and Commerce, it will be found that the exports of lumber for the fiscal year, ending June 30th, 1894, fall short of those of the year previous by rather more than $1,000,000, though showing an increase over 1891 and 1892, but again behind 1890. The figures are: 1890, $28,102,267; 1891, $26,812,765; 1892, $24,666,960; 1893, $28,841,081; 1894, $27,780,352.

Where this lumber has gone, in what quantities and ways, is an interesting question. The export of logs show up in large figures, and almost entirely of pine. Pine logs exported amounted to $2,459,354, where those of spruce were $107,282, and all others $106,824. The United States, practically, were our only customers for logs, and as showing how these exports have grown from year to year, the following figures are suggestive: Total exports of logs in 1894, $2,750,270; 1893, $1,508,513; 1892, $1,112,687; 1891, $722,845, and 1890, $681,265. How far it is wisdom on the part of Canada to ship her lumber in logs in such quantities is a question on which opinion divides. In his last annual address before the shareholders of the Merchants' Bank, Mr. Geo. Hague expressed the view that this large exportation of logs was an unwise policy.

The United States, happily, who were large customers for logs were still better customers for planks and boards, turned out of the saw mills of Canada, and it is a question whether exports in such quantities would have gone to that country, without the freedom in exportation of sawn lumber that has followed, and is a condition of, a free export of logs. The total exports of planks and boards for 1894, were $7,964,970, against $9,904,901 for the previous year; $8,353,055 in 1892; $8,963,434 in 1891 and $8,104,577 in 1890. Of these the United States purchased in 1894, $6,577,440; 1893, $8,571,525; 1892, $7,359,356; 1891, $7,966,134 and 1890 $6,977,697.

Coming to treat of another class of wood goods, to use the English term for lumber, it is learned that for pine and spruce deals the United Kingdom is an excellent customer. The exports of pine deals to Great Britain in 1894 were $2,766,065; 1893, $3,113,120; 1892, $2,405,610; 1891, $2,903,178; 1890, $3,719,487. The exports of spruce deals far exceed those of pine, being as follows: 1894, $4,925,640; 1893, $4,255,006; 1892, $3,710,627; 1891, $4,462,446, and in 1890, which was the best of these five years, $5,110.239.

The lumber of Canada finds a market, to a greater or lesser extent, in almost all parts of the world. The exports in planks and boards for 1894, to West Indies were $184,486. Newfoundland took $70,350 worth of planks and boards, $88,506 in lumber, and some small purchases in other manufactures of wood, and the S. W. Indies $172,673. The Argentine Republic, Australia, Africa, Germany, France, Spain, Portugal, Norway and Sweden, Belgium, Holland, Japan, Madeira, and other lands have all some acquaintance with Canadian lumber.

EDITORIAL NOTES.

The semi-weekly bathing of logs is something new in the history of lumbering, but this is being done on the Ontonagon river where the Diamond Match Co. cut last winter over 100,000,000 feet of timber, because of forest fires, which left the timber subject to the worms. These logs were put in the streams and what could be driven were sent down. About 80,000,000 feet were hung up. The water was very low in some places, and the only way to cover the logs was by the scheme devised for bathing. Though expensive, it will be better than losing the logs altogether.

The theory, generally accepted as based upon scientific principles, that forests or the lack of forests, determine the amount of rainfall in a given area, is called into question by a contemporary in the light of the drought that has been experienced everywhere in the past two or three months. The untenable character of the contention is shown by a reference to the fact that the drought-scorched area has included many states that are heavily timbered. The existence of the forests in these cases has not helped conditions any more than where it was simply broad prairie, and the conclusion is that "the man who says that forest denudation is the cause of drought is yet up a tree." Alongside of statements of this kind may be read the story of the work of the Society of the Friends of Trees, an organization having its home in France, and whose special purpose is to promote re-forestration for the purpose of regulating the matter of rainfall and preventing drought, and other injury that it is alleged comes to a country where the work of the denudation of its forests is indulged in. It not unfrequently happens that the beliefs, that seem the most fixed with individuals, are completely knocked out at times by the matter-of-fact experience of the day.

It is reported, that in Duluth, recently, lumber dealers threatened to boycott any builder or architect who should specify Washington fir in any public buildings. The purpose, doubtless, was to make it necessary that home timber should be used. Where it can be shown that for certain well defined reasons it is unwise to import foreign woods to be used in public buildings, the lumber trade owe a duty to themselves and their district to point out these drawbacks and bring all reasonable force to bear preventing their use. But let reason in all cases prevail. The boycott is a measure wanting in courage. It may be said, it is the coward's weapon, whether used by workmen, manufacturers, or any one else. In fact, so far as lumber is concerned, it is almost impossible to talk of excluding any particular class of lumber from any particular district or country. No article of merchandise is so thoroughly cosmopolitan in its character as lumber, and the trade is becoming more so every year. Washington fir, or what is known in this country as the Douglas fir of British Columbia, is especially suited for certain work, and the world over, those who want the best lumber for shipbuilding, and in other cases where great strength and endurance is required, will be obliged to secure Douglas fir. In the Transactions of American Civil Engineers is published the following tests of woods: White pine broke at 3,872 pounds, all same sizes. Norway pine broke at 4,008 pounds, all same sizes. Douglas fir broke at 6,214 pounds, all same sizes. In other words Douglas fir was shown to be by a large percentage stronger than the strongest woods. This wood is becoming well known lately in its uses for bridges and other public undertakings. Some unusually large pieces have been sent east to Montreal to be used for dredger work there.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN].

RATHER more than midway into the year lumbermen are congratulating themselves on the splendid business that has been done this season compared with other years. The opening of the United States markets has helped to swell the volume of trade into important figures, and it has been usually of a profitable character. The Consular's figures of trade between St. John and the United States for the year ending June 30th show as follows: First quarter, $261,950.01; second quarter, $335,197.16; third quarter, $199,658.73; fourth quarter, $696,735.23, or a total of $1,493,541.13. It will be seen that the shipments of the last three months cover nearly half of the shipments for the year. What this growth means will be recognized when it is stated that shipments from St. John for the year ending June 30th, 1894, were only $319,322.69. British trade has, of course, been regulated by conditions in the United Kingdom, and these have not been of the most satisfactory character, and yet a good trade has been done, and represents a fair margin of profit.

The Hamilton mill at Straight Shore is rapidly nearing completion.

An addition has been made to their saw mill at Spruce Lake by Hanson & Miller.

Lumber exports from Parrsboro, N. S., for the month of June were $189,116.

G. G. and W. C. King are making extensive repairs to their saw-mill at Summerhill, N. B.

The saw-mill of H. A. McPhee at Henry Lake is represented as being particularly well equipped and doing a splendid business.

The mills of W. C. Purves and A. Cushing & Co., which were destroyed by fire will be rebuilt, the city council granting aid to the former by wiping out the last year's taxes, and in the case of the latter will extend the water service to the site of this company.

ST. JOHN, N. B., July 24, 1895.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

SEVERAL circumstances, though varied in character, have created interest in lumber affairs on the Pacific Coast within the past month. One of these has been of a decidedly depressing nature, namely, the destruction by fire of the Brunette saw mills, at Sapperton, near New Westminster, and already noted in the columns of your weekly edition. The Brunette mills occupied a large place in the lumber concerns of British Columbia, and perhaps at no time in their history was business in a more prosperous and progressive state than this season. The fire broke out in the dry kiln and spread with alarming rapidity, it not being long before the entire mill was destroyed. Mr. Wilson, manager of the company, estimates the loss at fully $75,000 over the insurance, which will have to be borne by the stockholders. The financial position of the company is excellent, as all the stock issued is fully paid up. The liabilities, outside of the company's liabilities to the stockholders, are not large, and everything will be fully paid. The fact that for some time past the company have had orders booked more than a month ahead of the output, and cargo after cargo has been refused, will indicate how unfortunate the disaster is, and at what an unfortunate time it has overtaken the company. At this writing I am not able to say whether or not the company will rebuild. The stockholders, to a large extent, consist of prominent Ottawa lumbermen and others in Ontario and Quebec.

J. C. Anderson intends building a saw-mill at San Juan, Vancouver Island.

The settlement of the red cedar difficulty, placing this lumber on the free list, is an item of decided congratulation among the lumbermen of British Columbia. There can be little doubt but that large shipments of this lumber will from this out go into the United States.

A shipment of lumber that left here within the month for Shanghai, included an unusually large number of heavy sticks. The dimensions of the largest are as follows: 4 spars, 24x24 inches square and 100 ft. long; 4 pieces, 24x24 inches, 90 to 102 ft. long; 6 pieces, 25x20 inches, 90 to 100 ft. long; 12 pieces, 18x8, and 17 pieces, 16x16 inches, 80 to 100 ft. long.

After much waiting the lumbermen of British Columbia have finally got together and decided on an increase in the price of lumber of from $2 to $3 a thousand feet. Though the volume of trade on the Coast has kept up well for some time past, this encouraging feature has been offset by the low price at which much of the lumber in the past has been sold. The hope is that an advanced price has now come to stay.

Mr. R. H. Alexander, manager of the Hastings mills, who has lately returned from an extended trip in Great Britain and other foreign markets, is hopeful that Douglas fir will eventually find a large and profitable sale in the foreign markets. This pine for some time has been known on the English market as Oregon pine, but this is a matter that Mr. Alexander and others are having righted, and we shall in the near future learn of Douglas fir as one of the woods, I anticipate, well known in the United Kingdom. The low price of pitch pine in Great Britain has been a barrier to the introduction of Douglas fir in the past, but time also will overcome this difficulty. Mr. Alexander reports that upon the continent he found Douglas fir giving good satisfaction, and when on the Clyde he saw a cargo of lumber from the Hastings mill, that seemed to give particular satisfaction to English lumbermen.

NEW WESTMINSTER, B.C., July 23, 1895.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

LUMBERMEN in this district, viewing the matter from a purely personal standpoint, express themselves as pleased with the recent decision of the Board of General Appraisers in excluding matched lumber from the free list. Questioned as to the real interpretation of the Act, and what was meant by its promoters, many will be frank in saying that the Wilson tariff was intended generally to cover the classes of manufactured lumber now disputed.

Lumber business generally is quiet, but the disposition is to charge it to the midsummer holiday season.

A large raft of cedar containing 12,000 telegraph poles, 25,000 cedar ties and 50,000 posts was rafted down the Detroit River to Delray a week ago for the Cleveland Cedar Co.

Extensive timber fires have been prevalent in different parts of the State and a good deal of damage done. One result is quite sure to follow, and that is that the price of hay and coarse grains for lumber camps next year will be high.

A statement is made by lumbermen here that logging on the Canadian side of Lake Huron costs 25 per cent. more than on this side and as a consequence jobbers who took contracts based on cost of logging on this side will come out at the short end.

SAGINAW, Mich., July 26, 1895.

SOMETHING ABOUT INJECTORS.

HINTS ABOUT THEM FOR ENGINEERS AND FIREMEN.

IN some instances it may be found impossible to adjust the injector for the work required, as it may have been especially for a far different pressure than that at which you wish to work it, for the higher the steam pressure used the smaller in proportion must the steam tube opening be, and no injector can be made which will fit all conditions equally well, regardless of advertisements to that effect.

Suppose our injector acts as we have stated before, we immediately know that it is not the fault of the injector, for if it was it would not start at all, unless in rare cases there may be a tube loose, and after the injector has started this may move and alter the relation between the water and the steam supply.

If our injector does not receive steam from the same pipe, the engine does, and the boiler is not forced to such an extent that it lifts the water badly we may neglect the wet steam cause and look for others. First of all, we will make sure that our water supply is not interrupted by some unknown cause, for this would cause a deficiency of water and the steam would show at the overflow, making the injector break. This water deficiency may be caused by the water valve having a loose disk, which may move on the steam enough to alter the opening for water, and this is a fruitful cause of trouble many times both in steam and water pipes.

Or it may be that a pump in the neigborhood is taking the water at intervals, and at times the lessening of water may be enough to cause a "break" in the injector's working. Other causes which give trouble may be given briefly:

In many instances the pipes leading to the injector are long and small and often filled with rust and other deposits, and while the injector will start all right it breaks just as soon as it has used the amount of water that is in the pipe, for this acts as a reservoir, supplying water enough for a start, but being soon exhausted.

In a case of this kind it will not do to blame the injector after being sure that there is nothing loose about it, for if it will start it will run until worn out, unless stopped by some outside cause, and this cause must be looked for.

In cases where small injectors are used on large pipes confusion often arises as follows: The injector will start all right, and after a very short period of operation, will suddenly break and we wonder why. In cases that have come under my notice this has been caused by there not being an opening into the boiler, the check being either stuck or the stop valve shut. The injector starts well enough, but after it gets the large pipes filled and the pressure rises to the limit of the injector, then it breaks. A long pipe between injector and boiler, even if not so large, will have the same effect.

Great difficulty will sometimes be experienced in starting an injector, and one of the most common causes for this is a leaky check valve, allowing hot water from the boiler to come back into the injector and boil the water, or prevent it from condensing the required amount of steam. This can be readily found by care, carefully noticing whether any hot water shows at the overflow when the steam supply is shut off; this will indicate a leaky check valve unless the steam valve leaks, and a little care will soon determine which is the leaky valve.

The checks that give the most trouble are what are termed straight way or swinging checks, which, while very good for some work, are not as good for injector work as the old-fashioned plain check. The reason is this: The passage of water through them wears the side of the seat farthest from the hinge and in a very short time the check is not tight, and this little leakage back from the boiler makes it hard to start the injector. And if a very slight obstruction becomes lodged near the hinge, the opening at the outer end of the swinging valve is much greater and the leakage is considerable. This is not said to injure any maker of swinging checks, but merely to give my own experience in this class of work.

When you have your doubts as to the quantity of water that can be supplied to the injector, just measure the flow by letting it run into a measure of known quantity and note the time taken to fill the measure. If we have a two-gallon pail and the water from the supply pipe of the injector will fill it in five seconds, we know that as there are sixty seconds to the minute the pail will be filled twelve times per minute, which is twenty-four gallons a minute or 24x60 equals 1,440 gallons per hour.

In many cases the injector is made useless by the manner in which the piping is put up, and the writer has found cases where the injector refused to work, in which the supply of water had been cut down to less than half by the man who did the piping screwing all the pipes so far into the valves and elbows as to almost close the openings. This is particularly apt to be the case in the valves and checks, as the brass of which they are made gives so much more than iron fittings that the men do not stop until the pipe refuses to turn with the same force that they apply to iron pipe fittings. A little judgment helps wonderfully in a case of this kind. It is sometimes necessary or convenient to pipe the injector to the same supply and delivery pipes as used by the pump, although it should never be done where both are to be used at the same time, as the pulsating action of pump is very apt to take the water from the injector momentarily and cause it to break.

Where this is done there should be valves so that the pump connections can be shut tightly from the injector and vice versa, particularly in the case of a lifting injector. One instance of this kind was brought to my notice aboard of a little yacht which was being hurriedly fitted for a southern winter cruise, and in which the injector would start nicely and work for a minute perhaps, and then break or fly off, as some call it. The first thought was that there was a piece of wood or waste floating in the water tank in the bow of the boat, and that the action of the water drew it over the pipe and shut off the water supply, as often happens in cases of open tanks. This was not correct, however, as investigation showed that the men who had piped the injector had connected the water supply to the same pipe that supplied the wash basins in the cabins, and whenever the faucets in the cabins were open or leaked the air was drawn into the pipe and into the injector, and caused the break. By piping the two water supplies separately the trouble was remedied and the boat was ready for her trip in tropical climates.—The Tradesman.

CANADA LUMBERMAN

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Weekly Lumberman, published every Wednesday. Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

Lumberman, Monthly. A 20-page journal, discussing fully and impartially subjects pertinent to the lumber and wood-working industries. Contains interviews with prominent members of the trade, and character sketches and portraits of leading lumbermen. Its special articles on technical and mechanical subjects are especially valuable to saw mill and planing mill men and manufacturers of lumber products.

☞ Subscription price for the two editions for one year, $1.00.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type, and no display is allowed beyond the head line. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue.

WANTED.

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LOT 1.—Mill consisting of 50 H. P. engine and suitable boiler; one small size Waterous Band Mill with all necessary tools; long carriage; heavy three-saw edger; endless chain; bull wheel rig; 60 inch cut-off saw for shingle blocks; two Dunbar shingle machines; one combined planer and matcher, and small saws, etc., usually found in mills. The whole in first-class condition, having been in use only a short time and well looked after; situated at Gaspe Basin, Province of Quebec; deep water right at mill; excellent point for shipment to Prince Edward's Island, Cape Breton and New England ports.

LOT 2.—Timber Limits consisting of 68 square miles on the Dartmouth River, extending one and a half miles back from said river on either side; always plenty of water for driving.

The timber consists of large quantities of white pine, cedar, spruce and fir, and the greater part of these limits have never had an axe on them. Intending purchasers can view these limits at any time without trouble. Further information at time of sale.

For further particulars apply to John McD. Haines, 43 St. Sacrament St. Montreal; A. A. Benson, 718 Craig St. Montreal, or Waterous Engine Works Co., Ltd., Brantford, Ont.

A. J. MAXHAM & CO., Auctioneers,
130 Peter St. Quebec.

JOHN McD. HAINES, Curator,
43 St. Sacrament St., Montreal.

BUSINESS DIFFICULTIES AND CHANGES.

G. & S. Lavatt, saw-mill, have removed from Three Forks, B. C., to Sandon.

A. Ferris & Co., planing mill, Sudbury, Ont., are in financial difficulties.

J. Bergen, lumber, Plum Coulee, Man., has sold out to Wagner Bros.

Fire in the woods north of Lachute, Que., is causing much damage to standing timber.

A despatch from Vancouver, B. C., says that it is not likely that the Brunette saw-mills, recently destroyed by fire, will be rebuilt.

Robert Hall, formerly in the sash, door and blind business at Toronto, is in the western states looking for a desirable opening on that side of the line.

A large tract of land in British Columbia, containing 15,000 acres of yellow cedar or cypress wood, which is prized very highly, has been purchased by an English syndicate for $40,000 cash. It is estimated that there can be cut on these limits over 100,000,000 feet of yellow cedar suitable for commercial purposes.

The St. Lawrence Lumber Co., at Bathurst, N. B., is running night and day to clean up the season's logs. P. J. Burns has taken the place of his brother, the late Senator K. F. Burns, as manager and trustee for the Company. The mill will be offered for sale later in the season.

The saw-mill of Bolton & Matthew, and the sash and door factory of C. A. Jones, situated at McAuley's Corner, Lower Mill-Stream, N. B., have been destroyed by fire.

CURRENT TRADE CONDITIONS.

ONTARIO.

IT cannot be considered good business policy to be continually talking of trade as in a doleful mood, yet, just now, it is difficult, if one wants to be truthful, to say anything else than that the lumber business is dull. Perhaps it is that the summer quietude, which is expected at this time of the year, is rather more accentuated than usual, and it may be expected that the reaction that will follow in the fall will take on enlarged strength and force. Every one is hoping that this may be so, and there are conditions that give reason for this hope. Except that the crop reports are not as bright as they might be, because of the drought, the general trend of business in leading commercial manufacturing lines is towards better values and larger volume. It may be said that all this talk sounds very pleasant, but the lumber trade knows nothing about this improvement. Still it is reasonable to believe that the turn for lumber will come along soon. Stocks on hand at the close of the half year's business are larger than is desirable, with a considerable new cut right at hand.

QUEBEC AND NEW BRUNSWICK.

There is a little, but yet not to any great extent, an abatement of shipments from Quebec since the turn of the half year. Canadian exporters to Great Britain view trade in a more hopeful light than earlier in the season. Conversing with McArthus Bros. & Co., a day or two since, the writer was informed that whilst their shipments up to date were, probably, a little behind those of a year ago, yet before the season closed they would doubtless run into volume equal to those of 1894. The experience of this firm, as of others, is that the British maket is improving, good quantities of timber going into consumption and prices more disposed to harden. Business is keeping up a fair average in New Brunswick, and shows a decided increase over that of a year ago. Just at present the spruce market is somewhat unsettled, because of a lessening in demand in the United States, and as will be noted from something we have to say in another colum,n opinion differs as to what will be the outcome of conditions there before the season closes.

BRITISH COLUMBIA.

To quote the remark of Mr. R. E. Gosnell, provincial librarian of British Columbia, when in the east a week ago, the lumber trade on the Pacific Coast is very brisk. This is a report that is confirmed by those who are immediately engaged in lumber in that province. The mills are busy, and the amount of lumber going into consumption, both for foreign markets, and at home, is large. The outlook is more hopeful than it has been for some years, and if with an increased volume of trade the advance in prices made a few weeks ago can be maintained it will bring profit to the mill men that has long been looked for.

UNITED STATES.

The apparently steady march from a period of depression to that of activity in almost every branch of commerce is causing United States lumbermen to view the immediate dullness, that is a marked feature of the trade, with complacency and hope. If no large quantities of lumber are being enquired for at present, there is an undercurrent of preparation that seems to tell of a growing and stronger demand so soon as the summer months are passed by. In wholesale yards stocks are very low, and it will be a necessity to purchase liberally in the course of a month or so, if the expected revival in business matures at that date. In Tonawanda, Buffalo, New York, Boston and other eastern points this feeling is taking strong hold of the lumber trade. In the Southern States a better season's business has been done than in some northern sections, and will close with a large increase in the cut on any former season.

FOREIGN.

A hardening tendency in lumber prices in the British markets furnishes encouraging evidence of improvement in trade. The imports during the month of June, which fell largely below those of 1894, will, it is believed, also, prove a factor in bringing back the market to normal conditions. The largest difference in this respect is shown in Canadian figures, the imports from British North America being only 80,000 lds as against rather more than double that total in 1894, and 94,000 lds in 1893. It is remarked by an English contemporary that if shippers only acted as sensibly during the remainder of the season as they have up to the present, there is certainly a better prospect in view for the timber trade of the United Kingdom. Reports from foreign points tell of some improvement in business, and there is reason to suppose that the exports to Australia, South Africa, and South America will gather in size before the year closes.

HARDWOODS.

Sharing with business generally the quietness of the summer months, hardwoods are moving in smaller volume than has been the case in previous months of the year, where a very reasonable trade was done. The outlook, however, is hopeful. Maple is in fair demand, and it

looks as though there would be a much larger call during the coming fall. Ash and elm are on constant call, and Canadian lumbermen are recipients of fair orders for these woods. Prices keep firm.

STOCKS AND PRICES.

An order for 550,000 cedar shingles is being loaded at Cross Creek, N. B., for John A. Humble, for vessel Galatea, on order received from Stetson, Cutler & Co., of Boston.

D. S. Pate, Chicago, has closed a contract for 1,600,000 feet of pine lumber, sawed and furnished by Graham, Horne & Co., of Fort William, Ont. The logs out of which this lumber was cut were rafted across the lake from the Ashland, Wis. district.

Lumber exports from St. John, N. B., for the past week, were, 6,720,000 feet of deals, etc., to the United Kingdom ; 3,350,000 feet long lumber, 2,750,000 shingles, 1,763,000 lath, and 522 cords of wood to United States ports.

The following exports from St. John, N. B., are noted for the week : Per bqtn Belle Star, for Kilrush, by A. Gibson, 294,490 deals, 10,425 ends ; sch. D. Gifford, for Boston, by J. L. M. Jewett, 160,974 boards, plank and scantling, 21,875 clapboards, 1,940 pickets, 252,750 cedar shingles, 101,200 laths ; sch. D. W. B., for Vineyard Haven, by Stetson, Cutler & Co., 156,272 plank ; sch. Canary, for Boston, by J. R. Warner & Co., 25,000 lath, 37,749 deals, 80,925 boards, 160 scantling ; sch. Rondo, for Providence, by Miller & Woodman, 400,000 laths, 175,000 cedar shingles ; sch. Clifford C., for Boston, by Stetson, Cutler & Co., 29,337 scantling, 8,543 plank, 90,000 laths ; sch. Glenera, for Boston, by Stetson, Cutler & Co., 113,921 plank ; sch. Sower, for Vineyard Haven, by Dunn Bros., 151,517 boards; sch Eagle, for City Island, by Stetson, Cutler & Co., 217,246 deals ; sch. Adelaide, for Boston, by Dunn Bros., 97,971 boards ; sch. Florida, for New York, by Mill & Woodman, 327,794 deals ; ss Menemsha, for Liverpool, by W. M. Mackay, 1,343,309 deals and battens ,98,860 ends, 755 tons birch timber ; sch. Pariee, for New York, by Randolph & Baker, 870,000 laths ; sch. Rebecca W. Hudnell, for New York, by Miller & Woodman, 290,069 deals ; sch. Sallie E. Ludman, for Lynn, by Stetson, Cutler & Co., 83,153 pine boards, 123,059 spruce planks, 74,065 scantling ; sch. Winnie Lowry, for New York, by Randolph & Baker, 327,000 laths ; sch. Pefetts, for Vineyard Haven, by Stetson, Cutler & Co., 16,242 scantling, 159,948 plank ; sch. Carlotta, for City Island, by Stetson, Cutler & Co., 179,139 deals ; sch. L. T. Whitmore, for City Island, by Hilyard Bros., 323,786 deals ; sch. William Wilson, for Wilmington, Del., by D. J. Seely & Son, 1,550,000 laths ; sch. Ayr, for New York, by Miller & Woodman, 183,657 deals.

A. T. Bliss, of Saginaw, Mich., is reported to have sold a large block of lumber cut at Ashland, Wis.

David Whitney, of Detroit, is reported to have sold a large block of lumber on the Whitney & Batchelor docks at Melbourne, to the Eastern Lumber Co., of Tonawanda.

Chas. Burrill & Co. are loading the St. John three-masted schooner Beatrice McLean with lumber at Weymouth for Cape Virdi Islands.

SPRUCE MARKETS.

The determined and vigorous efforts being put forth by the Northeastern Lumbermen's Association to regulate the output of spruce, and fix the price at which this product shall be sold, are being watched with more than ordinary interest, not only by lumbermen directly interested in spruce, but by intelligent lumbermen everywhere. Some months ago, when spruce men formed this organization, the sceptical doubted whether the end aimed at would be accomplished. But until the past few weeks there was little cause to doubt the general success that had attended its management. A schedule of prices was fixed, and though there have all along been rumblings of some break, yet the general belief has been that Association prices were well maintained. Can this continue? is the question to-day. The demand for spruce has declined, and, as is always the case on a downward market, dealers are found who prefer cash to stocks and are ready to sacrifice prices to effect this transformation. This is the difficulty that lumbermen of the east, and those of the Maritime Provinces, who have joined hands with them, are now fighting ; and a good deal of the trouble to the Association is coming from New Brunswick and Nova Scotia. It is currently stated that Nova Scotia spruce, plank and scantling, has been sold within a week or two in Boston at $10.50 while $12 was an accepted figure for random cargoes, and a leading Boston wholesaler is quoted as saying that he would not hesitate to contract for 1,000,000 feet of spruce at 50 cents less than the schedule prices, and guarantee prompt delivery too. No one can say yet what the final outcome will be. The Association must be commended for the splendid fight it is making, for it needs courage to organize for the betterment of trade and the effort to hold the different interests involved, not to say anything of combating the opposition that is sure to be met with from outside. If the Association plan of keeping the mills closed can be maintained, it will go a long way to meet the end sought.

CONDITIONS IN THE EASTERN STATES.

No transactions of large size can be reported from New York, and yet there is an improved feeling in trade. The probabilities for the closing six months of the year point to an increase in business, though no one is enthusiastic enough to think that this will represent anything like a boom. Less wood is going into building than was anticipated earlier in the season, when the volume of permits was given out. Many of the buildings are of a class where wood does not enter largely into consumption. The belief is entertained, notwithstanding appearances sometimes in an opposite direction, that prices will hold firm during the fall. It is not believed that there is any good reason why good lumber should decrease in price. Rather, it ought to command a better figure.

With all the complaining that has been current throughout the season, it looks as though July in the Tonawanda district would make a better showing than the corresponding month last year. Firmness is the policy of those who hold good lumber, and prices apparently will advance shortly. Box and common are not so firm.

In Buffalo the same trouble is being experienced that we have had occasion to refer to in other localities : Smaller dealers and those who are not over strong financially are cutting prices of lumber and this is having an influence upon the larger mills who, though not disposed to cut, are unable to make sales, and the condition is one that militates against an advance in prices. Business has slowed somewhat the past few weeks.

Shipments of lumber from Albany for the past week are larger than those of a week ago, and are fully equal to the corresponding period of a year past. It is being remarked that increased quantities of lumber are being shipped through this point without rehandling. Lumbermen are commencing to give some thought to the matter of buying, as the opinion is held that trade will be all right in the fall.

The hardwood market in Philadelphia is somewhat quieter than has been the case for some two months past, but every confidence is expressed in the future.

COOPERAGE.

The SutherlandInnes Co., Chatham, Ont., with mills at various points in Ontario, Quebec, Michigan, Indiana, Wisconsin and Ohio, say that cooperage business for July, all along the line, has shown a very marked improvement. The demand for apple barrel material is very good indeed, much better than was anticipated from the gloomy reports which were issued early in the season. Most localities have got quite a few apples, and in some places the crops are going to be immense, even now a great many of the manufacturers are turning in to cut apple barrel stock instead of the ordinary flour, lime and cement stock. The demand for flour barrel stock has also been very good during the past month, and, from all appearances, is going to improve even still more in the fall. This, more especially applies to stock for export to the States and Europe, as Canadian millers have not been running as strong as might have been expected at this season. However, they have now started running fairly well, and as the new wheat is in some places the farmers are hauling their old wheat to the mills, and mills are enabled to run. The principal reason why mills did not run in this part of Ontario was, owing to the shortage of wheat. Prices have not materially changed, but we are looking for an advance in August. Some of the manufacturers are now asking 25 cents per 1,000 more for strictly No. 1 staves, but this advance is not general. However, on the whole, the prospects are very rosy indeed for manufacturers, much better than they have been for the last eighteen months.

RAFTING.

The last log was put through the Belleville boom a week ago.

The Klocks have a large raft coming down the Ottawa, which is being delayed by low water.

The Holland Emery Lumber Co., expect to be able to get down 70,000,000 feet of logs.

The Moore Lumber Co.'s drive is hung up about Square lake with the Brownlie Co.'s drive behind it.

A gentleman who has recently returned from the Georgian Bay district says, that it is very dry there, and in some sections forest fires are prevailing.

Two large rafts of logs from the Georgian Bay were received last week by Col. A. T. Bliss, of Saginaw.

The McArthur Bros. Co., Ltd., say that they have had some difficulty in getting their rafts down the St. Lawrence, owing to low water.

Very little rain has as yet favored the Saginaw district, and the streams are reported to be as dry as a bone, with no immediate prospect of the few logs hung up getting down.

The first square timber raft of the season is now passing the Chaudiere. The lateness is due to the exceedingly low water in the Ottawa. The raft is the property of Mr. William Mackey, and consists of timber of fine quality, principally board pine.

DRESSED LUMBER CASE.

The rehearing of the dressed lumber question came before the United States Board of General Appraisers on the 25th inst., consuming two days' time. A large number of witnesses were heard on each side, and an immense volume of written testimony submitted. Counter briefs will be prepared and submitted of contending counsel, and it is hard to say just how soon a decision will be given.

SHIPPING MATTERS.

The ship Alameda is loading lumber at Moodyville, B. C., for Sydney, N. S. W.

Lumber shipping is brisk in the vicinity of Hillsboro, N. B.

Steamer Sydenham has been chartered to load deals at West Bay for the W. C. England at 53s.

There are in St. John, N. B., at the present time several cargoes of lumber for shipment to South America.

The American schooner Alice Cook is loading lumber at the Hastings mill, Vancouver, B.C., for California. The Republic is loading at the same mill for Valparaiso at £2 5s.

Shipments of lumber from Alpena up to last week are represented by the following figures : 48,521,000 feet of lumber, 4,525,000 shingles, 3,576 pieces lath, 277,000 cedar posts and 207,000 cedar posts and 207,000 railway ties.

LUMBER FREIGHT RATES.

LUMBER freight rates for pine on the Grand Trunk Railway have been made a fixture, as below. Of any ntended change due notice will be given lumbermen.

General instructions in shipping by Grand T unk are embodied in these words in the tariff schedule: On lumber in carloads, minimum weight, 30,000 lbs. per car, unless the marked capacity of the car be less, in which case the marked capacity (but not less than 24,000 lbs.) will be charged, and must not be exceeded. Should it be impracticable to load certain descriptions of light umber up to 30,000 lbs. to the car, then the actual weight only will be charged for, but not less than 24,000 lbs. The rates on lumber in the tariff will not be higher from an intermediate point on the straight run than from the first named point beyond, to the same destination. For instance, the rates from Tara or Hepworth to Guelph, Brampton, Weston or Toronto, would not be higher than the specific rates named from Wiarton to the same points. The rates from Cargill and Southampton to points east of Listowel and south and west of Stratford will be the same as from Kincardine, but in no case are higher rates to be charged than as per mileage table published on page 9 of tariff.

Rates from leading lumber points on pine and other oftwood lumber, shingles, etc., are as follows : From Glencairn, Creemore, Aurora, Barrie and other points in group B to Toronto, 6½c.; Collingwood, Penetang, Coldwater, Waubaushene, Sturgeon Bay, Victoria Harbor, Midland, Fenelon Falls, Longford, Gravenhurst and other points in group C, to Toronto, 6½c.; Brace, bridge to Toronto 7c.; Utterson, Huntsville, Navor-Emsdale, Katrine to Toronto, 7½c.; Burk's Falls, Berriedale and Sundridge, to Toronto, 8c.; South River, Powassen and Callender to Toronto, 9c.; Nipissing Junction and North Bay, 10c. Rate from Goderich, Kincardine and Wiarton to Toronto, 6½c. These rates are per 100 lbs. Rates from Toronto east to Belleville are 7½c. per 100 lbs.; to Deseronto, 9c.; to Brockville and Prescott, 10c.; to Montreal and Ottawa, 11c. The

rates on hardwoods average about from 1c. to 2c. per 100 lbs. higher than on softwoods. For rates on railway ties, mahogany, rosewood, walnut, cherry, and other valuable woods, application must be made to the district freight agent.

On the Canadian Pacific the rates on pine and softwoods may be illustrated as follows: Cache Bay, North Bay, Sturgeon Falls and Warren, to Toronto, 10c; Algoma, Cook's Mills, Massey, Spanish River and Whitefish to Toronto, 13c.; Ottawa to Toronto, 10c From Ottawa, Hull, Aylmer and Duchesne Mills to station on the Lake Erie and Detroit River, Erie and Huron, Toronto, Hamilton and Buffalo, and Michigan Central Railways, the rate is 14½c. per 100 lbs. Regulations apply as to minimum size of carload of 30,000 lbs., and an advanced rate is charged for hardwoods.

Lumber freight rates on the Canada Atlantic Railway are as follows: Ottawa to Toronto, 10 cents per 100 lbs.; Ottawa to Oswego, $1.90 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Montreal, $1.00 per M ft., (3,000 lbs. and under per M ft.); Arnprior to Montreal, $1.50 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Quebec, $2.00 per M ft.; Arnprior to Quebec, $2.50 per M ft.; Ottawa to Buffalo, 12 cents per 100 lbs.; Ottawa to Port Huron and Detroit, 14 cents per 100 lbs. Ottawa to New York, five carloads or over $3.00 per M ft.; Arnprior to New York, $3.50 per M ft.; Ottawa to Boston, Portland and common points, local 15 cents; exports 13c. per 100 lbs.; Arnprior to Boston, Portland and common points, local 17 cents; export 15 cents per 100 lbs.; Ottawa to Burlington, 6 cents per 100 lbs.; Ottawa to Albany, 10 cents per 100 lbs.; Arnprior to Albany, 12 cents per 100 lbs.; Ottawa to St. John, N. B. and common points, 20 cents per 100 lbs.; Ottawa to Halifax, N. S. and common points, 22½ cents per 100 lbs Minimum carload weight for shipment of lumber, lath, shingles, etc., is 30,000 lbs., and rates quoted above are in cents per 100 lbs., except when quoted per M ft. the minimum carload charged is 10 M ft., lumber not exceeding 300 lbs. to the M feet. Ottawa rates apply on shipments from Rockland and Hawkesbury.

MODIFICATION OF HARDWOOD RATES.

THE Grand Trunk Railway and Canadian Pacific have made the rates on hardwoods from certain points to Toronto and Hamilton as follows. The regulations are over the signature of Mr. John Earls, W.D.F.A., of the G. T. R., and given in reply to a letter from Toronto hardwood men:

"After careful consideration we have come to the conclusion that, on and after Jan. 1st, 1895, a modification will be made in the present arrangements for hardwood lumber, to the effect that the rate will be 7½c. per 100 lbs. from our Northern and Northwestern branches to Toronto and Hamilton. This rate, however, will not apply from main line points and the straight run between Toronto, Sarnia and Windsor; also that so far as rates on common lumber to points like Guelph, Galt, London, Woodstock, Ingersoll, etc., from all lumber shipping stations the rate will be the same on hardwood as on pine." On the old principle, we suppose, that half the loaf is better than none, hardwood men have something, possibly, to be thankful for, though there is no good reason why the rates generally on hardwood should not be as low as on pine. It is understood that the C. P. R. rate will be made uniform at 7½c. from same points.

FOR SALE.

FOUR CARS 5/4 ROCK ELM, DRY, 10 TO 14 ft. long, and other hardwoods.
J. E. MURPHY, Hepworth Station, Ont.

MILLS

Having Brown Ash 12, 14 and 16 ft. firsts and seconds, inch Bass firsts and seconds 12 feet, or any other Hardwood Lumber, can sell same for cash by addressing
H. D. WIGGIN,
No 89 State St., BOSTON, MASS.
Inspection at mill.

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Wholesale Dealer in all kinds of
Bills cut to order.
Lumber shipped to all parts by rail or vessel.
Excellent quality of 18 inch Pine Shingles for sale.
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MANUFACTURERS OF LUMBER LATH AND SHINGLES
WE are open to cut White Pine and Hemlock Bill Stuff. Have for Sale a Quantity of Dry Mill Stocks and Sidings, also 16 in. Pine Shingles and 4 ft. Lath 1½ in. wide.
CORRESPONDENCE SOLICITED

Ottawa Lumber Co. Ottawa Canada
WHOLESALE LUMBER, LATH, SHINGLES, ETC.
Write for Stock List

The Pembroke Lumber Co., Ltd.
MANUFACTURERS AND WHOLESALE DEALERS IN
DIMENSION TIMBER OF ALL SIZES AND KINDS, JOISTS, CAR DECKING, CAR SILLS, SHIP DECKING, AND ALL KINDS OF ROUGH AND DRESSED LUMBER.
Write us for Quotations on all Bills
PEMBROKE, ONT.

Is it Your Wish . . .
To Purchase or Sell as quickly as possible
A PARTICULAR LOT OF LUMBER
A MILL PROPERTY
SECOND-HAND MACHINERY
An Advertisement in the "Wanted" and "For Sale" Department of the
CANADA LUMBERMAN WEEKLY EDITION
Will secure for you a Buyer or Seller, as the case may be. Address,
The Canada Lumberman
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FOREIGN EXPORTERS AND IMPORTERS

WE want to buy FOR CASH the following kinds of Lumber : : : : :
1¼, 1½, 2 and 3 inch BASSWOOD
2 and 2½ inch ROCK ELM
3 in. SOFT ELM; 2 in. SOFT MAPLE
Write us promptly, stating what you have to offer in each kind and quantity of each thickness, also dryness, etc., with lowest prices.
Empire Lumber Co. - Buffalo, N. Y.

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Canadian mill men invited to offer stocks. -:- 54 South Street, NEW YORK.

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MANUFACTURERS OF THE
GENUINE GEORGIA LONG LEAF YELLOW PINE
Cut to order for FACTORIES, HOUSES, WHARVES, BRIDGES, TRESTLES AND CARS . . . . . .
Kiln Dried Floorings ATLANTA, GEORGIA, U. S. A.

SCATCHERD & SON 105 Seneca Street, BUFFALO, N. Y. . .
: — WANT — :
ROCK ELM
COMMUNICATE AT ONCE. — 7, 8, 14 and 16 feet, firsts and seconds.

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Will pay your subscription to the weekly and monthly CANADA LUMBERMAN for
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Penberthy Injector Co., Detroit, Mich.
Silver Solder, P. W. Ellis & Co., Toronto.

Business Wisdom: "Patience lies at the root of all pleasures, as well as of all powers."—John Ruskin.

The Price Lists that here follow will be revised each week up to the hour of going to press, and in connection with these we would draw attention to the week's trade review under the heading of "Current Trade Conditions" on the first page, immediately followed with matter marked "Stocks and Prices," which presents the lumber situation of the week, together with a record of the week's sales and transactions.

PRICES CURRENT.

TORONTO, ONT.

TORONTO, July 31, 1895.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		2 30
XX shingles 16 inch		1 40
Lath, No. 1		2 00
Lath No. 2	1 80	1 85

HARDWOODS—PER M. FEET CAR LOTS.

Quality, 1s and 2s unless otherwise specified.

Ash, white, 1 to 2 in	$26 00	$28 00	Cherry	1	1½	50 00	60 00
" " 2½ to 4	30 00	32 00	"	2	4	60 00	65 00
Ash, black, 1sts and 2nds, 1 to 1½ in	21 00	23 00	Elm, soft	1 to 1½		$14 00	$15 00
Ash, black, 1sts and 2nds, 2 to 4 in	23 00	25 00	" "	2	3	15 00	16 00
Ash, M. R., 2	1½	18 00	20 00	" rock	1	1¼	16 00
" " 1	4	20 00	24 00	" "	1½	3	20 00
Birch, 2	1½	24 00	26 00	Hickory	1½	2	28 00
" 4	26 00	29 00	Maple	1	1½	16 00	18 00
" sqrs. 4x4	8x8	28 00	32 00	"	2	4	18 00
Basswood 1	1¼	16 00	18 00	Oak, red, p'n	1	1¼	28 00
" 1½	2	19 00	19 00	" "	2	4	30 00
" m. r. 1	1¼	14 00	16 00	" white	1	1½	28 00
Butternut 1	1½	23 00	25 00	" "	2	4	30 00
" 2	3	25 00	28 00	" quart'd	1	2	48 00
Chestnut 1		22 00	25 00	Walnut	1	3	85 00
				Whitewood	1	2	32 00

OTTAWA, ONT.

OTTAWA, July 31, 1895.

Pine, good sidings, per M feet, b.m	$30 00	35 00
Pine, good strips, " " "	26 00	30 00
Pine, good shorts, " " "	18 00	25 00
Pine, No. 1 dressing sidings, per M feet, b.m	19 00	24 00
Pine, " " strips, " " "	17 00	20 00
Pine, " " shorts, " " "	15 00	17 00
Pine, 10 s.c. and better stock, " " "	15 00	18 00
Pine, 8 s.c. " " " " "	13 00	14 00
Pine, " sidings " " "	13 00	15 00
Pine, " strips " " "	11 00	13 00
Pine, " shorts " " "	8 50	11 00
Pine, box culls " " "	9 00	12 00
Pine mill culls " " "	9 00	10 00
Lath per M	1 30	1 75

QUEBEC, QUE.

QUEBEC, July 31, 1895.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	16 @	22
For fair average quality, according to average, etc., measured off	20	26
For good and good fair average, " " " " "	25	30
For superior " " " " "	32	40
In shipping order " " " " "	36	42
Waney board, 18 to 19 inch " " " " "	36	42
Waney board, 19 to 21 inch " " " " "	38	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	40	49

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	22	30

BIRCH.

16 inch average, according to average and quality	21	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $40 to $43 for 3rd quality.
Bright spruce, according to mill specification, $40 $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality. F.O.B. batteau.

SAGINAW, MICH.

SAGINAW, Mich., July 31, 1895.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$45 00	Selects, 1 in., 8 in. and up wide	$38 00
1¼, 1½ and 2 in	45 00	1¼, 1½ and 2 in	40 00
2½ and 3 in	50 00	2½ and 3 in	45 00
4 in	55 00	4 in	50 00

FINE COMMON.

1 in., 8 in. and up wide	33 50	2½ and 3 in., 8 in. and up wide	40 00
1¼, 1½ and 2 in	35 00	4 in	45 00

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	25 00	2½ and 3 in., 7 in. and up wide	35 00
1¼, 1½ and 2 in	30 00	4 in	38 00

STRIPS. A AND B (CLEAR AND SELECTS).

1¼ in., 4, 5 and 7 in. wide	34 00	1 in., 4, 5 and 7 in. wide	32 00
6 in. wide	36 00	6 in. wide	36 00

FINE COMMON OR C.

1¼ in., 4, 5, 6 in. wide	30 00	1 in., 6 in. wide	30 00
1 in., 4, 5 in. wide	28 00		

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24 00	1 in., 4, 5, 6 in. wide	23 00

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in	17 00	1 in., 4, 5 and 7 in	17 00
1 in., 6 in	18 00	1 in., 6 in	18 00

NO. 2 FENCING OR NO. 4 FLOORING.

1 in., 4, 5 and 7 in	14 00	1¼ in., 4 to n	14 00
1 in., 6 in	14 50	No. 3 fencing, 1 in., 6 in	13 00

SHELVING.

No. 1, 1 in., 10 in. stocks	25 00	No. 2, 1 in., 7 and 8 in. stocks	19 00
1 in., 10 in. and up wide	26 00	1 in., 10 in. stocks	21 00
1 in., 12 in. stocks	29 00	1 in., 12 in. stocks	24 00
1 in., 12 in. and up wide	30 00	1 in., 10 in. and up wide	22 00
1¼ in. 1½ and 2 in., 8 in. and up wide	29 00	1 in., 13 in. and up wide	25 00

BARN BOARDS OR STOCKS.

No. 1, 12 in	20 00	No. 2, 9 in	14 00
10 in	17 50	8 and 7 in	14 00
9 in	17 50	No. 3, 12 in	13 00
8 and 7 in	17 50	10 in	12 00
No. 2, 12 in	16 00	9 in	12 00
10 in	14 00	8 in	12 00

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$10 00	1 in., 13 in. and up wide	$12 00
1 in., 6 in. wide	11 00	1¼, 1½ and 2 in., 7 in. and up wide	12 00
1 in., 7 in. wide and up	11 00		

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9 in. wide	17 00	1 in., 10 in. and up wide	17 00
1 in., 6 in. wide	17 00	1¼, 1½ and 2 in., 8 in. and up wide	17 00

COFFIN BOARDS.

No. 1, 1 in., 13 in. and up	20 00	No. 1, mill culls	9 00
No. 2	17 00	No. 2, or red horse	7 00

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23 00	No. 2	19 00
No. 1 (nearly clear)	21 50	No. 3	16 00

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16 ft.	$ 8 50	Hemlock, 2x4 to 10, 12 to 16 feet	8 00
18 ft	10 50	2x12	8 50
20 ft	11 50	Add $1 to each additional 2ft. in length.	
22 and 24 ft	12 50		

SHINGLES, 18-IN.

Fancy brands, XXXX	3 20	Standard brands. river made, XXXX	2 85
Clear Butts	2 00	Clear Butts	1 85

WHITE PINE LATH.

No. 1	1 85	No. 2	1 35
		Hemlock	1 25

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA N. Y., July 31, 1895.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in	$47 00	50 00	No. 3, 1¼ to 2 in	16 00	17 00
2½ and 3 in	50 00	53 00	Shelving, No. 1, 13 in and up, 1 in	31 00@	33 00
4 in	54 00	56 00	Dressing, 1¼ in	25 00	26 00
Selects, 1 in.	38 00	39 00	1¼ x10 and 12		26 00
1¼ to 2 in	40 00	42 00	1½ in	24 00	25 00
2½ and 3 in	47 00	50 00	2 in	26 50	28 00
4 in		52 00	Mold st'ps, 1 to 2 in	33 00	35 00
Fine common, 1 in	35 00	37 00	Barn, No. 1, 10 and 12 in	21 00	23 00
1¼ and 1½ in	37 00	38 00	6 and 8 in	20 50	22 00
2 in	34 00	35 00	No. 2, 10 and 12 in.	16 50	17 00
3 in		45 00	No. 3, 10 and 12 in.	14 00	16 00
4 in		45 00	6 and 8 in	13 50	15 50
Cut'g up, No. 1, 1 in.	26 00	28 00	Common, 1 in	16 00	18 00
1¼ to 2 in	32 00	33 00	1¼ and 1½ in	18 00	20 00
No. 2, 1 in	16 00	17 00	2 in	19 00	22 00
No. 2, 1¼ to 2 in	22 00	23 00			

NEW YORK CITY.

NEW YORK, N. Y., July 31, 1895.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply, rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$28 00 @ 40 00	Building orders	$26 00 @ 37 00
Decking	44 00 50 00		

SPRUCE.

6 to 9 in	13 00	14 00	10 to 12 in 15 50 16 00
6 to 12 in	14 50	15 50	Lath 1 85 2 00
9 to 12 in	15 50	15 75	

BOSTON, MASS.

BOSTON, July 31, 1895.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$11 50	12 00	¾ inch	$ 9 25	9 75
Coarse No. 5	15 00	16 00	11-16 inch	8 50	9 00
Refuse	13 00	13 20	⅝ inch	8 00	8 50
Outs	9 00		Clapboards, sap ext.	44 00	46 00
Boxboards, 1 inch	10 75	11 00	Sap clear	40 00	43 00
⅞ inch	9 75	10 00	Sap, 2nd clear	32 00	35 00
			No. 1	23 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in	$50 00@	52 00	Fine com., 3 and 4 in	43 00	45 00
1¼, 1½ and 2 in	52 00	53 00	No. 2, 1 in. Fine com.	28 00	30 00
3 and 4 in	58 00	60 00	1¼, 1½ and 2 in	29 00	31 00
Selects, 1 in	43 00	45 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in	45 00	47 00	No. 2	36 00	37 00
3 and 4 in	55 00	57 00	No. 3	28 00	30 00
Moulding boards, 7 to 11 in. clear	35 00	37 00	Cut ups, 1 to 2 in	24 00	32 00
60 per cent. clear	32 00	34 00	Coffin boards	19 00	20 00
Fine common, 1 in	40 00	42 00	Common all widths	22 00	26 00
1¼, 1½ and 2 in	40 00	41 00	Shipping culls, 1 in	15 00	15 50
			do 1¼ in.	15 50	16 50

SHINGLES.

Spruce	1 30	1 50	Second Clear	1 75	2 00
Cedar, extra	2 50	2 75	Extra No. 1	1 00	1 25
Clear	2 25	2 50			

HEMLOCK.

Boards, rough	10 00@	11 00	No. 2	7 00@	9 50
Planed	11 50	12 00			

LATH.

Spruce			By cargo	1 80@	1 90
By car	1 80@	2 00			

LUMBERMEN'S SUPPLIES

SUGAR.

	c. per lb.	
Granulated	4⅜	4½
Extra bright refined	4	4⅛
Bright Yellow	3⅞	4
Medium Yellow	...	3⅝
Dark Yellow	3⅜	3½
Raw	...	...

SYRUPS AND MOLASSES.

SYRUPS.	Per gallon bbls.	½ bbls.
Dark	25	30
Medium	30	35
Bright	35	40
Very Bright	50	00
Redpath's Honey		40
" " 2 gal pails		1 25
" " 3 gal pails		1 50

MOLASSES.	Per gal.	
Trinadad, in puncheons	0 32	0 35
" bbls	0 36	0 37
" ½ bbls	0 40	0 40
New Orleans, in bbls	0 30	0 32
Porto Rico, hdds	0 38	0 40
" barrels	0 42	0 44
" ½ barrels	0 44	0 46

RICE, ETC.

	Per lb.	
Rice, Aracan	3½	3¾
" Patna	...	4¾
" Japan	...	5
" Imperial Secta	...	5½
" Extra Burmah	3⅞	4
" Java extra	6½	6¾
" Genuine Carolina	9½	10
Grand Duke	6¼	6½
Sago	4¾	5½
Tapioca	4½	5½
White Beans, per bushel	..	1 75

FRUITS.

FOREIGN.	c. per lb.	
Currants, Provincial, bbls	3½	4
" ½ bbls	3⅝	4⅛
" Filiatras, bbls	4	4½
" ½ bbls	4½	4¾
Currants, Patras, bbls	5	5½
" " ½ bbls	5¾	5¾
" " cases	5	6½
" Vostizzas, cases	6½	7½
" " ½ cases	6¾	7¾
" 5-crown Excelsior (cases)	8	8½
" " ½ case	8¼	8¾
Dates, Persian, boxes	4½	5
Figs, Elemes, 10lb. boxes	10	12
" 7-crown	16	18
" Natural Figs, 28lb bxs	...	...
Prunes, Bosnia, casks	4	4½
" " cases	5½	7
" " bags	...	...
" Anchor C, bags	...	...
" " E, "	...	...
" " G & J, cases	...	5½
Raisins, Valencia, off-stalk	4¾	...
Selected	5½	6

CANNED GOODS.

	Per doz.	
Apples, 3's	$1 00	$1 10
" gallons	2 25	2 50
Beans, 2	0 85	0 95
Corn, 2's	0 90	0 95
" Epicure	...	1 15
Peas, 2's	0 85	0 95
" Sifted Select	...	1 45
Peaches, 2's	2 00	2 25
" 3's	3 00	3 25
Plums, Gr. Gages, 2's	1 85	2 00
" Lombard	1 50	1 60
" Damson Blue	1 50	1 60
Pumpkins, 3's	0 90	1 00
" gallons	2 10	2 25
Tomatoes, 3's	0 85	0 90
'Thistle' Finnan Haddies	1 35	1 40
Salmon, talls	1 25	1 35
" flats, No. 1	1 50	1 60

CANNED MEATS

(CANADIAN.)

Comp. Corn Beef 1lb cans	$1 65	$1 75			
" " 2 "	2 65	2 75			
" " 4 "	4 80	5 00			
" " 6 "	7 50	7 75			
" " 14 "	18 00	18 50			

COFFEE.

GREEN.	c. per lb	
Mocha	28	35
Old Government Java	25	32
Rio	20	21
Plantation Ceylon	29	38
Porto Rico	24	26
Guatemala	24	23
Jamaica	22	23
Maracaibo	24	24
Caffaroma, 1 and 2lb tins, asstd	..	30

DOMESTIC.

Apples, Dried, per lb	6	6½
" Evaporated	8	10

TOBACCO AND CIGARS.

British Consols, 4's; Twin Gold Bar, 's	59c
Ingots, rough and ready, 8's	57
Laurel, 3's	49
Brier, 7's	47
Index, 7's	44
Honeysuckle, 8's	56
Napoleon, 8's	50
Victoria, 12's	47
Brunette, 12's	44
Prince of Wales, in caddies	48
" in 40lb. boxes	48
Bright Smoking Plug Myrtle, T & B, 3's	60
Lily, 7's	47
Diamond Solace, 12's	50
Myrtle Cut Smoking, 1lb. tins	70
¼ lb. pg., 6 lb. boxes	70
oz. pg., 5 lb. boxes	70

RED CEDAR FREE.

JUDGMENT OF THE UNITED STATES CIRCUIT COURT IN FAVOR OF BRITISH COLUMBIA CEDAR.

THE history of the red cedar trouble of British Columbia will be remembered by readers of the CANADA LUMBERMAN. Some months ago a shipment of red cedar lumber from British Columbia to a United States port was taxed at 25 per cent. ad valorem, being included among the list of cabinet cedars, chargeable with a 25 per cent. duty. Largely through the efforts of Mr. J. G. Scott, manager of the Pacific Coast Lumber Co., of New Westminster, the case was laid before the Board of United States General Appraisers at New York. The matter was very fully entered into, a report in detail appearing in these columns at the time. The decision of the Appraisers was against the contention of the Britsh Columbia lumbermen that red cedar was a soft wood and should not be classified as a cabinet wood. The matter, however, was not allowed to remain here, but was appealed by Mr. Scott and associates to the United States Circuit Court. Judgment has just been given out by the Court, and reverses the decision of the Board of General Appraisers. The importance of the decision to British Columbia lumber interests is apparent to everyone, as there is undoubtedly a profitable market for British Columbia red cedar in various parts of the United States, and shipments to that country have only awaited this decision.

The judgment is clear and decisive, and based, not alone on law, but on a very commonsense view of the situation. We here give the judgment of the Court in full:

UNITED STATES CIRCUIT COURT,
Northern District of New York.

In re F. W. Myers & Co.

This is an appeal by the importers for a decision of the Board of the United States General Appraisers overruling a protest against the decision of the Collector at Plattsburgh, N. Y., subjecting to duty certain importations of lumber popularly known as Red Cedar.

Stephen G. Clarke for the importers.

W. F. Mackey, Asst. U. S. Attorney, for the collector.

Coxe J.

The collector classified the merchandise in question under paragaaph 181 of the Act of August 28, 1894, which is as follows:

"House or cabinet furniture, of wood, wholly or partly finished manufactures of wood, or of which wood is the component material of chief value, not specially provided for in this Act, twenty-five per centum ad valorem."

The importers protested, insisting that it should have been admitted free of duty under paragraph 676 of the same Act, which is as follows:

"Sawed boards, plank, deals and other lumber, rough or dressed, except boards, plank, deals and other lumber of cedar, lignum vitae, lancewood, ebony, box, granadilla, mahogany, rosewood, satinwood, and all other cabinet woods."

The Board found that the imported lumber is from the wood of a tree known botanically as "Thuya Gigantae," and that it is popularly known as "red cedar," or "canoe cedar." It is soft, light, but slightly fragrant. It does not take a polish. It is not of the class of woods known as cabinet woods. The other woods mentioned in the exception are hard, expensive cabinet woods used in fine finishing work. If the exception to paragraph 676 refers to cabinet woods, and only to cabinet woods, it is manifest that the importation, not being cabinet wood, is not within the exception.

The Board were inclined to sustain the protest upon this ground, but reached a different conclusion after construing the paragraph in the light of paragraph 219 of the Act of Oct. 1, 1890, the argument being that because in the prior Act the wood "Cedar" included rough lumber such as railroad ties and telegraph poles, a similar meaning must be given to the paragraph in hand, and that it cannot be restricted to that species of cedar used as a cabinet wood.

The clause in question is certainly ambiguous, and although much may be said in favor of the view taken by the Board, it is thought that the construction contended for by the importers is supported by more cogent and persistent reasoning.

In arriving at the legislative intent it is not altogether safe to rely for guidance upon the Act of 1890, it being common knowledge that its object was very different from that of the present Act. An examination of the former Act will show that practically the entire wood schedule has been transferred to the free list in the present Act.

It seems clear that it was the intent of Congress to exempt from duty all the cheaper grades of woods, when rough, unmanufactured or partially manufactured, and to levy duty only upon the boards, etc., of the finer and more expensive woods used in cabinet work.

This was the broad scheme of the Act of 1894. The construction of the Board ignores this intent and levies a higher duty upon cedar boards than the Act of 1890, and this, too, when similar boards of spruce and pine, used for the same purpose, are admitted free. It discriminates against the boards of one particular soft-wood tree without the suggestion of a motive for such legislation. When boards used for sidings, etc., are free, what possible reason could Congress have had for singling out and laying duty upon these boards when sawed from one particular variety of tree? It is as difficult to find a plausible motive as if Congress had discriminated against the boards cut from coniferous trees. Again, two pieces of wood are cut from the same tree; the one pays twenty-five per cent. duty, the other enters free; one—a shingle—is used to protect the roof, the other the side of a dwelling-house. The construction of the importers makes such a result impossible, gives force to every part of the paragraph and is in harmony with the general purpose of the law.

It is proved without dispute that all the other varieties mentioned in the exception are cabinet woods—the products of foreign countries—and the Board finds that the cedar known as "Cedrela Odorato," which is imported from the tropics, is a cabinet wood of the mahogany family, and is capable of taking a high polish. It is a very significant fact that this Credela, besides being a cabinet wood, is the only wood in the United States which is known as "cedar" pure and simple. All the other varieties have some qualifying term placed before them, such as white cedar, Spanish cedar, red cedar, etc. Finding cedar thus associated with eight well-known cabinet woods, the rule of ejusdem generis requires that the word should be construed as applying to that variety of cedar which is a cabinet wood. So construed the exception applies to hard, expensive, foreign cabinet woods, and to these alone.

That this is the true reading of the paragraph is made still more apparent by the use of the word "other." When the law-makers at the end of the paragraph refer to "all other cabinet woods," is it not clear that they supposed all the preceding varieties were cabinet woods and that they did not intend to include in this enumeration a wood that is no more a cabinet wood than is white pine or hemlock?

Again, it is apparent from the Act (par. 683) and similar provisions in the Canadian Act of the same year (sec. 13, par. 739 of the Customs Tariff, Canada) as well as from contemporaneous history, that the legislation of 1894 on this subject was entered into on both sides in a spirit of reciprocity. Neither country was to impose duty upon the coarser woods imported from the other. The construction of the board is at variance with this obvious intention.

The importers' contention is further strengthened by the construction placed upon a similar provision in the Act of 1883 by the Treasury Department. It was held "that the provision for wood, namely, cedar, lignum vitae, lancewood, ebony, box, granadilla, mahogany, rosewood, satinwood, and all other cabinet woods, unmanufactured, is construed as exempting from duty only such cedar as is fitted or intended for use as cabinet wood." It will be noted that the paragraph quoted is not so explicit as the paragraph in controversy, in that it omits the word "other." It was said at the argument that this construction of the Treasury was acted upon for many years.

In conclusion, it is thought that the decision of the Board is based upon a strict construction, which leaves out of view the real intent and purpose of the law. To say the least, the construction which makes the word "cedar" include all the varieties of soft, coarse wood known by that name, is a doubtful one. In such cases the doubt should be resolved in favor of the importer, "as duties are never imposed on the citizen upon vague or doubtful interpretations." (Hartranft v. Weigmann, 121 U. S. 609, 616.)

The construction asked for by the importer makes the paragraph consistent in all its parts, is in harmony with the general purpose of the Act and with the principles of international fair dealing.

The decision of the Board is reversed.

SOME SAWING HINTS.

A GOOD many little things turn up in the course of turning logs into merchantable lumber which, if they could be formulated into a set of rules, would help the young sawyer or the newly-fledged lumberman out of a large variety of perplexing situations, says the Wood-Worker.

When a log comes on the carriage, it is often a puzzle to tell just which side to begin sawing on first. I have had a good many years' experience in saw mills, with almost every kind of timber that is made into lumber, and I believe a man can be a mill foreman or pull the lever all his life and be as quick-witted as you please, and still find things to learn about handling logs clear up to the time the whistle blows for him to quit for the judgment day.

There are a good many things about turning a log so as to get the most good stock out of it, that cannot be done by rule, and that the wisest sawyer cannot tell to another. There are things that have to be learned of every log; for, as Harry B. Wetzell often said, "Nature never had two trees, or even two logs, exactly alike." This rule is at least so nearly correct that "the exceptions only prove the rule." A sawyer may work ten or even eleven hours and not have two logs alike come on the deck.

This is especially true of hardwood logs, which vary in characteristics in an aggravating manner. But there are some things that can assume the proportions of exact rules. For instance, a sawyer asks how to place for a first slab, a log, surface clear with the exception of a single defect. The answer is, slab the log with the defect exactly in the center of the width of the cut; then slab the opposite side and turn the log with the defect exactly on top, perpendicularly to the heart; then saw up to a well-boxed heart, if it is a kind of timber fit for squares or dimension; then turn clear over and saw up the same on the opposite side; turn down with best edge of cant to saw; cut up to square; then set out full size of square and rip it off; turn remainder of cant perpendicular with defect on top as in first place, and finish with the latter in one cut, or most two.

This will necessitate a little extra turning and a little more time in sawing the log, but when through all the lumber will be clear of everything but sap, except the one or two narrow pieces containing the one defect. If no square or dimension is wanted, then saw up to the defect on the one side and turn clear over and saw upon the other, letting the edger do the rest; every inch of clear stock in the log can be edged out with no waste and the very minimum of lumber not clear.

I have seen sawyers put such a log as this on, and after slabbing all around, turn the side with the one defect square to the saw and slash away to the last cut, making one-half the boards with perhaps a rotten knot right in the center, requiring them to be ripped twice to get out the good lumber, and so getting but little more than one-half the wide boards that could have been made by the directions I have given. And these sawyers were called good ones, too, and their bosses were wondering at the small per cent. of clear and wide lumber their logs turned out.

Butt logs with much taper should have the top end set out so as to slab parallel to the outside, and not to the center or heart of the log. Such a log is generally wind-shaken. The shake is conical, largest next the stump, hence by sawing parallel to the outside of the log, and by sawing round it, turning as soon as the shake is reached, all the clear lumber can be gotten out and all the shake be left in the tapering square in the center, which is seldom worth anything but firewood or to go to the refuse burner. In any event, sawn in this way the stock will be straight-grained, which it cannot be if cut parallel to the heart.

Some sawyers fail to catch their point and set the tops out to bring the center or heart in line with the saw, and if by the time the log is slabbed to the face the full length, all the clear stock from the butt end will have gone into chips, or out in an enormous slab; and after that every full-length board will be shaky at the butt end, requiring them all to be trimmed or graded as culls, and all if trimmed shorter than standard length or made into mere clips—and the boss would curse the logs instead of the sawyer.

Crooked logs are often puzzles to the best of sawyers. Many take a log with a straight bow, and put it on the carriage with the rounding side up, or exactly down. The latter is a dangerous thing to do, and many a good saw has been spoiled by it. Others place such a log on the one side with the back of the bow to the saw, and make a lot of clips or short lumber while getting a slab the full length. There is only one better way to do, and that is to place the bow at an angle of 45 degrees to the carriage, and after slabbing one side, turn clear over and finish. This will give more wide lumber than any other way from such a log. Try it once and see.

Hearts in all logs are more or less a source of trouble, but much less in pine or other soft woods, except hemlock, than in nearly all the hardwoods. In the latter they are nearly always an uncertain quantity. In sawing hardwoods it is a safe rule to make a large allowance for waste on account of them. It is a weakness of the sawyers and edgermen not to allow enough for them. This accounts for a large percentage of culls in the cutting of many species of timber, such as oak, cherry, birch, soft elm, and maple, gum, cottonwood, basswood, ash, rock elm, hickory and even poplar might come within the category. In oak and some other woods it is productive of better financial results to make sure of a good square of timber with a well boxed heart in the center, than to try to saw up too close and then edge the heart butt. In the latter case the quality of the boards is risked and the square is often not worth shipping.

A final excellent rule to always keep in view is, that a large daily cut is not of nearly so much importance as well sawed lumber, with the highest possible percentage of good grades.

Subscribe for the CANADA LUMBERMAN. $1.00 per year.

WHERE there is talk about dull times in the lumber business, the report comes from Duluth that every mill there is sawing at a lively rate, and the total output for the district will be about 100,000,000 ft. in excess of any previous year. It looks like a conundrum how facts of this kind are to be squared with the general talk of quiet business. If trade is slow now, and there is more lumber on the piling grounds than it seems possible to move, what will be the condition of affairs when the new cut is upon the market? I talked the other day with Mr. Joseph Oliver, Alderman Oliver, if you please, of Donogh & Oliver, who had returned only a few days from a trip through the Eastern States. He could only tell the story, that everyone is telling, of business being dull. No one wanted to buy, and no one seemed sure just what the future was likely to bring. He said that so far as his firm was concerned, they were buying hardly anything just now, and, as Mr. Donogh added, at no time since they were in business, had they so large a stock of lumber on hand at this season of the year. I enquired what was the effect of such conditions on prices. "Nominally," said Mr. Donogh, "there is no change. Prices are considered to rule firm, but when it is a case of being actually ready to buy, it is a different matter, and it is easy to understand this with our own mill men, as well as those in the States, carrying stocks in some cases of two and three years, and the new cut about ready to put on the piling grounds." Where a place is to be found for this lumber seems hard to say, and what it means in the way of interest for mill men to carry two or three years stock is easily seen. The lumber business appears to be changing in many ways, and lumbermen are disposed to do a good deal of thinking these days, without saying much. It is not possible for new districts like Duluth to increase their output to the extent of 100,000,000 feet, and everyone else keep up a fair average, and lumber not be forced to move in some manner. But, as Mr. Oliver said, in his good-natured and hearty way, it will come all right some of these days, and for his part he was neither growing grey, losing flesh, or wanting sleep.

* * * *

IT is to be expected that one would find Canadian lumbermen discussing the recent decision of the Board of General Appraisers of the United States, in drawing a somewhat sharp line as to what constitutes dressed and finished lumber. As regards the action of the Minister of Finance, in passing a retaliatory measure before the House prorogued a fortnight ago, I find that this is generally conceded to have been a wise step. The lumber tariff was framed on a reciprocal plan, and so long as the United States draws the distinction that the Appraisers have made in dressed lumber, it would be unwise for Canada to simply let the matter remain there, and allow American lumbermen to export matched and grooved lumber to this country without any duty charged. Where this matter is of interest to the Canadian trade is not in what business has already been done, but the possible development of the future. So far as I am able to learn there has been no large amount of matched lumber exported to the United States, as yet. It is a fine question, what actually constitutes manufactured lumber. To quote Mr. Meaney, of Robert Thomson & Co.: "The log when sawed into rough lumber has passed through a manufactured stage. Plane it on one side and it is a little further manufactured, but yet it is simply manufactured lumber. Who is to say that because grooved or tongued, as well as planed, that a customs officer shall step in and take it from the free list and put it under the duty list. My understanding of manufactured lumber is when it has been made into sashes, doors, blinds, etc." There is another feature of this question, I find lumbermen speaking plainly of, and that is that these customs difficulties occur through the ruling of a customs officer and not because of objection at headquarters. The law ought to be made so clear, that it could not be left to one who cannot have any technical training to decide what it means. There will be no end of trouble with our tariffs if, as in the case of the British Columbia red cedar and the present Ogdensburg difficulty, customs officers everywhere can constantly call some point into question. Then, and it seems to me clear that the makers of the law never intended that the Ogdensburg distinction should be made, where Canada will doubtless export a certain measure of grooved and tongued lumber to the United States, on the other hand United States manufacturers are sending in this class of lumber to our own country. A not unprofitable customer at the present time is the people of Manitoba and the Northwest territories, who import no little manufactured lumber of this class from the western states.

* * * *

WITHIN the past month Mr. Campbell, of the Muskoka Mill and Lumber Co., has returned from a visit of some weeks in the Maritime provinces. Finding pleasure, as everyone does who visits this section of the Dominion, especially in the summer months, he yet went east on business. His firm own considerable tracts of spruce lands in New Brunswick, and their expectations and hopes of that class of lumbering become stronger the more they know of the country. I cannot think of any line of trade more interesting to study than lumber, and especially to Canadians. The developments in wood manufacture and the uses to which woods are being put are so many and constantly widening that the person who has an interest in this work finds much that is suggestive and attractive. It is hard to say what will be the final outcome of the spruce trade in this country, so rapidly is the business growing, and especially the wood pulp side of the business. Mr. Campbell found the lumber business in good shape in New Brunswick, the season being an unusually busy one. The volume of trade will run largely in excess of that of former seasons. I asked him if any great difficulty was being experienced by loggers through drought in that province, and his reply was that logging there, compared with like work in Ontario, was a simple and easy matter. The country was not broken up into small streams, such as are met in Ontario, and consequently a dry spell does not tie up logs as it will here.

* * * *

HOW easily an individual circumstance will change the entire trend of trade is clear to every observant man. Take any section of country. Take the province of Ontario, and go over the history of its towns. See here and there a town which at one time was in flourishing condition, the centre of manufactures and everything booming. Fire or financial disaster has removed the leading manufacture of the town, or inducement has been held out by some other municipalities and a change of site is decided on. The town quickly collapses and soon becomes known as one of the dead places of the country. I shall not mention names of places, or I would get some of my editorial brethren of the local press after me with a long stick, or rather sharp pen, but they are known to everyone. What havoc the railroad has created in this way. Planting its workshops and running its extensions into certain towns everything progressed. Then in the most callous manner these shops have been removed, and the stopping point has been shifted further along the line and the town goes down. We see a good deal of this kind of thing in the lumber trade. Every little while a wail comes up from some of our northern towns that they are being ruined because saw mills are closed down, and the blame is often thrown on the tariff, or made chargeable to the unwise action of some public man. These whilom lumber towns are just in the same box as the manufacturing towns I have been speaking of, and the charge wants to be made to the constant change that is a feature of commercial life and which it is sometimes hard to analyze. There are towns where the saw mills were once the life of the community, that are dead to-day because they are too far away from the logs. In the early days of lumbering they were beside the forests, but as lumbermen have cut into the interior they have gradually and certainly got away from them. I have thought of another illustration in this line in the manufacture of box stuff, caused by the Standard Oil Co. giving its trade this year to North Carolina pine. This trade amounted to the consumption of 150,000,000 feet annually; a change to southern pine was a hard thrust for white pine, but the box trade will survive it. These changes may hit each one of us hard sometimes, but the business man needs to view such questions broadly, and have resources enough to shape his business and get on to other lines of trade and methods.

* * * *

A DIRECT injury that may come to lumbermen by a continuous dry season, such as has been experienced this year, in almost all parts of the country, is the "hanging up" of large numbers of logs through want of water in the streams and rivers. Or again, the greater disaster will come from forest fires, and it is to be regretted that neither in Canada nor in the lumber districts of the United States, has there been entire freedom from loss in this way this season, though this has not been as severe as in some other years. The drawbacks of the present drought, however, will not end here with lumbermen. In a short time they will commence to make preparations for the work in the woods, some of the Ottawa firms already sending advance gangs on to start the work of another season. Hay will be wanted for the horses, and it will be found scarce and high in price because of the drought. Other coarse grains and feed that are a necessary part of the supply of every lumber camp will be found almost equally scarce and in this way the cost of logging another season will be to some extent increased.

* * * *

IT is a very sure index of an improvement in lumber conditions that a strong desire exists among lumbermen in all branches to advance prices. It has been made plain, we think, in another column, that so far as the owners of standing timber are concerned, they must clear on the whole, a better average of prices than has obtained for the past two or three years, if any profit is to come out of their transactions. Manufacturers in wood-working lines have been doing business almost for the fun of the thing, and that they are now thinking on the lines of putting an advance on the manufactured products is hopeful. They must do this, if interest, much less profit, is to come from the capital invested. In Canada the stand taken by British Columbia lumbermen within the month ought to be inspiring. There was need for the change, but it called for courage all the same, to advance Pacific Coast lumber from $2 to $3 a thousand. Spruce men in the Maritime Provinces acted earlier than those in British Columbia, and though it looks just now as if the prices of some months ago would not hold continuously, still a brave fight is being made to adhere to the schedule of prices already fixed. It is going to be an interesting question how far shingle manufacturers will be able to fall in line with other lumber manufacturers in securing an advance in prices. Relatively, the shingle trade, whether in white pine, spruce, or red cedar, has been more demoralized of recent years than any other branch of lumbering. With all that the term means the shingle trade has gone to the dogs. Prices of white pine shingles in Ontario will be helped by the reduction that has taken place this year in the manufacture. Not a few mills that have, in some cases, made a leading feature of shingles, as well as those with whom it has been an incidental part of the trade, are this year making no shingles at all, and others are curtailing the output considerably. This would seem to be the wisest course that could be pursued to bring conditions back to a normal position. The truth is that with white pine shingles, always a leading article, and the prodigal manner in which lumbermen both in British Columbia and in the Washington territory have entered into the manufacture of shingles, has meant that the production of recent years, even if times had been good, far exceeded the possible demand. Who will, for a number of years, and indeed for all time, go out of the business? It would pay red cedar manufacturers to form a combine, buy up the percentage of the shingle mills of the country, stop the wheels running, and turn the buildings into some other uses. Like other heroic measures, though, perhaps, distasteful, these would be successful and prove a healing and curing remedy.

THE NEWS.

—Eli Chant will erect a shingle mill at Chantry, Ont.

—J. Hodgson is erecting a saw mill at South Finch, Ont.

—Wm. Smyth will erect a saw and shingle mill at Bensfort, Ont.

—A saw mill is being erected at Vernon, Ont., by W. J. Moses.

—W. C. Edwards & Co. propose rebuilding the old saw mill at Vernon, Ont.

—Prout's lumber mill at Oil Springs, Ont., recently destroyed by fire, is being rebuilt.

—Mr. Kendrew, of Pond Mills, Ont., has rebuilt his saw mill which was recently burned.

—R. H. and James Klock have commenced operations at Lindsay's saw mill, at Aylmer, Que.

—The site of Mr. J. R. Booth's large mill at the Chaudiere, which was burnt a year ago, has been converted into a loading platform.

—The Assiniboine Lumber Co., of Brandon, Man., commenced operating their mill early in July, their drive of logs having arrived.

—For stealing lumber from T. A. Burrow's lumber yard at Winnipeg, Man., a resident was recently sentenced to fifteen days in the Provincial jail.

—Owing to continued dry weather, Kelly Bros. and other mill owners in the vicinity of Amherst, N. S., have closed down their mills for want of logs.

—The LeBlanc Manufacturing Co., of West Pubnico, N. B., are applying for incorporation, to manufacture doors, sashes, mouldings, etc. The capital stock is placed at $3,000.

—R. McMaster, of Tremont, N. S., is overhauling the McMaster mills at that place, which consist of a saw mill, including shingle and stave machines, threshing and grist mills, etc.

—James Hamilton & Sons, of Glen Huron, Ont., were heavy losers recently by floods, their lumber sheds and contents, with piles of lumber, wood and staves being washed down the river.

—D. E. Sprague has secured the contract to supply the lumber required in the erection of the Northern Elevator Company's new elevator to be built at Winnipeg. The amount is over 500,000 feet.

—The Ontario Government will hold an examination of candidates for licenses as saw-log cullers at Huntsville, Ont., on Wednesday, the 7th of August. This will be the last examination held this season.

—The largest pile of sawdust in the world is said to be at Cheboygan, Mich., in the center of the city. It is nearly 800 feet long, about 600 in width, from 20 to 60 feet in height, and contains about 30,000,000 cubic feet.

—R. A. Mackenzie's timber limit in the Beaver Hills, Edmonton district, N. W. T., was burned recently by a bush fire.

—The Union Furniture Co., of Wingham, Ont., are about to commence the erection of a new brick factory on the old site.

—On 25th May last Mr. Malcolm McKinnon, of South Falls, Muskoka, cut 76,000 shingles in 10½ hours (stoppages included). This astonishing cut was made in Mr. Geo. Kiety's mill on a Gravenhurst Boss machine with a saw made by the E. R. Burns Saw Co., of Toronto.

Thos. Scott, of March, is reported to have commenced suit against the W. C. Edwards Company, of Ottawa, to recover $15,000 damages for the death of his son, which he claims to have been due to lack of provisions in the camp. The charge is denied by the foreman of the camp.

—Mr. Dery is putting up a new steam saw mill at St. Lite, Que., while that of Messrs. Rosseau & Vallee, at Notre Dame des Anges, is nearing completion. The mill of H. Price is also well supplied with logs, and great activity is reported in saw mill business along the route of the Quebec and Lake St. John Railway.

—McLachlin Bros., of Arnprior, Ont., recently filled an order for twenty white pine saw logs for Messrs. Skillings, Whitney & Barnes, of Ogdensburg, which are to be shipped to New York and from thence consigned to the Sultan of Turkey. The logs are very fine ones, splendid samples of the products of our Canadian forests.

—Prince Albert, Sask., has three saw mills. Of these the local paper says: Sanderson's saw mill in the west end, and Shannon's mill in the east end are running full time at present. The Moore & Macdowell Company are having trouble with their drive of logs, but expect to begin sawing operations at an early date. All these mills are preparing exhibits of Saskatchewan lumber for the Regina exhibition.

—On May 29th the warping tug "Alligator," owned by the Hardy Lumber Co., Alpena, Mich., was wrecked while ascending the Persia rapids, on the French river. Angus McEachen, one of four men on board, was carried over the rapids and lost his life in the whirlpool below. The "Alligator" has been replaced by the "Victoria," both tugs being manufactured by Messrs. West & Peachy, of Simcoe, Ont.

The Gillies Brothers Company, of Braeside, Ont., have commenced an action against the New York Central & Hudson River R. R. Company to recover $1,138.08 damages for the loss of lumber, consisting of five car-loads which was destroyed by fire at Morristown, May 22, 1891. The plaintiffs allege that the fires were dne to sparks from the R. W. & O. locomotives. The case will be placed on the calendar of the November circuit in Watertown.

—The new machinery in Mr. Peters' large saw mill at Parry Sound, Ont., was put to work recently, and is reported as running satisfactorily. The mill has been completely remodelled, and is now one of the finest on the Georgian Bay. It has two band saws built by the Waterous Manufacturing Co., and a fine gang saw from the William Hamilton Co., of Peterboro, besides the usual number of edgers, trimmers, lath mill, etc., as well as many new features. The mill and yards are also furnished throughout with electric light and will be run day and night.

CASUALTIES.

—Wm. Newell, of Parry Sound, lost a finger of his right hand in Peters' saw mill a fortnight ago.

—A youth named O'Leary was drowned while working on Gilmour's drive about 28 miles from Dorset, Ont.

—Samuel Forman had the first and second fingers of his left hand taken off recently at Phillips' stave mill at Chatham, Ont.

—Hugh Cameron, an employee of the Pembroke Lumber Co., was killed by lightning while working on a boom about a mile from Pembroke, Ont.

—A young man named Archie Stewart, of Horton, Ont., was drowned at the foot of Palmer Rapids while engaged on a log drive for Mr. John Ferguson, M. P.

—A young man named Grosseau, in the employ of W. C. Edwards, of Ottawa, was caught in the machinery of the saw mill and had his arm torn off in pieces. It is thought he cannot recover.

—A sad accident occurred at Ross Bros.' mill at Buckingham, Que., on the 11th ultimo, by which Baptiste Lascelle lost his life. He was working at the edger when a board flew, striking him over the heart and causing almost instant death.

—The 16-year old son of Denis Logan, of Carleton Place, Ont., had his foot caught in the endless chain which operates the sawdust carriage in a large saw mill at that place. The leg was drawn over the cog-wheel, terribly lacerating the foot and leg, which had to be amputated.

—A workman named Henry Martin met a horrible death in William Hornburg's saw mill at Forestville, Ont., on the 5th of July. In taking a board off the ways it was caught on the saw, and threw him upon it. A great chunk was cut from his side, and the saw mangled the leg on one side and cut off the other near the ankle.

—About two weeks ago, Judd Buckman, foreman in a large saw mill at Severn Bridge, Ont., had the misfortune to lose part of his thumb and forefinger of his left hand by coming in contact with a saw. A few years ago Mr. Bucknam lost all the fingers of his right hand in a mill at Gravenhurst, and much sympathy is expressed for him.

—By the bursting of a piston of the steam log roller in Wm. Peters' saw mill at Parry Harbor, Ont., on the 18th July, Charles Jefferson, a blacksmith, lost his life, while Joseph Bovaier, an engineer, and Alex. Adair and W. H. Dearborn were severely cut about the head and face. The accident occurred while heating the piston rod in the blacksmith's forge.

Lumbermen's Supplies

We are making a Specialty of **Lumbermen's Supplies,** and are offering, with other goods, a **good Japan Tea,** fine draw and make, at **12½ cents.** Get a sample of this splendid Tea suitable for the Camp.

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Address: THE CANADA LUMBERMAN, Toronto

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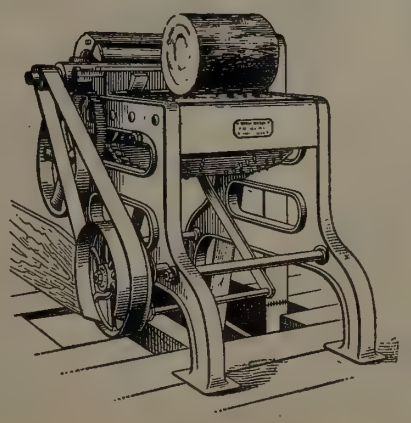
Patent Rossing Machine



Why you should use this Rosser.....

It will do double the work of any other.
It is the only machine made that will peel Cedar Shingle Blocks.
It will peel dirty blocks without taking the edge off the knives as they cut from the clean bark or block out.
It is a self-feeder, and very easy to operate.
It requires less power than a face wheel.
All iron and steel, very simple and durable.
It will ross knotty and uneven timber without waste.
It occupies about the same space as an ordinary planer.
You can have a chance to try a machine before buying it.

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EASTMAN LUMBER CO.
EASTMAN, QUE.

ROSEWOOD FROM INDIA.

ROSEWOOD from South America still holds the British market. One writer says in a British journal that Indian rosewood ought to displace the South American. Among other things he says: The natives of India have long recognized the valuable qualities of the blackwood or rosewood of the southern district of our great dependency, and its utility for furniture has been demonstrated at various exhibitions in London during the last few years. It is largely employed for carving purposes, some of the most elaborate work being done in this rosewood. It is closely allied to the "sisso," and the tree grows to an immense size in the Annamally forest. Specimens are frequently found forty to fifty feet in girth, and it is found in other parts of India and Burmah. The wood is close-grained, strong, flexible, fibrous and durable, and generally of a deep purple color. This is sometimes mottled with greenish-black veins, which fade to a dark brown or black. When sawed, it emits an agreeable odor. Admitting a high polish, its use for the best class of furniture is apparent when considered with other qualities.

The logs, some of which, imported to London in 1878, sold for $68 per ton, are sent from India from 9 to 16 feet long and from 20 to 34 inches in diameter, and are in a very sound condition. The wood does not warp when cut into boards, and when treated with oil, a common circumstance in India, it becomes almost black. These qualities have resulted in its employment by the Madras government for the construction of gun-carriages, for which purpose it has long been used in Bombay. Cabinet-makers hold it in high repute, and its suitability for the interior fittings of ship cabins, railway carriages and the like should lead to its early extended use in this country. The wood is said to be equal to Bahia or Rio rosewood, and taking into account its cheapness and superior widths, as well as its soundness, a great desideratum in converting, there can not be any doubt, at half the price of the other rosewoods, the wood from India must eventually supplant the ordinary kinds. Already our French neighbors, with their usual keenness to adopt new woods, are very large consumers, notwithstanding the national prejudice against wood supplied from the colonies of Great Britain.

A FEW STEAM PUMP CALCULATIONS.

WANTED—A steam pump to deliver 1,000 gallons per minute. Strokes per minute, 40; length of stroke, two feet; steam pressure, 80 pounds; head to pump against, 100 feet; allowance for loss, 20 per cent. A loss of 20 per cent. necessitates calculations for 1,000 gallons + 20 per cent., or 1,200 gallons per minute. This divided by 7.48 gives 160.4 cubic feet of water per minute. Dividing 160.4 by 40 we have 4.01 cubic feet per stroke, and call it 4, omitting the decimal. Dividing again by the length of the stroke (in feet) we get 4 + 2 − 2 square feet as the area of the pump cylinder, or about 19½ inches for diameter; a pretty large diameter for the stroke, but necessary to meet the requirements, although it would be better to lengthen the stroke to three feet. The head of 100 feet (.434 pounds per foot, but calling it .5, makes an allowance for friction) gives us fifty pounds pressure per sq. inch of piston, and the piston area equals 2 + 144 − 288 square inches, 288 + 50 − 14.400 pounds total pressure on the piston to be overcome by steam pressure on the steam piston. Dividing the total load by the steam pressure we have 14,400 + 80 —180 square inches for the steam piston plus 20 per cent. loss in the steam cylinder, etc.—15.25 + 3.05 − 18.3 inches as steam cylinder diameter. The conditions here given are a little unusual, the hand being low for the pressure used, and the stroke short for the diameter; also the small number of strokes per minnte, but the method of calculating is clearly shown and can be done for any selected case. In the case of suction or lifting pumps simply add the lift to the head forced against and use this as a total head, making an allowance for possible leaks in the suction pipe.

LUMBERING ON THE ST. MAURICE RIVER.

AN official of the Lake St. John, Que., railway says: "There are not a dozen people in Quebec or Montreal, who have any conception of the lumbering operations being carried on this year on the St. Maurice river. You will be astonished in fact, when I tell you that the volume of business is almost as extensive as on the Ottawa. One firm alone, and at one point, employ 1,100 men and 600 horses, and the supplies for this little army mostly come from the city of Montreal. Where our bridge crosses the river a pulp mill has been erected at a cost of one million dollars. Both in the mill and in the woods the number of men employed must run up to very near a thousand. As a matter of fact, no one can form any estimate as to the magnitude of the several industries along the river St. Maurice without being on the spot."

The Ottawa Saw Manufacturing Company is putting in machinery for the manufacture of band saws.

ROBIN, SADLER & HAWORTH
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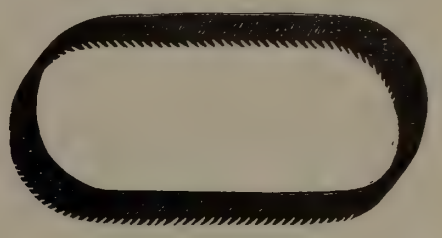
WHY BAND SAWS BREAK

SIXTEEN REASONS,

AND HOW TO AVOID THEM



Being instructions to filers on the care of large band saw blades used in the manufacture of lumber.

A book filled with valuable information on the care of band saws. Giving the reasons for breaking; analyzing each reason; giving instructions to dispense with the causes as laid down in each reason; and full details on filing and brazing. The proper styles of hammers to use are illustrated and described, and views of blades showing the blows of the different styles of hammers form an important part of the illustrations. Improper and unequal tension are then treated, and the manner of properly setting irregular teeth is described. In connection with the treatise is a history of the invention, manufacture and use of the saw from its origin to the present time. The work in whole makes an accumulation of information such as has never before been published.

The book is printed on fine paper, good clear type, and is handsomely and substantially bound in cloth. It will be sent to any address on receipt of the price, ONE DOLLAR.

Address— CANADA LUMBERMAN, Toronto, Ont.

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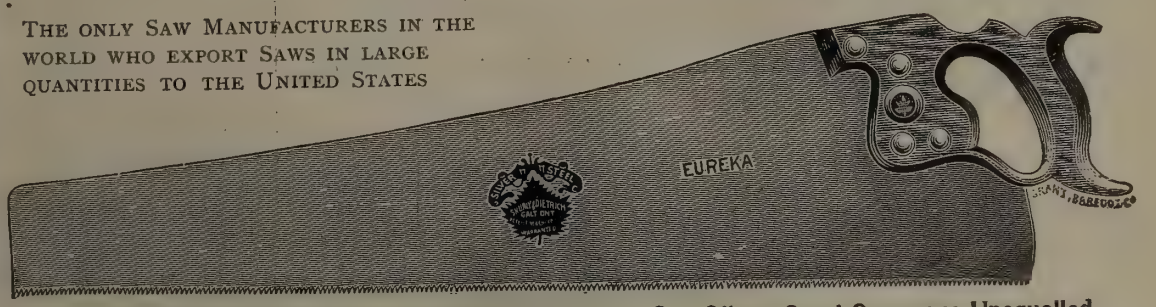

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Any person using a Steam Boiler can save 50 per cent. of their fuel and get 50 per cent. more power out of their boiler by having

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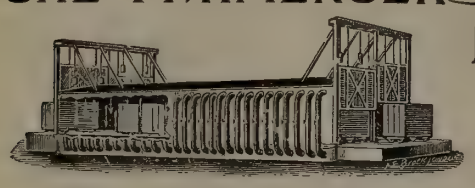

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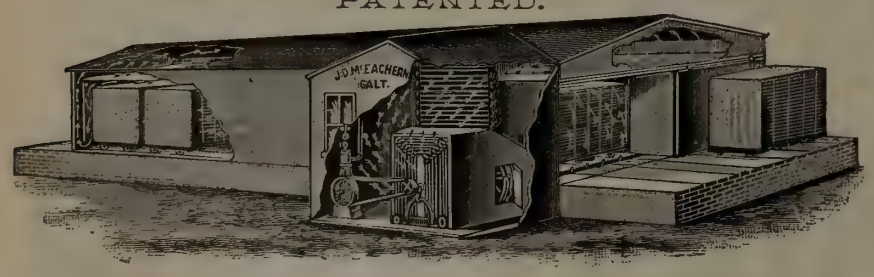

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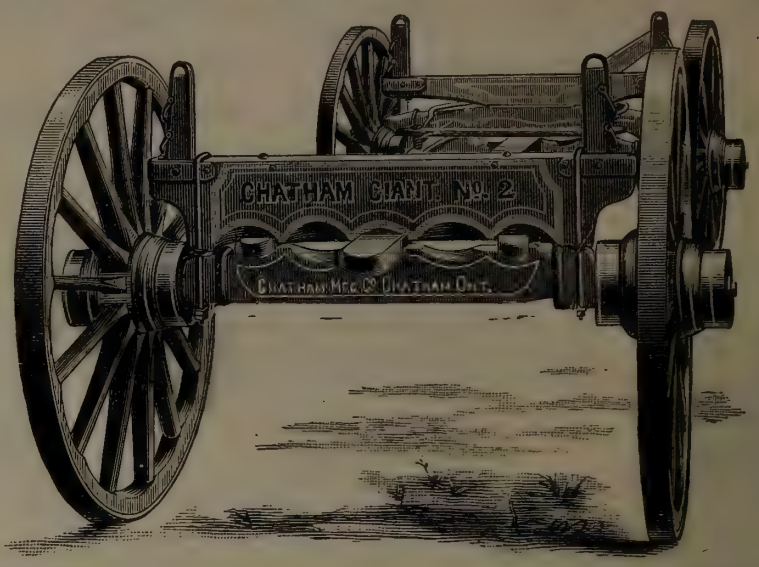
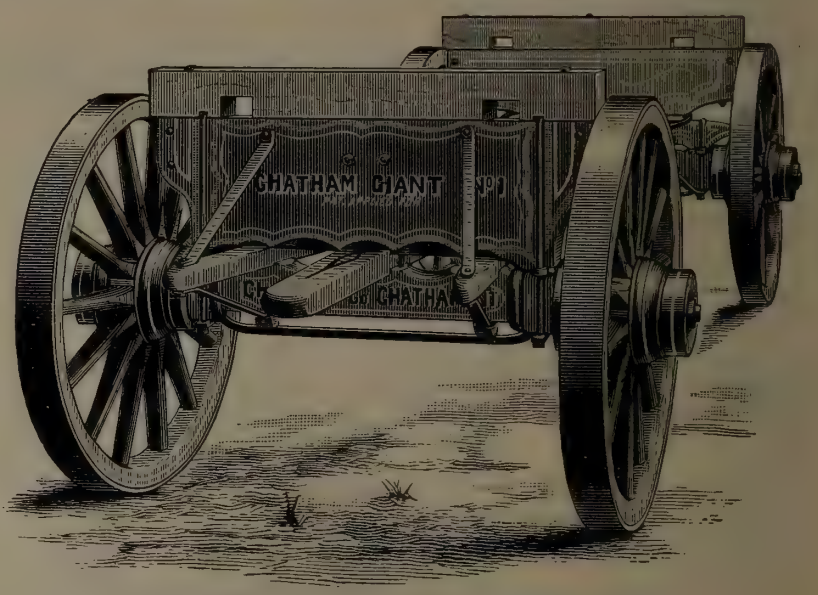


IT must be self-evident that our GIANT ARM LOG TRUCKS, of which the above is a faithful illustration, is the best log truck made; but if conclusive evidence of this is wanted we refer to every mill man and lumberman in the county of Essex, Ont., where millions upon millions of Elm logs are gotten out every year on them, and where these trucks sell readily, while those of other makes remain unsold at $5 to $10 less.



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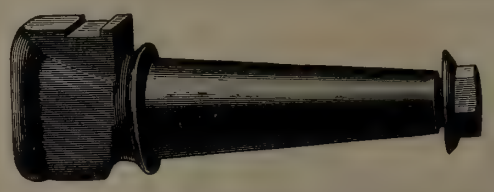
As seen above it is a Lumber Truck, but it is quickly converted into a Log Truck by bunks which are grooved at the ends to receive the stakes and slip down between them, and are perforated for side or lug poles. We build these trucks in all sizes from 2½ to 4 inch Malleable Giant Arms. Farmers all over are extensively adopting the lighter sizes as general purpose wagons.

In reference to above trucks we would call the attention of the reader to the accompanying illustration of VANALLEN'S PATENT GIANT ARM with which they are equipped.



It will be seen that the hind bolster and sand-board are formed to rest upon the flat top of this arm, and being securely clipped to the axles forms a complete and solid truss and render the axles unbreakable and inflexible.

Our Malleable Giant Arm farm and teaming Wagons have no equals on this continent, of which the judges on vehicles at the World's Fair, Chicago, gave us an unqualified certificate in the shape of a GOLD MEDAL AND DIPLOMA.

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This road traverses a section of Michigan with unrivalled advantages to settlers. Cheap lands, thriving villages and towns, well watered with streams in all directions: a market for every product of Forest and Field.
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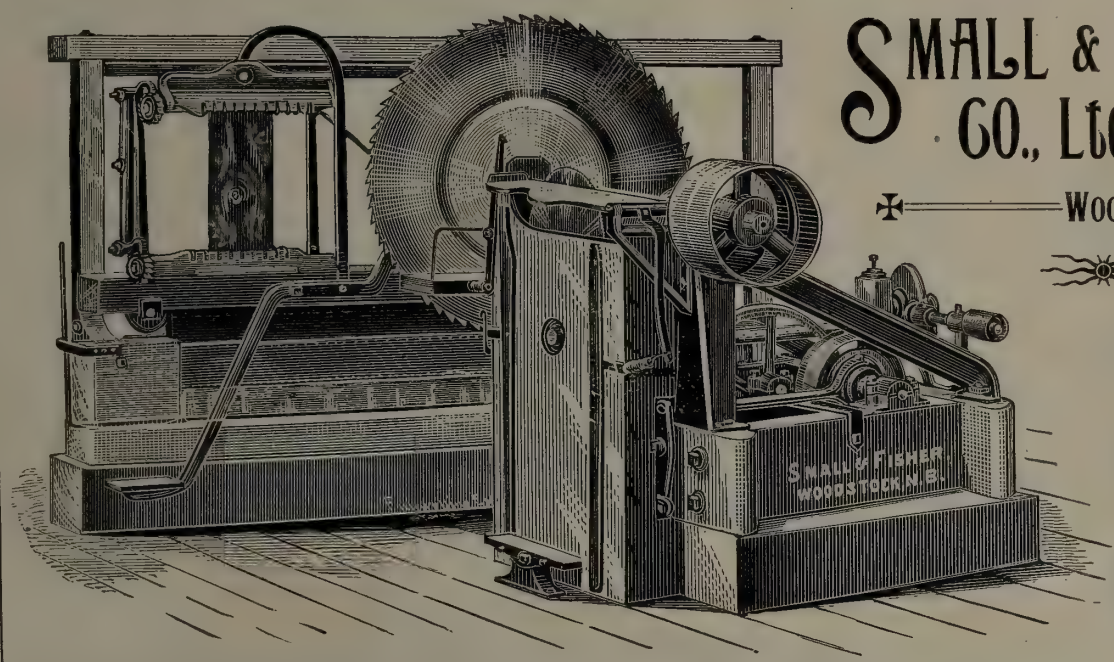

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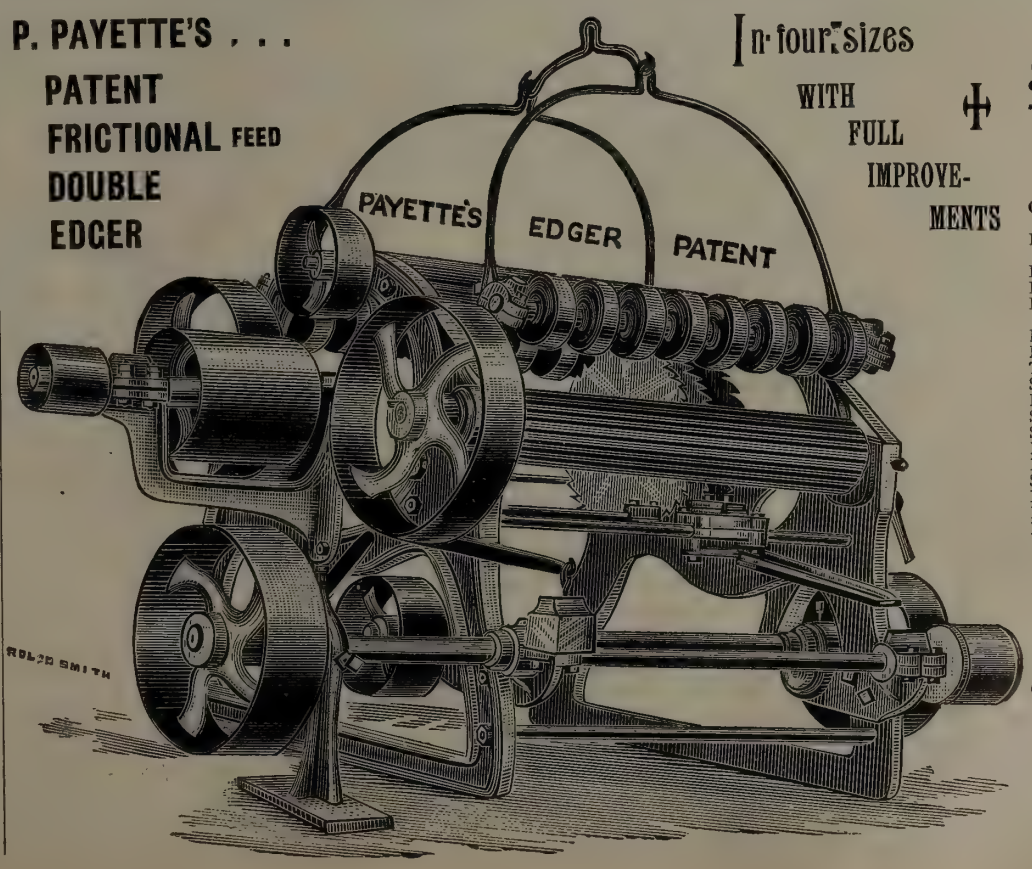

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C. J. SMITH
General Freight Agent, Ottawa.

P. S.—The opening of the Ottawa, Arnprior and Parry Sound Railway, Ottawa to the Georgian Bay, offers to the manufacturer and purchaser a new district not heretofore reached by any other line.

Dauntless Shingle and Heading Machine

WILL make more Shingles per day than any self-acting machine with vertical saw in existence, and more Shingles from the same quantity of timber.

THE FRAME
... Is of Iron throughout, very heavy and rigid, strongly bolted and braced.

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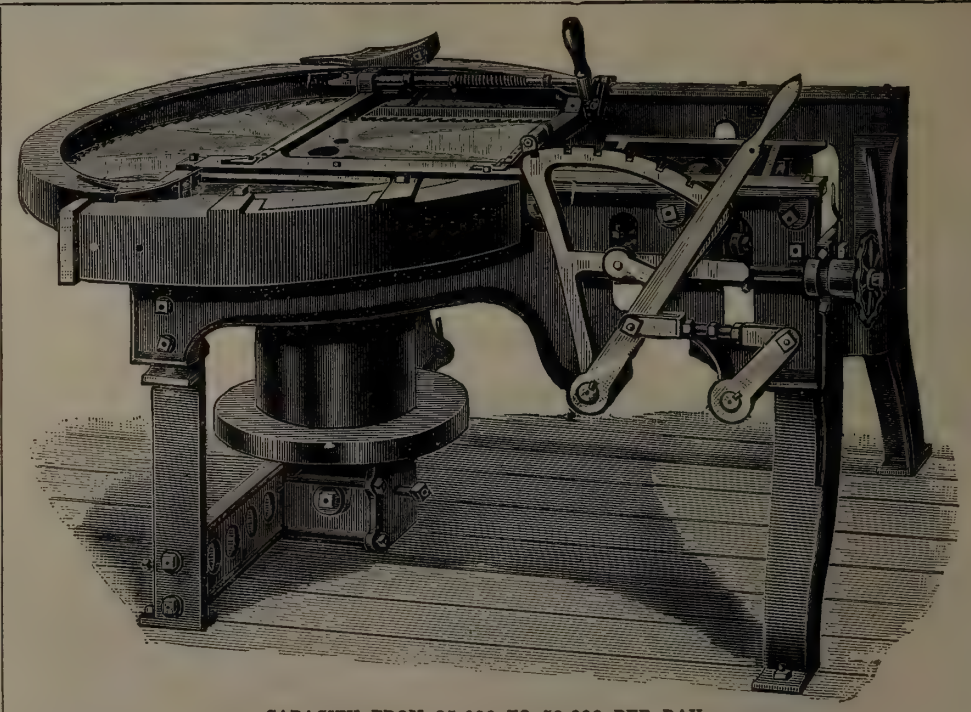
... Is very light and strong, made of forged Cast Steel Plate, running on steel ways or tracks. Will take in a block 18 inches wide and 19 inches long, adjustable for 16-inch or 18-inch shingles.



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Your Saw Mill is equal, or nearly equal, to any we have seen of much heavier make, and far in advance of any light rig in the market. The capacity per day is fully up to your guarantee, 40 M per day. We have tested with eight men.

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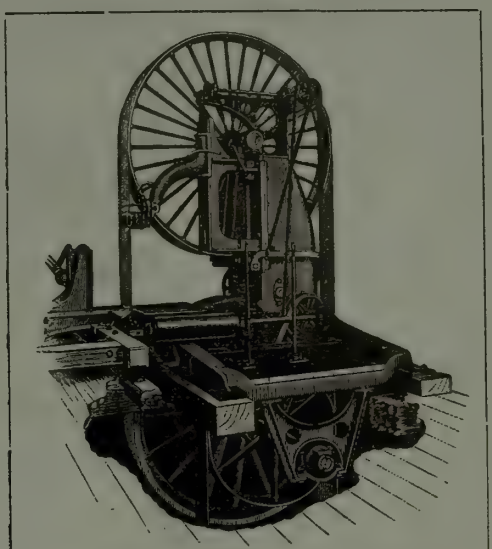

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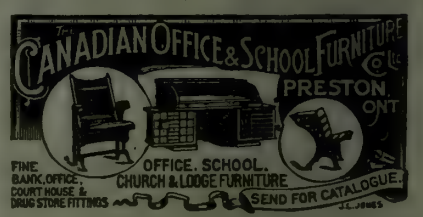

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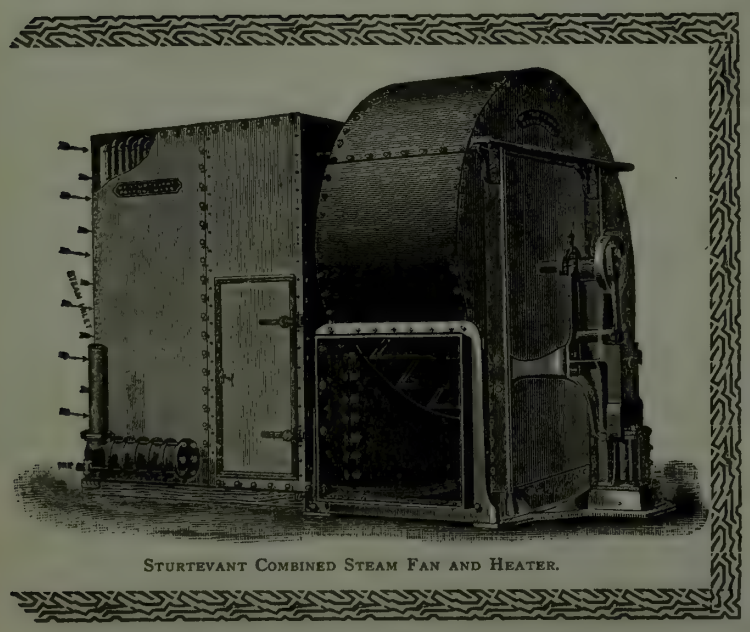
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WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XVI. NUMBER 9. | TORONTO, ONT., SEPTEMBER, 1895 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

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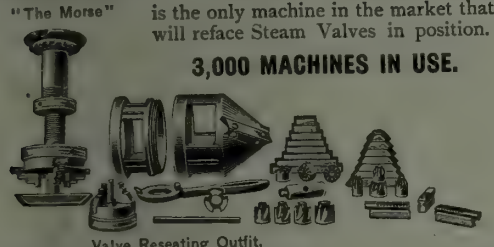

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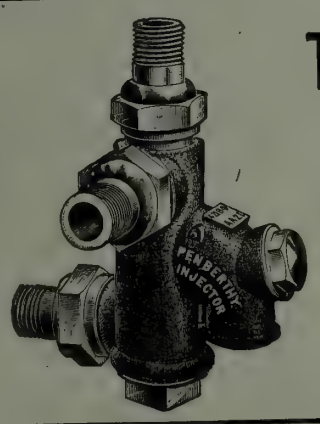

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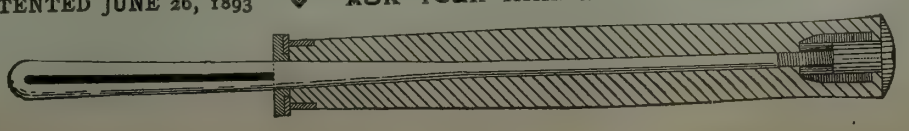

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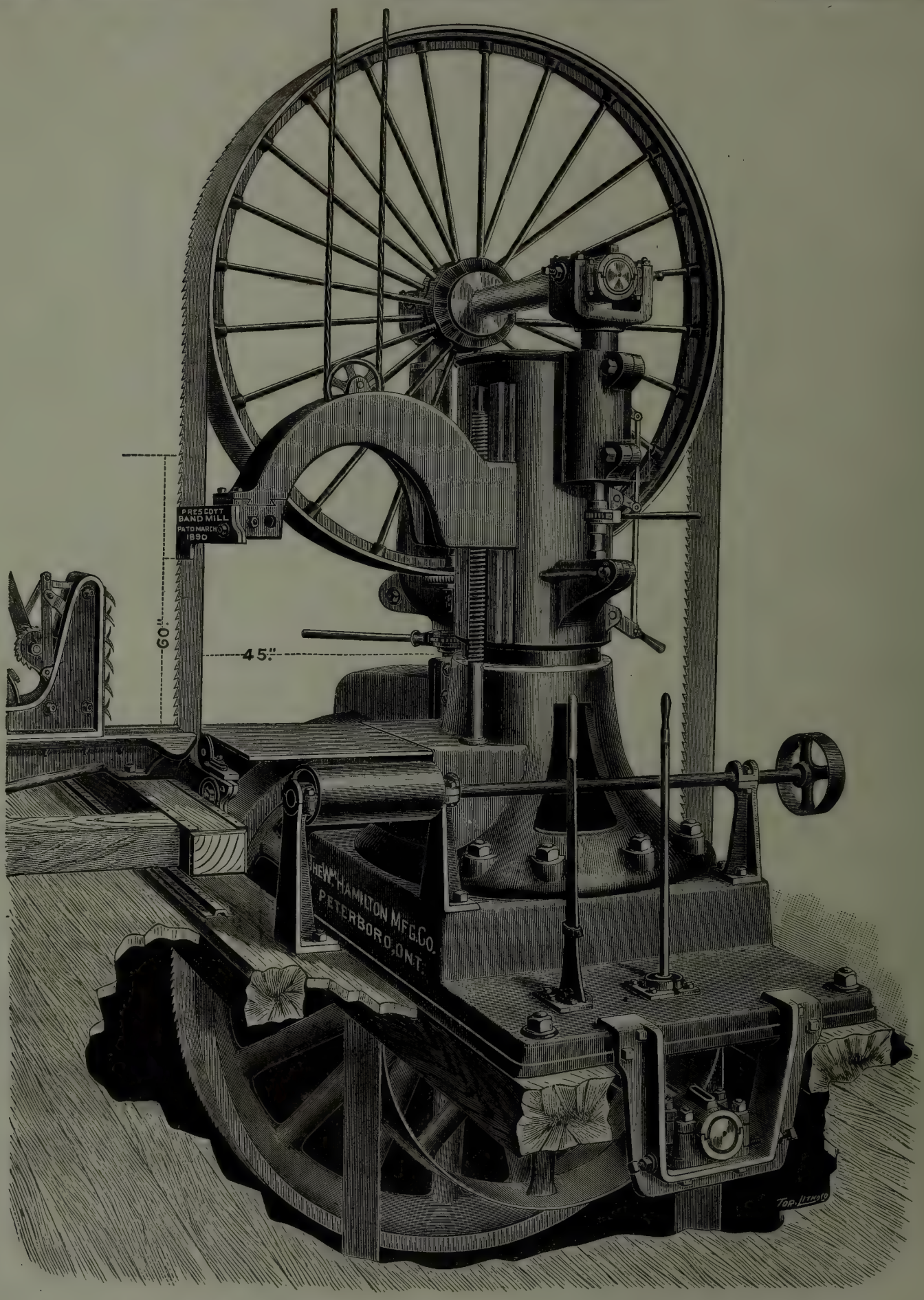

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THE CANADA LUMBERMAN

VOLUME XVI. NUMBER 9. TORONTO, ONT., SEPTEMBER, 1895 TERMS, $1.00 PER YEAR Single Copies, 10 Cents

BY THE WAY.

A TELEGRAPHIC dispatch from Rat Portage, Ont., of a week since, tells of a shut-down among the mills of the Ontario and Western Lumber Association. Last spring wages were reduced from $1.50 to $1.35 per day and the demand now is that these be raised to the former rate. This not being acceded to, the men, to the number of about 200, stepped out and the mills have closed down. The men labored 11 hours, and are willing to accept either the old rate or a reduction of hours to 10, or an increase to the old rate as follows: Laborers, $1.50, pilers, from $1.75 to $2. It is said that other grievances existed between the men and Manager Cameron, but the latter has stated that he is willing to leave a decision in the case to the Keewatin Lumber Co. as arbitrators, but to this the men do not accede. A good deal of lumber has been coming into Manitoba from Minnesota and selling at low prices. If the strike should last for any length of time it will have a hurtful effect on the trade of that province, no doubt, by stimulating this outside trade.

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Among recent logs from the Georgian Bay territory cut into lumber at one of the Michigan mills, was one log sawed at the South End Lumber Co.'s mill, at Bay City, Mich., which produced 1100 feet of 4 in. plank, all clear stuff, and valued at $33. Five of these logs foot up $150, when converted into lumber. And yet we are sometimes told that there are no fine timbers in these degenerate days.

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IT has not been all plain sailing with the big log raft floated down the Pacific Coast, though the outcome of the venture has been an improvement on some of the disastrous failures that had taken place before. At San Francisco things got a little lively, and betwixt the combined influences of wind and tide the tug-boats that had attempted to hold the raft in position were nearly pulled out to sea, making imminent for the moment danger to all the craft anchored thereabout. But as this is a small affair compared with the former experiments, there is reason for those on the Pacific Coast, who have been determined to pursue this experiment of rafting logs on the Pacific, to be congratulated.

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The decrease in the lumber cut of the Saginaw river mills is one of the remarkable changes that has overcome the lumber business of recent years. The statement is that the cut will not exceed 250,000,000 feet, though other estimates place the figures up to 400,000,000 feet. Even taking the latter figure, this will represent a big decrease from a year ago, when the cut was 482,500,000 feet. This decrease, of course, has been taking place for a number of years, but this season is more noticeable than ever before, because the figures are getting down so small. In contrast to this is the immense increase in the cut of the Duluth district, which it is expected will reach 500,000,000 feet. By procuring logs in large quantities from Canada and from the Lake Superior district, the calculation has been that Michigan would continue to hold its own as a lumber manufacturing centre, but the figures of this year hardly bear out this conviction. The fact is Michigan lumbermen have been importing lumber from Duluth in large quantities this year, rather than buying the product of their own mills, claiming that price is in favor of Duluth. As one of the various transformations which trade undergoes, it will be highly interesting to watch conditions in this case. Canada, as one source of supply for Michigan, is interested in the change.

SAWED HOOPS.

THE manufacture and sale of sawed hoops during the past few years has been watched with varying opinions, regarding their practicability and ultimate success. A recent interview with an experienced manufacturer of this article, says a writer in the Woodworker, produced the information herewith presented.

In entering into this industry, a very essential thing is to procure a fair quality of hoop poles, as free as possible from short crooks and ugly knots. Poles should not be cut earlier than the latter part of August or the first of September, when they are usually free from sap. For making tierce hoops they should be cut not less than eight feet two inches in length, and from 1¼ to three inches in diameter at top or small end. Poles of these dimensions yield easily from two to six good marketable tierce hoops.

In preparing poles for the saw, care should be used in having them properly knotted without making serious cuts in the bark. This part of the work should cost about 30 cents per 100 poles. After knotting they are ready for the cut-off saw, where they should be reduced to eight feet in length. They are then ready for the hoop saw, usually a band saw about 12 feet in length, welded together and revolving around two 24-inch wheels, one above the other. To obtain the best results these wheels should be speeded to about 800 revolutions per minute. An operator on each side of the saw serves to force the pole against the saw, while another assists in guiding it along its course, receiving the hoop and returning the pole for further and similar proceeding. A good sawyer can, with little experience, turn out from 1,500 to 3,000 hoops per day on such a machine.

The laps can be successfully cut by touching them against a disc wheel containing four knives set opposite each other, the wheel revolving about 300 revolutions per minute.

At this point a sawed hoop can be made as perfect as any bark hoop manufactured, by using a planer. This gives it the appearance of a shaved hook and preserves the fibre of the wood. Planers are now in use which have a capacity of planing hoops about as fast as one machine can saw them.

The remaining details of sawed hoops manufacture consist in building and tying. This should be done as soon as they leave the planer.

The entire cost of labor in manufacturing hoops in accordance with the foregoing process, amounts to about 28 cents per 1,000 for hickory and 34 cents for oak.

The principal difficulty met with in this industry seems to be the carelessness in selecting No. 1 poles in sufficient quantities. However, there is no reason why sawed hoops made from good poles should not be as satisfactory, if not superior, to the averaged shaved hoop. Their uniformity adds greatly to the appearance of a finished package, and with proper care in the different stages of manufacture, they should certainly command the same prices as shaved hoops.

A FOREST TURNING TO COAL.

REPORTS from France say that on the shores of Brittany, between St. Malo and St. Lunaire, in the vicinity of the St. Enogat station, at a place called Port Blanc, the tides have lately displaced a considerable amount of sand to a depth of some nine to thirteen feet. Accompanying this phenomenon is the fact that forests known to have been buried for periods covering eighteen or twenty centuries have been brought to light, and a vast forest has been discovered in process of transformation into coal. Ferns and the trunks and barks of trees are to be seen in an advanced state of decomposition, being already beyond the peat formation, showing the films and flakes which are found in coal, and while some of the trunks are sixteen feet in length and still very distinct, they are becoming rapidly transformed.—Iron Industry Gazette.

TREES SUCCEED THEMSELVES.

LUMBERMEN say, "When the pines are gone they are gone forever." But what are the facts? From time immemorial such trees have grown in various parts of the old and new world in the same places where nature has been allowed to have her own way. The pines of Maine have been cut over and over again on the same wild grounds. The ancient oaks of Britain have replanted themselves times without number on the very spot where the Druids worshipped. The redwoods of California and elsewhere yet live among their giant ancestors that date back even before the beginning of the Christian era. Despite human rapacity, the great cedars of Lebanon, whose sires were cut by King Solomon for his temple, have repeated themselves on those shaggy heights, a few yet lingering under religious protection. The olive trees of Palestine, and the fig trees, and the willows on the lower banks of the Jordan, under whose shade the nomadic Israelites pitched their tents, have again and again during all the centuries since replanted themselves there, rebutting the theory that they do not succeed themselves. If these instances are exceptions to the rule, they count for the rule when conditions warrant it.

If men rob the supports of the pines or any other class of trees, of course they will die out, and another species of less value may take the ground and hold it. The reason why there are so many tree rotations is because men interfere and produce the conditions that necessitate them. "When the pine forest is burned over," says Robert Douglas, "both trees and seeds have been destroyed, and as the burned trees can not sprout from the stump, like oaks and many other trees, the land is left in a condition for the germination of tree seeds, but there are no seeds to germinate. It is an open field for pioneers to enter, and the seeds which arrive there first have the right of possession." The cotton-winged seeds of the aspens and other poplars generally get ahead, taking root on high and dry soil, where some other seeds would die. The burned over land is their paradise, and their paradise is the forest retrogression for which our lumbering methods have paved the way.

Conifer and other seeds may sprout under their parent trees, but their young shoots speedily pale and die, if the shade is too dense. The same result occurs, though in reverse order, where the trees are all cleared off. If they sprout, the sun's excessive heat soon kills them. If a fire burn up the leaf mulch and the roof network in the soil, of course the seeds are destroyed, and there is no succession of forest growth there, simply because "we can not make something out of nothing." Observing there no reappearance of the old species, men aver "The pines once gone are gone forever," and they ring the changes on this "lumber adage" to convince us that it is useless to try to save our pines.

Some common sense needs to be drilled into men's understanding. By the decay of fallen leaves and limbs, mosses and other minor vegetations, aided by water thus conserved, forest trees manufacture their own nutrition and support. Hence forest soil that is not raided by axe or fire does not "run out" like a farm soil planted with the same kind of seeds from year to year. It is plain that successive tree crops will continue to grow and do well on their own native heath under a practical system of forestry, whereby the forest conditions are improved by cutting for the market.—Lumber World.

A SPLENDIDLY EQUIPPED WOOD-WORKING PLANT.

DESCRIPTION OF THE NEW SAW MILL AND PLANING MILL OF J. W. HOWRY & SONS, FENELON FALLS, ONT.

IN the march of progress that is characteristic of the days in which we live the advances that have been made in manufacturing lines stand out most prominent. In wood-working the advance has, in some respects, been more noticeable than in some other directions of manufacture. This point has been reached, that it is impossible to keep up in the race and competition of to-day, unless the most improved machinery constitutes the equipment of wood-working establishments. The concern satisfied to work along with the old plant, finds itself handicapped at every turn, the productive power of the institution weakened and the cost enhanced.

A retrospect of the history of wood-working machinery since the days when Sir Samuel Bentham first secured a number of important patents, contrasted with the epuipment of later day establishments, shows very clearly the large progress made. One need only go back a quarter of a century and draw the contrast between the machinery of that day and the present, and in many particulars the difference is as remarkable.

The position of a well equipped wood-working establishment in the present day can be best seen by taking a concrete illustration. We do this by a reference to the saw mill and planing mill of J. W. Howry & Sons, of Fenelon Falls, Ont., whose new mill is considered to be perhaps the most perfectly furnished in the Dominion. This is especially the case as regards the planing mill and box factory.

J. W. Howry & Sons take their place among the lumbermen of the United States, who have seen in Canada a profitable field for operations, particularly within recent years, as the timber resources of their country have been rapidly diminishing. The firm consists of J. W. Howry, John H. Howry and H. K. Howry. They have long born a reputation as progressive business men in their own country, and the energy they have thrown into business in Canada furnishes further proof of this.

The saw mill at Fenelon Falls is equipped with two 12″ Prescott band mills, one Challoner double block shingle machine, lath mills, etc. It is a combination steam and water mill, that is the mill proper running by water, the carriages, log turners, log stops and unloaders being worked by steam. The capacity is 200,000 feet daily, the mill being run 22 hours out of the 24.

The box factory and planing mill, around which in some respects especial interest centres, is 100ft. square, run by water, and is connected with the saw mill by a shaft 200 ft. long, which is attached to a water wheel in the saw mill. In the planing mill there are four surfacers and matchers, one moulder, two cut off saws and one edger. The planing machines and cut off saws are made by the S. A. Woods Machine Co., of Boston. It is also equipped with one standard band resaw, made by the W. B. Mershon & Co., of Saginaw.

The box factory is equipped with a cut off saw and rip saw and it is capable of turning out four cars of box shooks daily. Here, there is also a patent shingle department, where the blocks 16″ and 18″ are worked up into shingles with fancy butts for gables of houses.

The lumber operations of the firm are on a large scale from whatever standpoint the business is viewed. The firm owns large timber interests in the northern districts of Ontario. What is familiarly known as the old Scott mills are theirs, and also the Boyd mills in Monmouth, Sherbourne and Glen Morgan. They have between 12,000,000 and 15,000,000 feet of lumber on hand and expect to manufacture 18,000,000 more before the close of the season; the larger part of it will go to the United States.

The location of the mill property is on the proposed route of the Trent Valley Canal, and the G. T. R., 14 miles north of Lindsay. There is at the present time about eight miles of railroad sidings covering over 50 acres of land.

Messrs. Howry have about 20,000,000 feet of logs on the way down the streams, which are to be manufactured this year, and it is their intention to run the mill winter and summer. Their annual output is about 30,000,000 feet of lumber, 5,000,000 lath, and 15,000,000 shingles.

PLANING MILL AND BOX FACTORY OF J. W. HOWRY & SONS, FENELON FALLS, ONT.

BURNING SHAVINGS.

IT is considerable of an art to burn shavings in such a manner as to keep up a regular supply of steam and not injure the boiler. Shavings make probably the most intense heat that any boiler is subjected to, except when oil is used. The fireman will put in a small amount of shavings in front of the furnace, light them and check down the damper until the steam begins to start; then once well under way, he will fire slowly, feeding the shavings "little and often." The sign of proper combustion in a furnace is a bright flame all over the grate surface. This is very hard to secure when shavings are burned, especially if a bunch two feet thick be thrown into the furnace right in front of the fire door, and the fire allowed to taper down to nothing round the edges and back of the furnace. The signs of bad combustion are blue flame, dark spots and smoke. More particularly is this the case when coal is burned. To a certain extent it is true with shavings and with all other kinds of fuel. Good firing is accompanied by an absence of dark smoke, except perhaps for an instant after firing. The thickness of fire is perhaps a matter of choice more than of necessity. Evenness of surface of fire is more to be required than thinness. Regulate the draft according to the thickness of fire, quality and quantity of fuel, etc. A thin fire is best when a boiler must be forced.

ARTIFICIAL YARN FROM WOOD-PULP.

THE production of artificial cotton yarn from wood-pulp is declared by a Rhode Island experimenter to be a practicable industry, the difference between the two materials being said to be very light as regards appearance, softness, strength, lustre and general condition. It appears that for this purpose the wood of the spruce or the pine is used, and is defibrated, after which it is disintegrated thoroughly and subjected to a good bleaching. Much depends upon the latter process, an essential point being that the whiteness of the stock equals that of the genuine cotton material. Thus far, it is stated, the bleaching compounds have consisted of hot solutions of bisulphate of soda and chloride of lime; after bleaching the subdued pulp the cellulose is treated with a compound of chloride of zinc, castor oil and gelatine, resulting in the formation of a paste which is reduced to strands and rubbed into thread. Under the naked eye the pulp thread is said to differ very little in appearance from the real cotton, possesses practically all the features of a pure cotton thread, and is white and soft, but when compared beneath a strong microscope a difference is noticed, the fine, fussy and loose fibres so prominent in cotton threads being missing in the pulp sort, though not to the disadvantage of the latter. The peculiar twist character of cotton thread is also absent in the pulp strand, while the latter seems harder and smoother under the glass.—Northeastern Lumberman.

RESISTANCE OF WOOD.

THE resistance of wood to destruction is extremely variable, depending upon the kind of wood and the conditions to which it is exposed, for the durability of the same specific gravity varies in air and under water. Ordinarily, oak will last one hundred years, beech seventy-five years and the conifers eighty-five years. As estimated by the Engineering Record, oak subjected to alternate dampness and dryness lasts fifty years, pine at the most twenty years. If kept continually dry, oak wood will last three hundred years and pine one hundred and twenty to one hundred and fifty years. Oak and beech last indefinitely under water, and alder lasts much longer under water than in the air. The most durable woods under water are oak, alder and pine; the least durable, birch, linden and willow.

In the air timber is exposed to the ravages of insects, the sap wood being attacked more than the heart wood. Woods rich in resin, like the elm and poplar, are not so much troubled as those like the alder, willow, birch, yoke elm and red beech, which have an abundance of sap and are rapidly deteriorated.

Observations upon the preservation of timber have shown that, first, the more warm and humid the atmosphere the more rapidly the wood deteriorates; second, timber felled in winter is more durable than that felled in summer; third, timber raised in cold climates is most durable, and fourth, the best timber is that raised on meagre soil.

Timber construction which is protected from heat and humidity is only endangered by worms, and, on the contrary, that which is in a damp and badly-aired place fails by rotting, which is really produced by microscopic vegetable growths. Under water timber is attacked by the taret. The primary cause of the decay of wood is the presence of albuminoid substances in the sap, and incrusting materials which afford nourishment to insects and microscopic vegetations.

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THOSE LITTLE MILLS.

BY JOHN SHAW, IN "LUMBER."

I OFTEN go into planing mills that remind me of the galleys of the old class of whale ships of thirty or forty years ago. The stove filled almost the whole width of it, and there was just room for the cook when the door was slid back to crowd in and sit down on a little narrow bench that he had to brace up against the stove in order to sit down with safety on it. In this galley was kept all the cooking utensils for a crew of from twenty-four to thirty-six men; and you can imagine how pots had to be nested together, and kettles and dishes and all the cook's necessary utensils had to be grouped and corraled in order to get them in that little galley, in which he had to be almost doubled up to stand. He had to be like the boy's toad—when he stood up he sat down. But the cooking was done there, and the whalemen got fat and lazy and often had the scurvy for a change.

We may as well call this convenient as to call a planing mill convenient where you have to climb over a grindstone to get at a band saw, or a band saw so near to a molding machine that you have to have a board nailed up to keep from getting into the bottom band wheel when setting up.

I know low beams and floors are very convenient for laying and sticking up files and tools and wrenches on, but the inconvenience comes in when dust and shavings have so covered them up that you have to go pawing around in the shavings and dust to find them. The cook's galley had this in its favor, that the dust could not cover up the spoons and knives and forks he had stuck in it to be handy to get at.

We must often have charity for those who put machinery into low and narrow quarters, because, from the conditions of being near the center of their trade they find it hard to find proper quarters in which to set up their machines.

Notwithstanding this, they pay an awful percentage for their narrow accommodations, and yet, it seems as if some firms courted this percentage of loss by voluntarily selecting little, low, tucked-up quarters, where machines are fairly piled on top of each other, like packages in a warehouse.

I have in my mind now a room 30x60, in which is an engine, three planers, a jointer, two turning, a molding machine with saw, a band saw, grindstone, emery grinder, and saw for sawing strips for matchers. It has the accommodation of running all the planed stuff outside, but all molding stock is dropped inside, and it is an art study to keep things clear so anyone can get around the mill. If this room was convenient to an open shed where a stock of lumber could be easily handled, there would be some excuse for crowding so many machines into so small a space, but it has not even this convenience, and stuff has to be left in a load or two at a time and carried around by hand.

We do not consider it a sign of convenience when lumber is laid around in a mill as if it was going to play leap the frog to get where it was needed, and yet once in a while we find this to be the case. Firms that have been a long time in the business hold on with an awful tenacity to old surroundings, and hold on to old-fashioned machines because they have got used to them, and in being so used to it, they feel like the elderly lady did about moving into a new house. She could get along very well with everything, but could not see for the life of her where she was going to hang her broom and dust pan. And so it seems with many old firms. They have always been used to being piled up in a heap, and they would be lost in a good, wholesome, clean, convenient mill, where everything was get-at-able, and the machines did not tread on each other's corns. Not a great while ago a firm was prospecting for a mill site, and the point they wanted to make was to locate so that the cost of handling stock should be brought down to the least possible amount, and stuff could be delivered to the machines and shipped from the mill at very little cost. They said: "We don't want to handle our stock any more times than we can help, and we shall fix it so that when once in the mill, once at the saw and once at the planer for matched stuff, and once at the planer for surfaced stock, will be all we shall handle till it goes directly on cars or vessel." They believed they could make a profit on their stock by saving in the cost of handling, and they were men that could and would accomplish what they undertook. The plan of the mill was very large and roomy, with accommodations for laying in a large amount of rough stock. All lines of shafting was under the floor, and the planing mill proper was only one story, with truss roof, which was to be lighted in the best possible manner.

The truss roof left the whole floor free from any obstructions so that teams or trucks could unload at any desirable point. You say, and truly, that all firms, or individuals, cannot so desirably locate. I grant that they cannot, in all cases, but I do say that there are hundreds of cases where mills are just the counterpart of their owner, pinched and shriveled and tucked up. Men often show their character in whatever they do, whether it be in building a mill or shop, or in the daily transaction of business.

Years ago I often heard a man say he wished his —— mill would burn down so he could build a decent one. The old mill never did burn down, "bad luck to it," but a couple of years ago he had stood it just as long as he could, and it was razed, and now a splendid mill stands in the place of the old one, and in speaking to me about it recently he said: "If I had torn it down twenty years ago I would have made enough to have twice paid for the building." A thousand others might "go and do likewise," and all the regrets they would have would be that it was not done "long, long ago."

A great many carry these old places because they came to them as a legacy from some grandfather or ancient maden aunt, who wore spit curls each side of her wrinkled brow, and to lose the memory of these ancients, long since gathered to rest, would be a great sacrilege, and hence any loss of money or inconvenience would be a virtue if the memory of ancient departed friends and their eccentricities were only preserved.

To anyone locating or building a mill or shop or factory now, one great point to be gained is, room enough in it to handle the stock of whatever kind you are making conveniently. It is true that some men understand better than others do the fine art of passing stock along from one machine to another. This is where good calculation comes in, and it is far better to call in such expert experience, where it will be for our benefit, than to rely on ourselves, when we can find out a better way from others. It is a common thing to seek information in regard to money investments, trusting almost implicity on another's knowledge in making or getting loans or making investments. Then why not as well avail ourselves of others' experience and knowledge in arranging buildings and machines for making the money which we may hope to buy bonds or stocks with (may be you could get some of the recently issued bonds, if you pay enough for them).

It is a wonder that inexperience does not oftener seek the aid of experience in such matters.

Oftener it is that "every crow thinks her own young the whitest," and men are apt in the same way, to think that in all such matters, their own opinions are superior and more practicable than are any one's else, and hence the idiom, "They that dance must pay the fiddler."

AN ENGLISH BAND SAW.

AN English builder of band saw mills has built a horizontal band mill which is now on exhibition in London. From published cuts and descriptions it appears that the carriage and log run is under the saw, with all the machinery suspended above it, the cutting being done by the under half of the saw, slicing off the top of the log to any thickness desired, the whole saw frame being raised or lowered by a twin-screw motion. It is said to be very simple in all its workings, and as it requires no space below the mill floor proper, the makers claim that if the portable band mill ever comes into use it will be a horizontal one, something after the pattern of this one, if not this very thing. From a mechanical standpoint these claims are not unreasonable. It now remains for an American band mill maker to take up this English idea, perfect it, and build a light, strong, portable mill that can be placed on the ground in the woods, and that can be transported easily and operated economically.—Hardwood.

THE CARE OF BOILERS.

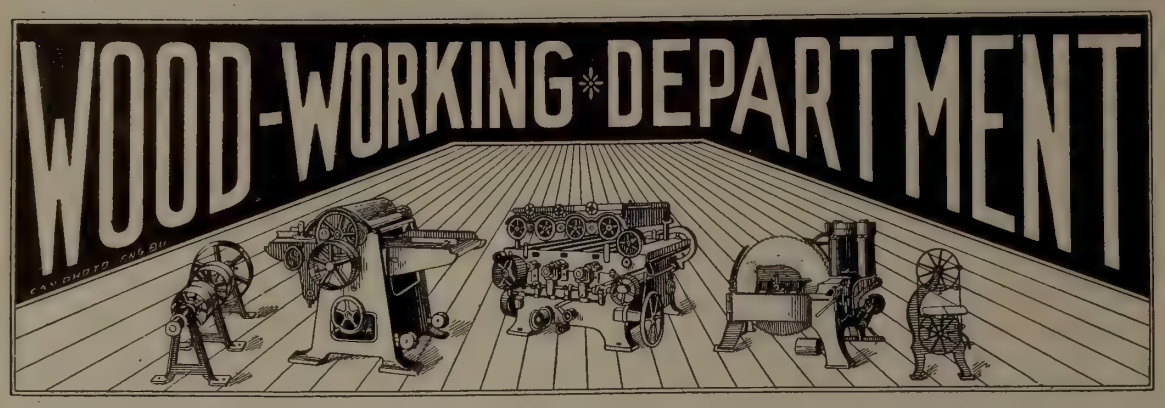
THE boiler being the vital part of the steam plant, which again is the center of all motion and life in a mill or factory dependant on that form of power, all the skill and attention possible should be directed to their preservation in good order, and at the smallest possible expense consistent with good results. To this end all means proposed should receive the careful consideration of those interested, so that the best plan applicable may be chosen in each place. It is evident that the same method is not practicable under all circumstances, for while the general principles involved are in all cases the same, the working out of these principles necessarily varies. Thus all water derived from wells where the underlying rocks are anything except granite or sandstone contains a greater or less proportion of solid matter, varying, according to one list in my possession, from as little as 6.7 grains per gallon to as much as 353.8 grains per gallon. In the same localities the water of the streams is likely to partake to a considerable extent of the characteristics of that in the wells. So it may be said that over the greater part of the country it is impossible to procure even comparatively pure water. Even that which falls as rain and snow in inhabited localities contains impurities washed from the air in its descent, although the proportion is so small as not to interfere with its use in boilers, provided it could be obtained in sufficient quantity; but this, from the nature of the case, is impracticable.

Of course not all the solid matter found in well water is of the kind which forms scale. Lime and magnesia are the principle ingredients of scale, with at times a combination of iron and some organic matter, a mixture of iron especially forming a peculiarly hard and obstinate scale. The question of greatest interest to a man in charge of steam boilers is: "How shall I get rid of the scale in my boilers?" The correct answer perhaps smacks of the Hibernian, but I believe it to be: "The best way to remove scale from boilers is not to let it in." After a dozen years of experience with water containing seventeen to twenty grains of solids per gallon, the greater part being of the incrusting kind, I am satisfied that with a little care and the use of moderately good exhaust steam heaters no trouble need be had with scale in a boiler which is well taken care of.

One great trouble in this matter is that owners are unwilling to allow the firemen reasonable compensation for the extra time required to properly do the work connected with keeping the boilers clean. Some only allow a quarter of a day's pay for the time necessary on Sunday to wash out and clean up generally. It is safe to say that the firemen, unless made of sterner stuff than the majority of the race, does not, on an average, put in much more time than he is paid for. Other owners allow full pay for the day, depending on the engineer and fireman to keep the plant up to the highest condition possible. In one such plant with return tubular boilers, which has been run for fifteen years, with the kind of water just mentioned, no trouble has been had with scale on the boilers for ten years at least; and the heaters are not of the most recent construction either.

Very much depends on the care taken of the heaters as to their efficiency, for if they are allowed to become foul, the accumulation of slush is liable to pass on to the boiler, at least, if the heater is one of the closed variety. While it is a little more trouble to take care of an open heater, as they are generally provided with some kind of a filter which requires some attention to keep in good order, they are, I think, a little more efficient in heating the feed water, while the proportion of steam condensed in the process, being pure water, is also of some advantage. Where the plant is of sufficient size to warrant the expense, or where the water is so hard as to require it as a measure of safety, the addition of a live steam heater of proper size will almost prevent scaling. The water being raised to the temperature of that in the boiler, practically all the incrusting matter is dropped by the water, which is then frequently filtered through a layer of finely-ground coke or similar substance, and so enter the boiler practically pure.—F. Riddel, in American Miller.

A Boston man has patented a process by which glass veneers are made to represent highly polished wood.



PRODUCTIVE POWER OF TIMBER.

RUSKIN has said: "Men don't and can't live by exchanging articles, but by producing them." This has a very practical application if a study is made of the lumber trades. The standing trees of the forest represent large wealth, and are among the enviable resources of this country, but it has only been since the woodman's axe touched these trees, that they have attained to the immense value that is to be attached to timber limits to-day.

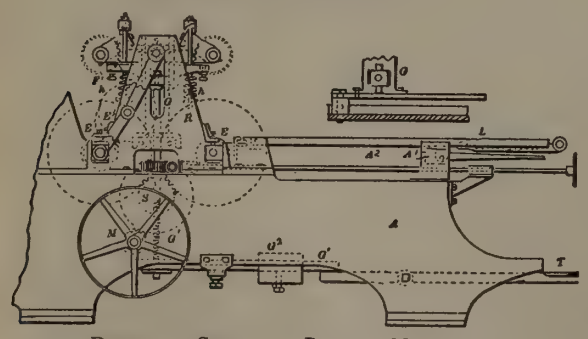
The manufacturer of lumber is the one who has given value to the products of the forest, and the prosperity that has already been scored in this direction points the story of further prosperity just as increased activity is given to the manufacture of lumber. To refer again to Ruskin, the trees of the forest must be placed in the position of producing articles of utility; then they become valuable and peoples thrive through the result of this productive wealth.

The thought is one that gives force to the figures of wood-working production, published in these columns a month ago, and ought to awaken activity in wood-working circles.

When men who own timber limits are coming out of a season of depression, such as has been witnessed of late in this country, as well as in other lands, they look almost instinctively to the course likely to be pursued by manufacturers. Be assured that the men who take the rough log, and after that the sawn board, and cut it up and transform it into various articles of manufacture, cause hope to perch on the banner of the man whose money is locked up in the trees of the forest. Given evidence that building operations are becoming active, and as a consequence sash and door factories are working to their full strength, and lumber will quickly go into consumption. The heart of the hardwood man is delighted when he is told that the furniture factories are planning a busy season. Let commerce in its many ramifications commence to boom and the box factories do not remain idle, and the lumberman who has box stuff to sell sees a means of lessening the overcrowded character of his piling grounds.

It is worth while for lumbermen to use every legitimate means to add to the development of the planing mills and box factories of the Dominion. As shown by the Government statistics of the past year, there has been development in this direction in Canada, but there is ample field for further increase and progress.

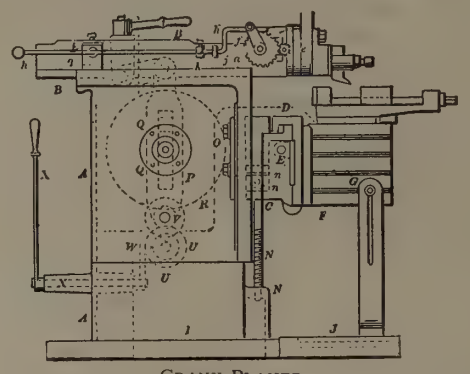
NEW UNITED STATES PATENTS.



DOUBLE OR SECTIONAL PLANING MACHINE.

Patentee: Louis T. Pyott, Ardmore, assignor to Daniel A. Waters and William G. Vernon, Philadelphia, Pa. Filed Feb. 2, 1892. Serial No. 420,118. Dated July 9th, 1895.

CLAIM 1. In a sectional or double planing machine, a vertical guide way on each side of the machine, a cross-head adapted to slide vertically therein, vertical lifting rods on which the cross-head is mounted, weighted levers to which the free ends of said rods are attached, upper entry-feed rolls constructed in sections, each having independent driving bearings pivotally mounted upon the cross-head, and counteracting spring controlled rods mounted upon and having their resistance entirely within the cross-head, whereby a double set of resistance supports, both operating through the cross-head, is provided for the feed rolls, said resistance supports operating independently of each other, either as to both sections of the feed rolls or as to either section thereof. 2. In a sectional or double planing machine, a vertical guide-way on each side of the frame, a cross-head adapted to slide therein, a vertical rod on which the same is mounted, said cross-head being provided with independent spring rods and swing arms mounted thereon, forming an independent driving shaft support for each individual section of the upper feeding-in rolls with its resistance entirely within the cross-head.



CRANK-PLANER.

Patentee: Ulrich Eberhardt, Henery E. Eberhardt and Fred L. Eberhardt, Newark, N. J. Filed April 20, 1894. Serial No. 508,261. Dated June 25th, 1895.

CLAIM 1. In a planer, the combination, with the main feed gear, of an oscillating arm having a pawl applied to the gear, a feed rod extended from such an arm and having opposite smooth parallel surfaces, and a friction clamp secured to the frame of the planer and clamped upon the opposite parallel surfaces of the feed rod. 2. The combination, with the adjustable ram head *c*, provided with the tool slide and feed screw *s*, of gearing mounted upon a ram for rotating the screw, an oscillating arm having a pawl applied to the main feed gear, a feed rod extended from such arm along the side of the ram, and a friction clamp secured to the frame of the planer and clamp upon the feed rod. 3. The combination, with the adjustable ram head *c*, provided with the tool slide *d* and feed screw *s* of gearing mounted upon the ram for rotating the screw, an arm with pawl applied to the main feed gear, a feed rod extended from such arm along the side of the ram, a friction clamp clamped upon the feed rod, a bearing attached to the main frame and a swivel connection between such friction box and bearing. 4. The combination, with the ram provided with the disk *b*, of the transverse shaft e^1 inserted in the edge of such disk, the pinion *e* and feed gear *a* and pawl *g* for actuating the shaft, the adjustable head *c* provided with the double bevel gear *t*, the slide *d* carrying the tool post and the pinion s^1 within such head and the screw *s* fitted to a spline within such pinion.

The James Shearer Co., Montreal, are applying for incorporation, with a capital stock of $200,000, to manufacture sashes, doors, blinds, mouldings, etc.

A HANDY VISE.

A WRITER in Lumber furnishes the following description of a handy vise:

Having been many times in need of a vise in and about a mill, I concluded one day to make one that would answer for almost all purposes, so I got two pieces of white oak, 3 x 5, planed them and took two shorter pieces of the same material and put across the top to make it in the shape of a vise jaw; I then got a common bench screw and put through the two pieces and fastened them rigidly together at the bottom, and the vise was ready for use. As seen by sketch, it is very simple. A is 3 x 5 oak, to the proper height you want the vise. B is 3 x 5 oak, a little shorter. C is 2 x 4 oak (or hard maple is better), about twelve inches in length. D is a block made for B to rest on, which must be made so as B won't slide out when opening the jaws, also with a small piece on each side to hold it from moving sidewise. E is the bench screw, which can be bought at any good hardware store at small cost. F is the burr or nut which is sunk in the oak, A. G is a bolt to fasten D. By marking the piece C larger, it makes a very good as well as a noisless filing clamp for cross-cut and hand saws.

A HANDY VISE.

THE FADDIST AMONG WOOD-WORKERS.

IN his own quaint, and sometimes, blunt way, "Job", in the Lumber World, deals thus with the wood-worker who takes on the garb of the faddist. He says:

It wood seem incredible that a business man, so constantly in contact with hard facts as a planing-mill operator, for example, would or could be the holder of a fad that would cost him good money every day, and yet every man on the road will find such a man, here and there. Not long ago I found a faddist who owns a planing mill. His fad is that only one firm in the country can make planing machines that are fit to be used. The amusing part of this man's fad is its falsity. The machines he swears by are, beyond any sane doubt, the most primitive machines of the class that are made to-day. He has so long used these machines that he simply knows nothing at all about improved machines.

He pays as much for these primitive machines as he would have to pay for up-to-date machines. If any machine is offered to him at a higher price, he concludes it is a swindle. If one is offered to him at a lower price, he concludes it is a no-good machine. He stands ready to match his old-style, half-good machine against all creation for work, and every agent who has by chance visited him has gone away with the idea that the old fellow is a mule who by by some freak of transmogrification, has got into the body of a man who owns a planing mill.

This faddist's mill was burned recently. The announcement that he would rebuild caused a number of agents of machinery houses to visit him, and every manufacturer in the line flooded him with letters, circulars, catalogues and other literature. The old fossil stood firmly on his fad against all comers who tried to shake his faith in the machines by which he swore. The only concession he could be prevailed upon to make was to permit one or two other houses to put in high grade planers on trial alongside of planers built by his favorite house.

The trial machines were placed. The tests showed them superior in every way to his favorites. They ran easier, kept in adjustment better, turned out more and better stock, and were actually offered to him at prices slightly below those of his favorites. Nothing availed. The faddist could not be induced to believe the evidence of his own senses, and the new and superior machines were taken out.

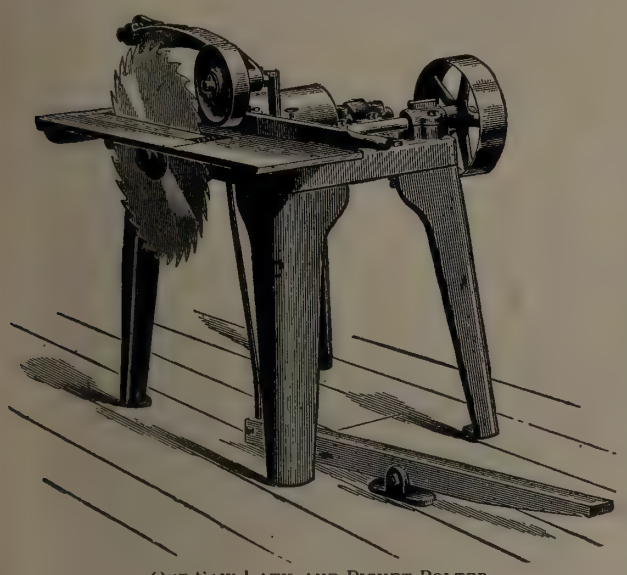
That man to-day has a mill that cost him quite a sum more than he needed to pay for a plant that would do 25 per cent. more work with the same outlay for operating, and do every bit of it 50 per cent. better than his mill does it. Faith of that stripe in a fad is a touching thing to see. It is not the general thing for a man to be obstinate when his obstinacy costs him good dollars.

The day of the fossil in the wood-working business is

past. The fossil, who could subsist and even make money when times were good and profits large, is succeeded by the up-to-date hustler, who has shaved the costs of production down to a notch below what he can get for his wares in an overcrowded market.

A SAW BOLTER.

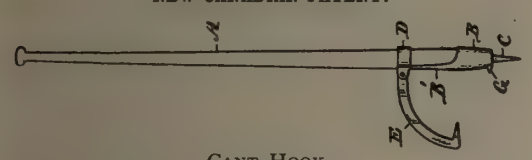
HEREWITH is an illustration of a one-saw bolter for lath and pickets. The machine weighs 625 pounds and occupies a space 3 by 4½ feet. It has a 22-inch saw, so that it can cut slabs about 8 inches thick. The guide is adjustable to different positions for lath or



One-Saw Lath and Picket Bolter.

pickets. The bottom feed-roll is of steel spurs, making a very strong feed; the top press-roll is lifted by a foot lever and can be weighed as desired. The arbor is of steel 1¾ inches in diameter and runs in long self-adjusting ball-and-socket bearings. A spreading knife, which does not appear in the cut, is placed back of the saw to prevent the bolts from pinching it. This bolter is suited to a wide range of work in getting out dimension stock, as the guide is so quickly set for different sizes. A guard is attached above the saw to protect the operator.

NEW CANADIAN PATENT.



Cant Hook.

Patentee: Thomas Pink, Pembroke, Ont., 20th May, 1895; 6 years.

Claim.—A cant-hook having the socket B provided with a tang B′, and the ferrule or clasp D, carrying the dog covering the end of said tang when surrounding the handle A, as set forth.

MODERN MACHINE SHOP PRACTICE.

WHILE almost all kinds of mechanical business within the past few years have been gradually assuming the form of specialties, the machine shop is no exception to this rule, says a writer in the St. Louis Lumberman. If we go back comparatively but a few years the average machine shop might be said to have no regular line of business. The proprietors were ready to contract for anything from a forty horse-power engine down to a straw cutter. The men employed as machinists had no special part of the work to perform, but were expected to perform lathe, planes and vise work as well as to make and dress their own tools, and notwithstanding the low rate of wages that were paid at that time, the average cost of machinery and machine work, when compared with the quality of that which is turned out by the modern machine shop, was much greater than at the present time.

In modern practice, however, this system of working men promiscuously upon any and all parts of a machine in the process of construction has long since been abolished in all first-class machine shops, and the work is divided into special parts, and each man so far as possible, is kept constantly upon one class of work, and the perfection of all classes of machinery that is put upon the market may be attributed not only to each shop adopting a certain class of machines to manufacture exclusively, but also to the system of working each man, so far as possible, upon some special part. Another quite important change in machine-shop practice has taken place within a few years in the system of apprenticeship. At the present time and under the present system upon which all first-class shops are conducted, when a young man enters the shop as an apprentice, it is not expected that he will learn all the different branches of the work. In fact, that would be impossible in the time usually allotted for that purpose, and even if he were to do so the chances are that he would only get a smattering of each branch and be incompetent to perform the work of either in a skillful and workmanlike manner.

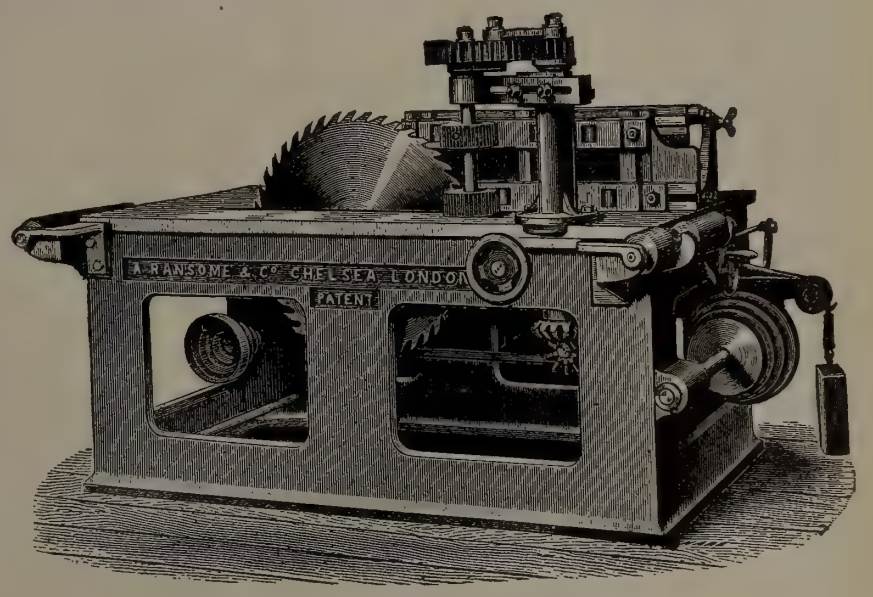
The fact is, young men of the present day are not willing to devote sufficient time for that purpose, as the average time for an apprenticeship in this country has by custom been fixed at three years. No matter what may be his natural mechanical abilities, it is quite safe to say that no young man is able to learn all the different branches of machine work and become a competent workman in either branch in that time. Consequently in modern practice, when the young man enters the shop as an apprentice, he can usually have his choice to become a lathe workman, a planer or a vice man, and which ever branch is determined upon it is expected that he will give his whole time and attention to this one branch. Now if lathe work becomes his choice, which includes all kinds of turning and boring, besides other work that is usually performed upon a lathe, and if he devotes his three years of time faithfully and intelligently to this particular class of work, at the end of his term, provided that he is possessed of ordinary mechanical genuis and ability, he should become an expert workman and be able to earn first-class wages in any shop. The same theory is true with all other branches of machine making. Even if he should be given the privilege to attempt to learn even the three principal branches of machine making, viz., lathe, planer and vise work, in that time, he could not possibly devote but one year to each branch, and he would at the end of his term find that his knowledge of either would be so limited that he would not be proficient in either, and should he obtain a job in a strange shop, if he succeeded in retaining it, he would at once be classed as a second or third class workman and his wages rated accordingly.

Take, for example, an expert lathe man when given a job to perform he is able at once to know just how to take hold of it and just what tools are required in order to perform it in the best and most perfect manner, and he will go about the same in an intelligent manner, and the job is often completed in about the same time it would require a man not so familiar with lathe work to get his lathe and tools in order to begin. Again, where a man has his own special lathe and tools and a special class of work to perform, he will naturally take more pride in keeping it clean and in perfect order; his small tools are carefully selected and kept in order also, so that he is at all times ready to take hold of any job in the line of lathe work and perform it in a workmanlike manner. The same rule is equally applicable to the planer, and probably no other tool in the shop requires more skill and judgement in its use than the planer.

An old planer man once remarked in the presence of the writer that the most important point about planing is to put the work on straight and take it off straight. It is true that in most first-class shops special chucks are provided for certain kinds of work, so as to render the springing of the work less liable, but even then unless much care is manifested in placing the work in the chuck it is liable to be sprung; still, the use of special chucks not only facilitates the work of chucking, but with proper care it is less liable to be sprung than otherwise. But there are always certain pieces of work that require planing for which a special chuck is not always available, and in such cases the work must be secured to the patten by means of bolts and straps. This requires not only skill and judgment in order to secure the work firmly to the patten, so as not to change its normal shape, or without being sprung, or otherwise distorted. In many cases castings, no matter how carefully they may be chucked, when a cut is taken off from one side and the bolts are released, there will often be a tendency to warp towards the side from which the cut is taken. This is most frequently the case where the plate is thin and only to be planed upon one side, and it is not unfrequently the case that it may require a second chucking and another cut taken from the surface. The experienced workman, however, will in most cases be able to judge from the shape and style of the casting to be planed whether it is liable to warp and take all the necessary precaution against it. While the modern system of working each man upon special work has had much to do with the present state of perfection which is found in all classes of machinery materially decreasing the cost of production, the workman has also been materially benefitted by this change in practice. Under the old system of management, first-class workmen were only able to obtain about $1.75 per day, while at the present time the same class of workmen are able to earn from $2 to $3. And while all will admit that modern machinery of all classes is much more complicated than formerly, still the manufacturers are able to put upon the market a much more perfect machine and at less price. Again, special tools for special work, has had its effect, for while certain kinds of work required the slow and tedious process of hand labor, now the same work is performed in many cases upon special machines for that purpose in a more perfect and economical manner.

VERTICAL ROLLER-FEED SAW BENCH.

THE engraving below is of an endless feed saw bench, English manufacture, of new design, in which the piece being sawn is carried past the saw by revolving rollers attached to a swinging arm bolted to the bench.



Vertical Roller-Feed Saw Bench.

This arm is adjustable to suit stuff of various thicknesses, and to work in connection with saws of various sizes.

The feed rollers are driven by a suitable arrangement of gearing, giving four different rates of feed.

A special feature of the machine consists in the readiness with which the feed rollers, with the standard which carries them, can be removed when it is desired to use the machine as a plain saw bench. The bench is made in two sizes.

Butchers' chopping blocks are made of white oak, maple, birch, sycamore, and one or two other woods. White oak is preferred, but probably three-fourths of the blocks are made of maple, because of its greater availability. It is hard to get a solid block; most of the trees large enough to make good blocks have heart checks.

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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

THE COMING LUMBERMEN'S MEETING AT BUFFALO.

THE annual meeting of the United Associations of Lumbermen, to be held at Buffalo on Sept. 3, 4, and 5, will have more than usual interest for Canadian lumbermen. The location is central for many of those engaged in the lumber trades in Canada. The selection of Buffalo is also suggestive of the discussion of questions of international interest to the trade. We do not know that this has been specially planned by the management, but it may be expected, in the case of lumbermen from all sections of the United States meeting at a border point, that lumber matters having an inter-relationship to Canada will form the subject of conversation, if not of open discussion.

The official programme takes in such questions as the following: Insurance, Contractors Credit System, Wholesale Consumers, Influence of United Associations, Local Associations, Early Days of Retail Trade, The Social Side of the Association, The Territory of the Retailer, The Scalper, Lumber Trade in Hard Times, State Association Work, The Ideal Association, What Constitutes a Regular Dealer? The Management of Retail Yards, Local Competition, and The Attitude of the Retailer to the Wholesaler and Manufacturer.

It is worthy of remark, that out of the seventeen subjects appearing on the programme five of them will discuss, in different ways, the one question of organization and associations for lumbermen. It would be, we are sure, a great help to Canadian lumber interests, if a considerable contingent of Canadian lumbermen might hear these papers and the discussions that will follow. We are lamentably weak in Canada in the matter of lumber organizations.

When the matter of home markets in one shape or another comes up for discussion it is not unnatural to anticipate that the relations between United States and Canadian lumbermen will be considered. It is not likely that all will see with one eye on this question, for, whilst American lumber for Americans sounds very nice on paper, it is not a view that all engaged in the lumber trade in the United States can endorse. The question is growing, whether in an important raw material like lumber, a free market is not the best for everyone concerned, and for a country as a whole.

The secretary of the United Associations of Lumbermen in a letter to the CANADA LUMBERMAN says that the social features of the meeting are going to be the most clever and enjoyable that have ever been presented to a convention of lumbermen. The country adjacent to Buffalo is viewed as peculiarly adapted to entertainments of this character, and the Buffalo and Tonawanda lumbermen have made great preparations for the entertainment of their visitors, the principal features being an excursion to the docks and yards of dealers of those two cities, showing their shipping capacity, stocks, etc., all of which will be of interest to the visitors present. Second, there is to be a grand excursion by water from Buffalo to Niagara Falls taking in all the points of interest in that vicinity with dinner at Queenston and a supper on the steamer on the return trip. A reception will be given on the first evening at the Hotel Iroquois, the headquarters of the convention, and on the second evening there will be a grand Hoo-Hoo contatenation. An interesting feature of the Association meetings will be the attendance of ladies and they are sure to enjoy the social features.

The hope is expressed by the secretary of the United Associations, and we may say that this includes lumbermen in all their different branches, timber limit owners, manufacturers, wholesalers and retailers, that there will be a large attendance of Canadian lumbermen. The dealings of Canada with the United States are on a sufficiently large scale to make the one interested in the other, and we can only hope that the expressed wish of the officers of the American Association will be realized.

LUMBER AS AN INTERNATIONAL AGENT.

IT is fitting, on the eve of the big meeting of United States lumbermen at Buffalo, to which reference has been made elsewhere, that one should take a glance at the field of lumber operations in Canada and the United States

It is not only business, but patriotic, that those engaged in the lumber trades in these two countries should jealously guard their home interests. It does not follow, however, in doing this, that a narrow business view must necessarily be taken. The fact is, that the time has gone by when lumber, as a commercial product, can be viewed from any narrow standpoint. More, perhaps, than any other article of commerce, it is international, and cosmopolitan in its nature. It enters into consumption in all parts of the world, and all parts of the world must look to those countries that are the richest in lumber for supplies. More than this, it is being discovered that in different parts of the world are to be found timbers indigenous to the particular territories, that are needed in other parts of the world, where timber is one of the principal resources, but yet where these particular kinds of timber are not grown.

It is impossible to keep closely in touch with lumber interests, and not become impressed with the over lapping needs of the lumber trades, in so far, and particularly, as the United States and Canada are concerned.

Canada ranks lumber as one of its richest resources, and this is the case whether we speak of Ontario, the Lower Provinces or British Columbia. These resources can only be changed into gold by finding a profitable market, and to-day we are obliged to seek other than a home market. There would not be nearly so great encouragement for the heavy investments of capital represented in lumber to-day, if there were not other avenues of disposing of the product, than those within the confines of our own Dominion. A natural and profitable market for Canadian lumber is in the United States, a fact that has created an intimate business relationship between men engaged in the lumber trades in the two countries, and one that is growing rapidly.

This relationship does not arise simply through the exportation of lumber from Canada to the United States. United States lumbermen, as they have found the products of the forests in their own country becoming exhausted, have looked to Canada as a source of supply, and at the present time the trade of United States lumbermen, who have an interest in Canadian timber limits and saw mills, is very large. We need only mention the names of A. T. Bliss, Gen. R. A. Alger, E. C. Whitney, Arthur Hill, D. L. White, A. T. Fletcher, R. A. Loveland, Albert Pack, E. W. Fowler, Emery—Holland Lumber Co., J. T. Hurst, William Peter, Merrill, Ring & Co., Fisher & Turner, and Eddy & Sons, to suggest many other names of United States owners of Canadian limits. Nor are the investments of United States capitalists in Canadian lumber confined to any one province, for their holdings in all the provinces are large.

That various views of the situation suggested by these conditions are held by Canadian and United States lumbermen, is true, but with the broadening character of commerce, the most liberal view that can be taken of conditions will, in the end, be found most helpful to trade. The fact that such conditions have an existence ought to prove a circumstance of wide interest to the lumbermen of these two countries, who are likely to come together at Buffalo the early days of next month.

ANOTHER CUSTOMS CASE.

ANOTHER dressed lumber dispute has come to the front. The Board of General Appraisers in the case of F. W. Wood & Co. entered protest against the decision of the collector of customs at Burlington, Vt., which was to the effect that certain bird's eye maple and rock elm cut into strips a half an inch thick, planed two sides, with rough edges, were cabinet woods, and subject to 25 per cent. duty. This decision was based on par. 676 of the Wilson Act, which reads: "Sawed boards, plank, deals and other lumber, rough or dressed, except boards, planks, deals and other lumber of cedar, lignum vitae, lancewood, ebony, box, granadilla, mahogany, rosewood, satinwood and all other cabinet woods."

The view of the Appraisers was that bird's eye maple and rock elm ought to be classified among the woods exempt from duty. Their decision reads as follows: "It seems to us that the woods Congress intended to cover by the exemption in par. 676 are those which are chiefly used for cabinet purposes. The value and rarity of the woods enumerated and of others, such as cherry and black walnut, would render them unsuitable for other uses. Maple and rock elm are not named in the list exempted and they are not of the character of the excluded woods, which are rare, costly and highly ornamental. We find secondly that the said goods are not cabinet woods. The protest is sustained."

In this instance the United States customs collector did not get the sympathy of the Appraisers, but the case is one not likely to end here, and will make at least the third case in dispute since the passing of the Wilson tariff, to wit, the red cedar of British Columbia, the dressed lumber case of J. W. Howry & Sons, and the present one.

The question can again be fittingly raised, whether, with as little delay as possible, a broad and intelligent interpretation should not be given touching the whole question, as to what constitutes cabinet woods and dressed lumber. As it is the customs officers are the ones who raised the question. Sometimes they are sustained by the Appraisers, only to have the decision finally reversed by the United States Circuit Court, and again, as in the present instance, the decision is unfavorable to the customs officer. Uncertainty, however, is a result in all cases, and this can only mean an injury to business.

A FRANK VIEW.

THE Lumber Journal, of New Orleans, La., is frank and honest in its view of the dressed lumber dispute, even though its sympathies are with the Appraisers in exacting a 25 per cent duty. The Journal fully concurs with Mr. Hotchkiss in his opinion that "dressed lumber" in its general sense applies to all the product of the planing mill, and closes some sensible comments on the question with these words: "To be sure the common-sense construction of this question is under the present law in favor of the Canadians, at the expense of our own producers. This should not affect the decision, however, as a wrong committed for selfish ends almost surely establishes a precedent that reacts to the hundredfold detriment of those who do it. The way out of a dilemma of this kind is to change the law, not to juggle with or misinterpret it." That is what we call a square deal.

EDITORIAL NOTES.

A CIRCUMSTANCE that tells of the growth of lumber interests in the southern states is found in the large increase that has taken place of late years in the establishment of wood-working concerns in that territory. The wood-working establishment that would thrive must, if possible, get near the place where there is abundance of timber, and whilst this is not as necessary in these days of many railroads as was the case some years ago, yet it is important. Certainly it is the case, that if wood-working concerns will pay anywhere they will pay where the necessary raw material can be readily obtained. The suggestion carries with it some importance for Canadians, who would find it profitable to cultivate the establishment of wood-working plants in districts where they are not known to-day, and yet where the necessary forest product is near at hand.

A MATCH is a little thing, but the extent to which the match business is growing in Canada is a matter of importance to the lumber trade. The raw material, of suitable kind, is here in rich abundance, and with easy means of transportation to foreign markets, Canadian matches should be exported in large quantities to almost all parts of the world. Progress in this direction is taking place. The exports of matches and match splints in 1894 amounted to $216,038, as against $204,410 in 1893, $196,185 in 1892, $168,237 in 1891, and $114,712 1890. In England, however, there are yet imported, despite the fact of the large manufacture of matches there, $1,500,000 of the finished goods, which, as has been remarked before, ought to come from Canada. The field open in Great Britain has a relative existence in other countries. It is stated that taking the world throughout, $50,000,000 are invested in the match business, figures that are very suggestive of the possibilities of the business.

THE average man does not take a long look ahead. Sufficient unto the day is the evil thereof—with him. Were the suggestion of a contemporary, that farmers plant trees along the lanes, highways, and other places not suitable for crops, generally adopted, there would be less liklihood of a scarcity of timber in this timber country in the days that are to come. There is little or no expense to be attached to the planting of rows of maple, oak, pine, beech, hickory, walnut and other trees on the farms and country sections of the Dominion, and while the people slept the trees would grow, and in due time there would be a forest produced worth good money. The suggestion has already been made that it would be an investment that would pay large interest, for the farmers of Ontario to set aside a corner in their farms, and reforest these with suitable trees. Timber is becoming more scarce every year, and future generations, if not the present, would reap a rich legacy by the adoption of this method.

WORD that comes to the LUMBERMAN from a correspondent in Newfoundland that the forest fires in that colony have not been nearly as damaging in their outcome as was generally reported at the time is cheering. It is the case, however, that even when bush-fires secure comparatively little headway the loss sustained is heavy. A recent report from British Columbia conveys the news that heavy losses in timber limits have been made in that province from this cause, and the unfortunate aspect of the case there, as almost everywhere, is found in the fact that these fires invariably result through carelessness, or designedly. In British Columbia it is pointed out by a local contemporary that the fires there have usually occurred through the careless dropping of a match or by the indifference and carelessness shown by those engaged in camping and picnicing throughout the woods. The matter is of sufficient importance, and indeed so serious, that the reiteration of a word of warning is not alone desirous, but a great necessity.

THE by-uses of wood are constantly increasing. It seems difficult to say for what purpose wood will not in some manner be used. In some countries saw-dust is actually being mixed with grain, from which bread is made, and whilst we must admit that tastes differ, it is claimed that this condiment is nutritious and palatable. A change in the uses of wood has developed of late in supplanting the softer woods as broom handles by certain species of hardwoods. Until lately broom-handles have been made of soft wood, and they have not always been the most elegant articles. Now handles are made of hardwood, shorter and neater, and far less liable to become scratched or uncomely. In certain parts of the country large quantities of hardwood are consumed for this particular purpose. Of course, as one has remarked, this change from softer woods to hardwoods for the purpose named, may only be a freak of fashion and some of these days something else will be proposed. In the meantime it is providing a reasonably profitable trade.

A PENCHANT of the Lumber World of Buffalo is to get a rap at Canada whenever an opportunity presents itself, or, rather more frequently, with little or no reason for the step. This Buffalo friend thinks that the credit Canadians take for their superior methods of preventing forest fires is not justified by the costly fires that have taken place in the Dominion this season. One compliment, and it ought to count for something with a lumber journal, that has been paid to Canadian foresty legislation is the adoption of legislation in the United States modelled on similar lines. And whenever the question of forest preservation is agitated reference is made to the progress attained in Canada in this direction. The facts speak for themselves. So does the other fact, that no serious bush fires have occurred in Canada for some time, not even this season, dry as it has been, compared with the fires among our neighbors to the south. What of the terrible fires in Minnesota last year, when there was less reason to make these chargeable to a dry season?

THE number of prominent lumbermen, those with experience and capital, who are changing their base of operations from some of the older fields to the newer fields, is one of the interesting features of the lumber trade. No inconsiderable investments have been made on the Pacific Coast, and in New Brunswick, by Ontario lumbermen. The Brunette Saw Mills, which were destroyed by fire recently, as well as other mills in British Columbia, are owned almost entirely by Ontario lumbermen, and no small amount of capital from this province has been invested in spruce lands in New Brunswick. We find the same kind of thing operating across the border. Many of the older firms there are changing their location from Michigan to Wisconsin and the Lake Superior district, while it is recorded that, in the near future, supplementary to what has already taken place, large sections of timber land in the Puget Sound and Washington territories will come into the hands of Eastern lumbermen. The lumbermen in Ontario, who are wealthy to-day, have in most cases made money by securing timber limits while values were low, and disposing of them as they commenced to advance. Low values in timber limits cannot be found in Ontario to-day, but these investments are possible in other parts of the Dominion. And so with the big lumbermen of the United States. There is not much money to be made in buying timber limits in Michigan, but in the Lake Superior districts and the Southern States and on the Pacific Coast, the men who get in on the ground floor will make a substantial turn-over of their investments in later years, just as in recent years they have done this with their holdings in the older lumber states.

CAPITALISTS across the border, interested in spruce manufacturing in any of its departments, are keeping a close eye on conditions in Canada. They recognize the fact that this country is unusually rich in spruce. At Odgensburg, N.Y., to take just one instance, a member of the Gould family is at the head of the Continental Match Co., which has established a factory in that city. A local journal tells us that this concern was influenced to locate at Odgensburg because near to the great Canadian spruce forests north of the Ottawa river. Just what ground these cover the Odgensburg journal explains with some detail, as well as pointing out the methods by which this product can be lumbered. To quote: "The Ottawa river has a number of tributaries from the South, which are crossed by the Canadian Pacific Railway, at the mouths of which there is ample water power. There is a project already on foot to build pulp mills where this cheap water can be obtained. The spruce timber used in making pulp could be cut and floated to the mills and ground into pulp at a very small cost. The supply of timber is practically inexhaustible, as, while a large amount of pine has been cut from the region described, the spruce has never been touched." If there is a country that has a cause to rejoice in its immense natural resources it is Canada. Considering the awakening that is manifest at the present time in the mining districts of British Columbia, the activity that is shown in the development of the iron ore of Ontario, the progress in spruce fields in Quebec and New Brunswick, and the rich coal mines of the Maritime provinces—without going further, is there not a wonderful foundation on which to build a great country?

THE value of little things is a lesson more quickly picked up in the present day than in former times. Observation and ingenuity have proven that much wealth can sometimes be brought out of the utilization of products, and indeed refuse, that hitherto had not been counted worth anything. In the lumber trade we do not despise the culls and refuse, nor even the saw-dust, to the same extent as in the early days of lumbering. We are not indeed so prodigal in the matter of using wood for fire-wood, for we have learned that it pays better to cut beech and maple into lumber than into three piece lengths, only to burn in the stove. Economy has grown in this direction, so that in the pitch pine regions of the United States a new industry is springing up that promises to increase vastly in the future. It is the simple utilization of the enormous fields of fat pine logs and stumps, from which all resinous matter has been extracted. These have in many cases in the past been allowed to decay where they happened to fall. This "lightwood," or fat pine, as it is called, is cut up as fire-wood in most of the eastern cities. A machine is invented for shaving up the logs and stumps into appropriate lengths. These are then tied up into small bundles and sent to the cities in ships. It is said that at the rate of one cent a bundle the old stumps will yield nearly as much profit as the trees sold as timber or for other uses. The truth is, as men use their wits, it will be learned that there is hardly need for the most despised articles to go to waste nowadays.

IN these columns, a month ago, was recorded the fact that preparations were being made to enter the woods for the coming season in the Georgain Bay districts, as also in the Ottawa territory. Activity in this respect becomes increased as we draw nearer to the fall months. It is yet too early to predict what will be the cut of the year, but it seems not unlikely, with the prospects of better times, that there will be no reduction at least on that of the past year. The cost of stumpage renders it almost imperative that those who have money invested at present prices should make a considerable cut every year, for they will catch it, if things do not go right, with heavy interest on the standing timber, if they do not on the lumber actually on the piling grounds. Then of the better grades of lumber there is no mistake that stocks all over are low, and so far as it is possible to supplement supplies in this direction, it is desirable, and a good price for this class of lumber is sure to be obtained. At the same time it is well that a measure of caution be observed, for it would be a damper on the prosperity of the lumber trade if, with business generally improving, there should be an overcut, that would have the effect of keeping down prices. Speaking specially of the output of spruce for 1896, the Northeastern Lumberman, of Boston, thinks that perhaps the low prices for spruce that have prevailed lately may serve to discourage Canadian operators from cutting even as many logs as they did last year. But against this view, it must be remembered that the demand for spruce, especially for wood-pulp, is increasing with great rapidity. Besides, if prices have not been what the Northeastern Lumbermen's Association would like, the volume of trade done in the United States by New Brunswick and Nova Scotia spruce men has been of a size to encourage a further cultivation of this trade. There is, of course, the $2.00 duty in favor of Canadians, which did not exist a year ago.

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE movement in lumber along the Ottawa river at the present time is altogether quiet, and the prospects of a revival are not the most cheering. The fleet of Ottawa Transportation Co. barges on the Hull side of the river, beside Nepean Point, has been further increased by several other boats, which have been laid up for the remainder of the season, as business was so quiet.

It has been a rare occasion when the water of the Ottawa river has been as low at this season of the year as it is at the present time, and it is feared that navigation will be impeded at many points where saw-dust shoals have been growing. Reports from up river are to effect that the water continues high enough to allow the driving of logs on nearly all the larger tributaries.

The first raft of square timber from the Upper Ottawa this year is passing through the government side at the Chaudiere, and as usual a number of strangers are availing themselves of the opportunity to take the exciting run and final plunge, where the raft is being made up for towing down the Grenville. The timber belongs to William Mackay and is for the English market.

Barnett & Mackay have sent out their first gang of men for the season's cut on their limits on the Montreal river. Buell, Hurdman & Co. are sending a gang to Kippewa and Magnawsippi. The David Moore Lumber Co. have also sent up their first shantymen and J. R. Booth has taken a gang from Gatineau Point. As far as learned shantying operations have not begun on the Upper Gatineau.

Messrs. Hill & Fowler, of the St. Anthony Lumber Co., and Mr. Quinn, have returned from an inspection of the Company's new mill at Long Lake up the Parry Sound road. Everything is now working satisfactorily and the Company expect to cut upwards of 60,000,000 feet a season. It is their intention to construct another mill in the course of another year. The capacity of the present mill for sawing will be about 250,000 feet per day, supplied by three band-saws and one gang saw, with edging, butting and trimming saws, sufficient for the requirements. Saw-dust belts carrying a continuous supply of saw-dust to the furnace will furnish necessary fuel, and the balance of the saw-dust and other waste material will be disposed of by means of a burner. This burner is constructed of iron plate ⅜ inch thick and lined inside with a brick 18 inches thick, the top being covered with a heavy netting.

OTTAWA, Can., Aug. 22, 1895.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN].

AS you have had occasion to remark in the trade review in the weekly edition of the LUMBERMAN, the season here has been more than usually prosperous, and shipments from the province have run into large figures. This is due, in no small extent, to the impetus that has been given to trade with the United States.

Reports received here from Dublin, Ireland, tell of a large demand for St. John, Miramichi and Quebec spruce deals at steady prices.

Sawyer's mill at Harland, which was closed down for some weeks on account of no lumber being in the booms, has again commenced operations.

There is likely to be a new saw mill erected at Trocadie. Messrs. Hill & Standford, of Bangor, Me., are interested in the project, owning 10,000 acres of timber land in that district.

Edward Walker, of Bass River, has recently shipped two large vessels with spruce for Great Britain. He proposes to erect a new building and put in a planing and matching plant.

It is now definitely settled that the mills of W. C. Purvus and A. Cushing & Co., destroyed some time ago by fire, will be rebuilt, the asked-for assistance from the municipalities being granted.

Messrs. Goodwin, of New Horton, have removed their steam mill to Memel to saw A. H. McLane's logs, which they have purchased. Mr. McLane is offering for sale by public auction the large gang saw mill at this village, and all of the milling property on the Saw-Mill Creek purchased by him last year.

Large quantities of spool bars sawed at Richard's mill, Boiestown, N. B., have been shipped to Scotland this season. Steam power is being placed in the mill at Richard & Gunter's, and when completed it will enable them to saw more than 3,000,000 feet of lumber a year, besides spool bars. White birch is used principally for spool bars, there being large quantities of it in the Miramichi district.

ST. JOHN, N. B., Aug. 24, 1895.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

ALIVE to every interest that will facilitate lumbering on the Pacific Coast, electricity is being introduced into the forests here. A complete electric plant will be in operation in a very short time on the west coast of Vancouver Island and the logs will be hauled by electricity, supplied by portable motors. The motors will be easily movable from place to place as the timber is cut. There being abundance of water adjacent to the scene of operations, all the trouble and expense of building a railway for the use of locomotives will be avoided by the simple method of stringing a wire to convey the electricity to the spot it is required for use. A canal has been dug through a portion of these limits, so as to facilitate the transportation, and it will require the application of the electric power for only a few minutes to haul the logs from their place to the water. The limits are in the Euculet district and are owned by Mr. Wm. Sutton. Even in this province the success of lumbering depends on keeping down the cost of production and it is anticipated that the introduction of electricity will be a means of saving expenses, though it will represent a considerable investment of capital at the outset.

C. P. Burton has placed an order with the B.C. Iron Works, for machinery for a saw mill at Nawas Harbor.

Bush fires are raging along the lines of the Island Railway, and fanned by a strong wind threaten considerable damage to the settlements. Thousands of acres of valuable timber are said to have been burned.

Lumbermen here are not slow to realize the benefit that will come to them by the decision of the United States Circuit Court in again placing red cedar upon the free list. Red cedar shingle and bevel cedar have already obtained a high reputation and for interior finish it is gaining in popularity. There is an improved feeling in the lumber trade generally throughout the province.

NEW WESTMINSTER, B.C., Aug. 23, 1895.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE rapidly accumulating stocks, with the sawing season in full swing, is giving rise to some concern by saw millers on these shores. Stock has just moved off slowly enough this season to cause the new cut to swell the stocks on the piling grounds too largely. It is more than likely that in some cases the mills will be closed down as a remedy for this difficulty. At Bay City the South End Lumber Co. has leased the McLean mill property, on which to pile lumber.

More lumber arrived at Saginaw by water during July than was shipped out by water.

The lumber shipments from Saginaw for the month of July were distressingly small, totalling only 2,125,000 feet.

The lumber operations of C. K. Eddy & Sons, in the Georgian Bay districts, the coming fall and winter will be on an extensive scale.

Greater activity in shipments of shingles has prevailed in Manistee during the past few weeks than at any other time in three months.

A log was sawn at the mill of the South End Lumber Co., Bay City, ten days ago, that scaled 1100 ft. It was Canada stock and was cut up into 4 inch plank.

In the lumber camp of the A. W. Wright Lumber Co., in Ross Common County, 3,000,000 feet of logs a month are being cut and sent by rail to the Company's mill at Saginaw.

The big steel steamship, Penobscot, was launched from Wheeler's yard, Bay City, a fortnight ago. It is said to be the largest freight steamer on the lakes and will cost complete $200,000.

It is somewhat remarkable that despite the fact that the statistics of the past year or two have shown a great falling off in the vessel lumber trade, yet some of the shrewdest lumbermen in Michigan are making investments in vessel property.

No small amount of interest is manifested by lumbermen here over the dressed lumber case, and they will await with a measure of anxiety the result of the recent appeal here before the Board of General Appraisers. Whilst some manufacturers are wishing that dressed lumber should be taxed the 25 per cent. and thus exclude Canadian competition, this is not the case with everyone engaged in the lumber business in Michigan. Some of the largest holders of Canadian limits are Michigan lumbermen, and they have seen a prospective and satisfactory trade ahead in the manufacture of dressed lumber near to their limits in Canada, if it could be exported to the States free of customs trammels.

SAGINAW, Mich., Aug. 24, 1895.

Subscribe for the CANADA LUMBERMAN. $1.00 per year.

PRACTICAL HINTS.

"JOB" IN LUMBER WORLD.

WOOD-WORKERS nowadays are fruitful in resources. There is hardly a mechanic in wood in the country who does not carry about in his head from one to a hundred valuable ideas pertaining to his work. Experience always suggests to the true mechanic improvements, novelties and originalities, and the worker who can should put his ideas into shape and patent them. Many a man is carrying matured ideas which, if put into form and machinery or processes, would enrich him. Don't let your ideas die unused. Bring them out. Dress them in iron and wood and set them to work for your good and for the good of the world.

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Workers in wood will be interested to learn that, in putting together quartered pine or any other kind of wood, greater strength and durability may be obtained by placing the grain of the wood at an angle of 60° than is obtained by crossing at 90°. The reason for this is that, as all wood expands and contracts more or less under the variations of moisture in the atmosphere, the pieces glued at an angle of 60° can expand and contract to a certain extent without tearing themselves apart, as is the case when glued at an angle of 90°. The 60° glue-joint simply pulls the object out of place a little and disturbs its shape, while the 90° glue-joint pulls things all to pieces in its effort to accommodate itself to climatic conditions.

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Wood-workers who have kept their senses at work know the value of the draw cut. The art of varying the angle of cut by varying the motion of the cutting tool is learned almost instinctively in actual practice. The small boy very quickly comes to understand that his knife will cut better if he gives the blade a drawing motion while cutting. This is due to two reasons: One, that the knife, even when it is sharp, is microscopically a saw, and the drawing motion gives the teeth a chance to act; and the other, that, as the drawing becomes more rapid, the cutting angle of the blade is made smaller and sharper, so that a rapid draw really gives a temporary sharpness to the instrument.

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Now here is something that is important, if true. An inventor, whose name I have not learned, is said to have invented a band-saw that possesses the power to saw during both the forward and backward courses of the log carriage. In this invention the saw is provided with two sets of teeth, facing in opposite directions, and is sustained by band-wheels, and the operation consists in a forward movement of the carriage, which brings the log in contact with the teeth facing one way, while the retreat of the carriage utilizes the teeth facing the other way, assuring a considerable economy of time and wear of the saw. Any difficulty in reversing the "lead" or angle of the saw face toward the log to accommodate the alternate motions of the carriage is overcome by the log-carriage performing the reversal movement. The upper band-wheel, which is movable, is connected with the carriage by means of a series of screw shafting, well geared; the carriage runs its course in one direction clear of all mechanism, and with the wheel face and saw resting thereupon, tilted at the angle required to saw a slab from the log, completing the course and reversing for the return, the carriage is instantaneously brought in contact with pawl-and-ratchet, which, working in conjunction with a rock-shaft and pitman, transmit, by means of the screw-shafting, a motion to the upper band-wheel, which throws the latter at an opposite angle and holds the saw in readiness for its work upon the log while the carriage retreats. At the end of the retreat the connection is again broken automatically, and the carriage again makes its clear run.

"I had to babbit a solid box some time ago. The shaft 1 11-16 inches; I turned the mandrel 1-64 inch small, and gave it a good coat of 'Dixon's pipe graphite'. The box came out just right side for the shaft. I did not let the mandrel stay any longer in the box than was necessary, as it would have 'stuck,' no doubt. It is a good plan to heat the mandrel first."—B. F. Odell in American Machinist.

CANADA LUMBERMAN

WEEKLY EDITION

The Lumberman Monthly Edition, 20 pages } $1.00 PER YEAR { The Lumberman Weekly Edition, every Wednesday

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Weekly Lumberman, published every Wednesday. Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

Lumberman, Monthly. A 20-page journal, discussing fully and impartially subjects pertinent to the lumber and wood-working industries. Contains interviews with prominent members of the trade, and character sketches and portraits of leading lumbermen. Its special articles on technical and mechanical subjects are especially valuable to saw mill and planing mill men and manufacturers of lumber products.

☞ Subscription price for the two editions for one year, $1.00.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type, and no display is allowed beyond the head line. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue.

SHINGLES—IX AND 2X 18-INCH — PINE and cedar; in car lots. Apply to R. R. WEIR, Lindsay.

WANTED.

3 IN. HARD MAPLE. 150,000 FT. NO. 1 AND 2, all 14 ft. Name lowest cash price delivered at Brooklyn, N. Y. Address: MANUFACTURER, 457 7th street, Brooklyn, N. Y.

ADVERTISER WANTS SITUATION AS Buyer, Shipper, Inspector or Salesman. 25 years experience in Canadian and American markets. Pine and hardwoods. Best references. "Lumberman," care CANADA LUMBERMAN.

FOR SALE.

FINE MILL SITE FOR SALE, CONSISTING of about 60 acres in Midland harbor, just adjoins the town; shipments can be made either by water or rail. Apply for particulars to JAMES BRYDON, Collingwood.

FOR SALE.

450 FT. OF SECOND HAND 1 IN. STEEL wire cable; also one good shingle mill drag saw, good as new; also two double frictions complete. Above all made by the Wm. Hamilton Co., of Peterboro. Write us for particulars.

J. W. HOWRY & SONS, Fenelon Falls.

FOR SALE

LUMBER BUSINESS IN NEW BRUNSWICK, consisting of Steam Saw and Planing Mill; also one hundred miles of spruce limits. Mill almost new and in good running order; property must be sold to wind up an estate.

IRVING R. TODD,
Milltown, New Brunswick.

BRITISH COLUMBIA TIMBER DUES.

The Dominion Government has reduced the dues on the timber cut within the railway belt of British Columbia from 5 per cent. on sales to 50 cents a thousand feet of logs cut on their berths. A rebate is also allowed of 40 cents a thousand on manufactured lumber exported from the province. The rebate does not apply, however, to lumber shipped to Manitoba and the Northwest territories from British Columbia.

CURRENT TRADE CONDITIONS.

ONTARIO.

SEVERAL factors enter into a review of the lumber situation at this time. We are at the parting of the roads, going out of the summer season, and entering the early fall. It is to be expected that a better feeling would prevail among the trade, and that improved business would be looked for. But mere feeling does not always materialize in substantial trade. How will it be this fall? There can be no doubt that the general outlook for business is better. The splendid crop that is to be harvested in Manitoba and the Northwest territories is proving more than an offset to any shrinkage in the crop in Ontario, and is inspiring confidence in all sections of the Dominion. The lumber trade will be benefited by these conditions. Again, the past week, has shown more life than for two months past. Enquiries have been larger, and buyers from the United States are now coming to the Canadian market, which gives strength to the view that stocks in the yards there are light, and as fall trade opens there must be a stocking up. A report from the Parry Sound district says that the demand for lumber there from the United States has increased considerably, and cargoes of lumber are going out with a good deal of activity. Among those who are loading this week, may be mentioned William Case, at Peters Mill, shipments for Toledo, Ohio.; a cargo per D. R. Van Allan, at the Parry Sound Lumber Co's. docks, for Oswego, and the sch. New Dominion, at the Congor docks, for Hamilton. Little alteration is taking place in prices, and the improvement here is only fair, but it is reasonable to suppose that as larger quantities of lumber go into consumption prices would show an upward tendency.

QUEBEC AND NEW BRUNSWICK.

The situation in Quebec and New Brunswick maintains the average of some weeks past. Shipments are perhaps a little lighter than formerly, though it cannot be complained that they are on the light side. The decision of the Northeastern Lumbermen's Association, which embraces a number of lumbermen in New Brunswick and Nova Scotia, to lower prices for a time would seem to indicate a measure of weakness, as the special purpose of the Association was to hold firmly to prices. A good deal of spruce from the Maritime Provinces has been going into the New England States, and at a price that has entered seriously into competition with United States spruce, so that perhaps the decision of the Northeastern Lumbermen's Association was the best in the premises. It may be expected that there will be a lull for a time, as perhaps the best part of the season's trade is over.

BRITISH COLUMBIA.

The week's trade in lumber has been of an encouraging character, and would seem to indicate that shipments for the early fall will assume a good size. Trade with California holds its own, and accumulates strength. With the undoubtedly large harvest in Manitoba and the Northwest territories, lumbermen on the coast are looking forward to a good trade with these provinces, as they have the field, if they like to cultivate it, very largely in their own hands. Taking the shipments of British Columbia for the season from January to July inclusive of this year, we find that there were 46 cargoes of lumber loaded in British Columbia. Of that number reports on 41 show the following destinations and amounts: To California ports 23 cargoes, containing 10,925,000 feet of lumber; to Australia, 3 cargoes of 2,926,000 feet; China, 3 cargoes of 1,964,000 feet; Cork, 2 cargoes of 1,627,000 feet, and to other foreign ports, 10 cargoes of 9,130,000 feet, making a total of 26,672,000 feet.

UNITED STATES.

The improvement in lumber that commenced to make itself manifest a fortnight ago, has more than held its own during the past week, and inspires lumbermen with the hope that the fall season will open out with lumber decidedly strong. From whatever points conditions are studied, though there will be some variation, they yet tell of an improved outlook. Stocks are light in most of the yards in the eastern states, and that the trade are recognizing this fact, is shown in the activity during the past week in looking around for new stocks, and in not a few cases making purchases. The better grades of soft pine are in very limited supply, and there can hardly be any doubt that prices will become firmer, if not advanced, before the trade gets well into fall. In anticipation of an advance in prices, yardmen are considering whether it is not wise to stock up, and that more generously than has been their custom at any time during the year. In point of price, white pine is weaker than other grades of lumber, and quotations are not at all satisfactory to manufacturers, but they hope to count in with the general uplifting of business that will certainly take place almost right away. Yellow pine men are in better shape than white pine; mills are running actively, and prices are firm.

FOREIGN.

It is the opinion of at least one English lumber journal, that the wood market, to use the British technical term for lumber, is on the brink of some important change, whether for the better or the worse it is not certain, but the position the one way or the other will be decided very shortly. Prices have not lost ground, and buying is more active than it was. Low prices unfortunately continue, and in London trade is slack. The report from Liverpool is that there is a better tone in the trade, and although immediate business is not large, better things are expected shortly. Continued favorable reports come from Glasgow where the demand is good and prices firm. Trade in Australia is gradually improving, and the lumber business is receiving some benefit from this improvement, which it will appreciate after the prolonged depression in that country.

HARDWOODS.

Perhaps on the whole, the month of August will hardly total up as large for Canadian shippers as July, and yet there will be comparatively little falling off, with indications that soon business will assume larger size. Mill men are holding lumber, rather than accept some prices, at least, that are offered them. This will seem to tell of better things for this fall.

STOCKS AND PRICES.

CANADA.

The cut of Buell, Hurdman & Co., Ottawa, this season, will be about 25,000,000, and has been sold to the Gobiel firm of Quebec.

Large quantities of this year's deals from J. R. Booth's mill, Ottawa, Ont., are now being shipped over the Canadian Atlantic Railway. The purchasers are principally John Burstall & Co., and S. & W. J. Sharpless, Quebec. and Robt Cox, of Liverpool, Eng. The cut will be about 35,000,000 and will be worth in the neighborhood of $750,000.

The Alameda and the Alice Cook, both lumber-laden vessels, for Sydney, N. S. W., from the Moodyville and Hastings Saw Mills, Vancouver, B. C., have left port. The Alameda has the following cargo: 1,046,303 feet rough lumber, 2,287 bundles of pickets, 1,578 bundles of laths; value, $8,000. The Alice Cook has 853,124 feet of rough lumber, and 274,050 laths, valued at $7,610.19.

Lumber shipments from port of Montreal during the week ending 20th Aug.: Marigosu to Liverpool, 42,299 ft. lumber, 1,563 deals; Sardinian, to Liverpool, 5,775 deals; Gerona, to London, 4,230 deals, 16,295 boards; Warwick, to Glasgow, 6,488 deals; Parkwore, to Liverpool, 2,161 scantling, 11,929 boards, 3,841 deals; Etolia, to Bristol, 3,003 deals; Brazilian,

to London, 10,845 deals; Siberian, to Glasgow, 16,718 deals.

Exports of lumber from St. John, N. B., for the past week include 5,350,000 feet long lumber, 624,000 lath, 1,669,000 shingles, 200 cords of wood, 13,500 clapboards, and 50,000 pickits to United States markets; and 2,565,000 feet of long lumber to the United Kingdom.

Lumber shipments from St. John, N. B., for the week include: Per sch. Glenora, for Salem, by Stetson, Cutler & Co., 3,995 boards, 109,686 plank; sch. Greta, for New York, by S. T. King & Sons, 159,932 deals, 28,328 plank: sch. Beaver, for New York, by Randolph & Baker, 1,380,000 laths; str. Inchlonga, for Liverpool, by W. M. Mackay. 1,449,516 deals and battens, 92,628 scantling, 102,825 ends, 875 tons birch timber; sch. Saxon, for City Island, by Stetson, Cutler & Co., 12,006 deals: bgt. Carrick, for Drogheda, by W. M. Mackay, 319,084 deals and battens, 7,662 ends; per sch. Thistle, for New York, by Miller & Woodman, 186,852 deals; sch. Atwood, for Providence, by Dunn Bros. & Co., 131,156 scantling; ss Damara, for London, Jarvis Wilson, 177 pieces birch timber, 100 loads 845 pieces spruce deals, 22,482 feet; ss Macduff, for Glasgow, by W. M. Mackay, 1,877,171 deals and battens, 1,605 scantling, 110,777 ends; sch. Canary, for Vineyard Haven, S. T. King & Sons, 700,000 laths; sch. Marguerite, for Boston, by A. Cushing & Co., 74,091 scantling; sch. Comrade, for Rockland, by Master, 100 cords wood; sch. Modoc, for New York, by L. M. Jewett, 132,794 deals, 409,300 laths.

UNITED STATES.

Shipments of lumber so far this season from Alpena, Mich., are 62,049,000 feet of lumber, 4,765,000 shingles, 3,976,000 lath, 631,500 pieces of cedar.

Log run at Michigan is held at $14 and $18. Box lumber is being held at $10 to $10.50, though sales, it is said, have been made at from $9 to $9.50. Norway is nominal at $8 and hemlock $7.50, but nobody wants it.

COOPERAGE CONDITIONS.

The Sutherland-Innes Co., Chatham, Ont., in its circular letter for August, has this to say of the cooperage situation: "Since our July report, the state of the coopering trade has shown a great improvement, and prospects for fall trade are very encouraging. Flour barrel stock has been in good demand all over the country, and fine grades are being picked up by the large barrel manufacturers for fall and winter trade. Prices are firm and there has been no cutting done by first-class manufacturers. We make a specialty of turning out an extra quality of flour barrel staves for machine work, jointing in such a way that they will not buckle in the tresser. We also joint staves, specially for hand barrels, and supply kiln dried staves when parties who have no kilns themselves desire them. Salt barrel stock was not used so largely last month as it was previously, and prices are very low. Manufacturers who make an extra good grade of No. 2 staves cannot sell at present prices without loss, and if they want to sell for salt trade, will have to reduce quality to meet prices; otherwise not cater for this trade at all. Hoops are not so bad, but prices are still too low, owing to parties offering off-grade sugar barrel hoops at low figures, which will not allow manufacturers of first-class hoops to compete for the business. Heading is also low. White ash staves are now nearly all cleaned up, manufacturers of choice stock having very little left. Prices are firm, and, in fact, very few makers are offering stock at all, but holding what they have to fill contracts made earlier in the season. The cement trade has only been fairly active, but prices are being maintained, most of the mills having contracted for all the stock they will turn out this season. Few, if any, cement staves will be carried over into next year. Lime barrel stock has been in very good demand, especially basswood and cottonwood staves, while some lime burners are using No. 2 stock. We put up special No. 2 staves for this trade at a slight advance over the ordinary No. 2, and they are meeting with great favor. Heading and hoops for this purpose are in good demand at fair prices. Apple barrel stock is now moving freely, and while, in some parts, the crop is a failure, in others it is immense, and more stock will be used this fall than for the last two years. Prices are as yet very low, but we look for an advance by Sept. 1. Prices for apple barrel hoops and heading are, in some cases, lower. The truck and packing barrel trade has hardly been as good this season as usual, the only industry that has been very busy being the glass blowers. Prices are normal, according to kind of stock required. The cranberry barrel season is only commencing, but some large orders have already been placed. Nail keg stock has been in exceptionally good demand, and prices all along the line. The stock is now very scarce, and good prices are ruling. At present, there exists a strong feeling among many manufacturers that, on account of the extra expense and care this season's market demands of them, in the finish and quality of their output, they should be entitled to an increase of price; and a very strong opinion prevails among the trade that the only remedy to bring around a fair and legitimate valuation is a curtailment by large and small manufacturers of the output of their mills in all branches of the slack cooperage trade. In the tight cooperage trade, the demand for thoroughly seasoned stock has been quite active, but the actual supply on hand, as usual, has been very limited. In fact, it has been almost an impossibility to secure fairly seasoned stock, and, consequently, purchasers have been holding off.

THE CAMPS.

Lumbermen have commenced operations on the head waters of the Tobique, N. B., for next year.

William Mackay, of Ottawa, has sent large gangs of men to the woods to cut square timber. Wages are expected to rule about the same as last year.

Nat Warner, of Saginaw, has taken a contract to get out about 60,000 cubic feet of rock elm near Penwater, in that State, for McArthur Bros. & Co., of Toronto. The work of cutting will begin next month.

Lumber operators in New Brunswick are commencing to make contracts for next winter. Cunliffe Bros., C. H. Dickie and J. A. Laliberte, of Port Kent, A. E. Hammond, of Van Buran, and Thos. Clair have already made their arrangements. Their cut on the Upper St. John will probably aggregate 40,000,000.

Loveland, Roys & White, the Michigan syndicate, who purchased a tract of timber in the Georgian Bay district some months ago, have a crew of men cutting waney pine. They expect to get out 200,000 cubic feet for the foreign market.

The Central Lumber Co., Michigan, who have large timber interests on the Blind River, Ont., are about starting two camps at work. The calculation is to put in from 10,000,000 to 15,000,000 feet of logs, which are to be rafted to Saginaw next season.

EASTERN STATES CONDITIONS.

No large quantities of lumber are going out from Albany, N. Y.; at the same time there is a very fair enquiry. The call from New York is improving for all kinds of stock. The timber trade is commencing to feel the benefit of the large amount of building going on in that city. Dealers very confidently assert that prices for pine, spruce and hemlock in this market will increase in the fall.

The movement of lumber in Buffalo the past few weeks shows an improvement and enquiries are running into good size. A Buffalo dealer, who has returned from New York, says that box lumber has got down as low as $11.75 delivered.

Trade is not looking up very much at Tonawanda. Shingles and laths are moving fairly well. Box and common are steady. Dressing, star clear, and builders' stock is holding its own at firm quotations.

Complaint still comes from New York, that trade is somewhat quiet. Eastern spruce is the hardest line to keep track of; it seems subject to many changes. Prices, it is said, have dropped as low as $11.

SPRUCE VALUES.

E. J. Swan, of New York, who was one of a syndicate that acquired recently large tracts of spruce lands in Quebec, has been endeavoring to interest other American capitalists in the venture. His claim is that the syndicate have possession of 350,000 acres of heavily timbered land. He thinks the pulp industry is something very bright in outlook, and believes fortunes can be made out of Canadian spruce. The claim is that this spruce makes the finest pulp, and by a process recently developed in Germany, silk from spruce pulp wood can be made, which only an expert can distinguish from the genuine article. The syndicate say they are going to build a $1,000,000 plant in Montreal to make this silk pulp. Another story is that some one recently bought the pulp wood on 100,000 acres in Quebec, paying therefor to the farmers who owned it $1 an acre, and sold out within 90 days for $8 an acre, clearing up a nice profit of $700,000.

ENGLISH OPINION OF QUEBEC TRADE.

The Timber News, of Liverpool, Eng., says: On looking all round at the Quebec trade, there are some who affect to know something of the true position. We have during the week made a special set at one or two of our leading pine and spruce operators, and from what we can learn it would appear that, contrary to prophecy, first pine stocks of fair dryness and good quality must now hold their own, if an advance in price does not even occur. The impression here is that even at Liverpool and Glasgow prices must advance for this article. As to seconds, thirds and fourths, a good tone prevails, more especially in the 4th pine market. The London spruce business is still in a most unsatisfactory position, and it is difficult to see when it will again raise its head to that place that it held, say, two years ago. We hear of 1s. 3d. per Ptg. std. profit transactions in the Liverpool trade, but it would appear from information to hand that London hardly comes second in this respect. One feature noticeable in the Canadian hardwood London market is the number of parcels of birch planks that are offered by agents on a c.i.f. basis, but, as a rule, never reach London. The inference to be drawn from this is, that better prices prevail at other points than the London market will afford.

BUSINESS DIFFICULTIES AND CHANGES.

Prescott & Co., well-known New Brunswick lumbermen, are about to erect a steam mill to cut shingles and deals on River Benjamin, Restigouche County.

The St. John Lumber firm of A. Cushing & Co. is to be dissolved. George Cushing will build a mill on the site of the one destroyed by fire last spring. A. Cushing will remove to the Aroostock, Maine.

The Standard Wooden Ware Co., of Toronto, with a capital of $25,000, is applying for a charter to manufacture all kinds of woodenware. R. Matthews, Thos. Wasson and Alfred Brown, all of Toronto, are to be first directors.

The matter of the winding up of the St. Lawrence Lumber Co., of Bathurst, N. B., of which the late Senator Burns was manager, was before the courts a few days ago on an application of some Quebec creditors to have some sales by them declared preference sales. The goods were attached at first, the creditors claiming that by the Quebec law they became the vendors again as soon as there was no payment. It seems then the goods were allowed to go to the liquidators, it being understood that they then became a sale to the liquidators. Mr. Fitzpatrick, of Quebec, presented the case for the creditors. Judgment was reserved.

SHIPPING MATTERS.

Bark Rothiemay has been chartered to load lumber at Saguenay for Buenos Ayres at $8.

Ship Fred E. Scammell will load deals at Musquash, N. B., for West Coast England, at 37s. 6d.

Barque Olive Mount, now in England, has been chartered to load lumber at St. John, N. B., for Buenos Ayres, at $7.

The St. Anthony Lumber Co.'s cut, which has been purchased by the Export Lumber Co., will be shipped to the United States market over the Ottawa, Arnprior and Parry Sound, and Canada Atlantic Railways.

The Norwegian ship, Prince Amadeo, supposed to be destined to Halifax, N. S., with a cargo of British Columbia cedar and Oregon pine, has been reported out into port near Valparaiso with fever on board, a number of the crew being already dead with the complaint.

LUMBER FREIGHT RATES.

LUMBER freight rates for pine on the Grand Trunk Railway have been made a fixture, as below. Of any ntended change due notice will be given lumbermen.

General instructions in shipping by Grand T unk are embodied in these words in the tariff schedule: On lumber in carloads, minimum weight, 30,000 lbs. per car, unless the marked capacity of the car be less, in which case the marked capacity (but not less than 24,000 lbs.) will be charged, and must not be exceeded. Should it be impracticable to load certain descriptions of light umber up to 30,000 lbs. to the car, then the actual weight only will be charged for, but not less than 24,000 lbs. The rates on lumber in the tariff will not be higher from an intermediate point on the straight run than from the first named point beyond, to the same destination. For instance, the rates from Tara or Hepworth to Guelph, Brampton, Weston or Toronto, would not be higher than the specific rates named from Wiarton to the same points. The rates from Cargill and Southampton to points east of Listowel and south and west of Stratford will be the same as from Kincardine, but in no case are higher rates to be charged than as per mileage table published on page 6 of tariff.

Rates from leading lumber points on pine and other oftwood lumber, shingles, etc., are as follows: From Glencairn, Creemore, Aurora, Barrie and other points in group B to Toronto, 6½c.; Collingwood, Penetang, Coldwater, Waubaushene, Sturgeon Bay, Victoria Harbor, Midland, Fenelon Falls, Longford, Gravenhurst and other points in group C, to Toronto, 6½c.; Brace, bridge to Toronto 7c.; Utterson, Huntsville, Navor-Emsdale, Katrine to Toronto, 7½c.; Burk's Falls, Berriedale and Sundridge, to Toronto, 8c.; South River, Powassen and Callender to Toronto, 9c.; Nipissing Junction and North Bay, 10c. Rate from Goderich, Kincardine and Wiarton to Toronto, 6½c. These rates are per 100 lbs. Rates from Toronto east to Belleville are 7½c. per 100 lbs.; to Deseronto, 9c.; to Brockville and Prescott, 10c.; to Montreal and Ottawa, 11c. The

rates on hardwoods average about from 1c. to 2c. per 100 lbs. higher than on softwoods. For rates on railway ties, mahogany, rosewood, walnut, cherry, and other valuable woods, application must be made to the district freight agent.

On the Canadian Pacific the rates on pine and softwoods may be illustrated as follows: Cache Bay, North Bay, Sturgeon Falls and Warren, to Toronto, 10c; Algoma, Cook's Mills, Massey, Spanish River and Whitefish to Toronto, 13c.; Ottawa to Toronto, 10c From Ottawa, Hull, Aylmer and Duchesne Mills to station on the Lake Erie and Detroit River, Erie and Huron, Toronto, Hamilton and Buffalo, and Michigan Central Railways, the rate is 14½c. per 100 lbs. Regulations apply as to minimum size of carload of 30,000 lbs., and an advanced rate is charged for hardwoods.

Lumber freight rates on the Canada Atlantic Railway are as follows: Ottawa to Toronto, 10 cents per 100 lbs; Ottawa to Oswego, $1.90 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Montreal, $1.00 per M ft., (3,000 lbs. and under per M ft.); Arnprior to Montreal, $1.50 per M ft., (3,000 lbs and under per M ft.); Ottawa to Quebec, $2.00 per M ft.; Arnprior to Quebec, $2.50 per M ft.; Ottawa to Buffalo, 12 cents per 100 lbs.; Ottawa to Port Huron and Detroit, 14 cents per 100 lbs. Ottawa to New York, five carloads or over $3.00 per M ft.; Arnprior to New York, $3.50 per M ft.; Ottawa to Boston, Portland and common points, local 15 cents; exports 13c. per 100 lbs.; Arnprior to Boston, Portland and common points, local 17 cents; export 15 cents per 100 lbs.; Ottawa to Burlington, 6 cents per 100 lbs.; Ottawa to Albany, 10 cents per 100 lbs.; Arnprior to Albany, 12 cents per 100 lbs.; Ottawa to St. John, N. B. and common points, 20 cents per 100 lbs.; Ottawa to Halifax, N. S. and common points, 22½ cents per 100 lbs Minimum carload weight for shipment of lumber, lath, shingles, etc., is 30,000 lbs., and rates quoted above are in cents per 100 lbs., except when quoted per M ft. the minimum carload charged is 10 M ft., lumber not exceeding 300 lbs. to the M feet. Ottawa rates apply on shipments from Rockland and Hawkesbury.

MODIFICATION OF HARDWOOD RATES.

THE Grand Trunk Railway and Canadian Pacific have made the rates on hardwoods from certain points to Toronto and Hamilton as follows. The regulations are over the signature of Mr. John Earls, W.D.F.A., of the G. T. R., and given in reply to a letter from Toronto hardwood men:

"After careful consideration we have come to the conclusion that, on and after Jan. 1st, 1895, a modification will be made in the present arrangements for hardwood lumber, to the effect that the rate will be 7½c. per 100 lbs. from our Northern and Northwestern branches to Toronto and Hamilton. This rate, however, will not apply from main line points and the straight run between Toronto, Sarnia and Windsor; also that so far as rates on common lumber to points like Guelph, Galt, London, Woodstock, Ingersoll, etc., from all lumber shipping stations the rate will be the same on hardwood as on pine." On the old principle, we suppose, that half the loaf is better than none, hardwood men have something, possibly, to be thankful for, though there is no good reason why the rates generally on hardwood should not be as low as on pine. It is understood that the C. P. R. rate will be made uniform at 7½c. from same points.

FOR SALE.

FOUR CARS 5/4 ROCK ELM, DRY, 10 TO 14 ft. long, and other hardwoods.
J. E. MURPHY, Hepworth Station, Ont.

MILLS

Having Brown Ash 12, 14 and 16 ft. firsts and seconds, inch Bass firsts and seconds 12 feet, or any other Hardwood Lumber, can sell same for cash by addressing
H. D. WIGGIN,
No 89 State St., BOSTON, MASS.
Inspection at mill.

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....MANUFACTURERS OF....
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TORONTO

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Wholesale Dealer in all kinds of
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Lumber shipped to all parts by rail or vessel.
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Excellent quality of 18 inch Pine Shingles for sale. | WHITBY, ONTARIO

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—: HUNTSVILLE, ONT. :—
MANUFACTURERS OF LUMBER LATH AND SHINGLES
WE are open to cut White Pine and Hemlock Bill Stuff. Have for Sale a Quantity of Dry Mill Stocks and Sidings, also 16 in. Pine Shingles and 4 ft. Lath 1½ in. wide.
CORRESPONDENCE SOLICITED

Ottawa Lumber Co. Ottawa Canada
WHOLESALE LUMBER, LATH, SHINGLES, ETC.
Write for Stock List

The Pembroke Lumber Co., Ltd.
MANUFACTURERS AND WHOLESALE DEALERS IN
DIMENSION TIMBER OF ALL SIZES AND KINDS, JOISTS, CAR DECKING, CAR SILLS, SHIP DECKING, AND ALL KINDS OF ROUGH AND DRESSED LUMBER.
Write us for Quotations on all Bills PEMBROKE, ONT.

Is it your wish . .
To Purchase or Sell as quickly as possible
A PARTICULAR LOT OF LUMBER
A MILL PROPERTY
SECOND-HAND MACHINERY
An Advertisement in the "Wanted" and "For Sale" Department of the . . . . .
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Will secure for you a Buyer or Seller, as the case may be. Address,
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WE want to buy FOR CASH the following kinds of Lumber : : : : :
1¼, 1½, 2 and 3 inch BASSWOOD
2 and 2½ inch ROCK ELM
3 in. SOFT ELM; 2 in. SOFT MAPLE
Write us promptly, stating what you have to offer in each kind and quantity of each thickness, also dryness, etc., with lowest prices.
Empire Lumber Co. - Buffalo, N. Y.

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MANUFACTURERS OF THE
GENUINE GEORGIA LONG LEAF YELLOW PINE
Cut to order for FACTORIES, HOUSES, WHARVES, BRIDGES, TRESTLES AND CARS . . . . . .
Kiln Dried Floorings ATLANTA, GEORGIA, U. S. A.

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:— WANT —:
ROCK ELM
COMMUNICATE AT ONCE.— 7, 8, 14 and 16 feet, firsts and seconds.

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Will pay your subscription to the weekly and monthly CANADA LUMBERMAN for
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Business Wisdom: *"Throughout every part of my career I have felt pinched and hampered by my own ignorance."—Sir Walter Scott.*

The Price Lists that here follow will be revised each week up to the hour of going to press, and in connection with these we would draw attention to the week's trade review under the heading of "Current Trade Conditions" on the first page, immediately followed with matter marked "Stocks and Prices," which presents the lumber situation of the week, together with a record of the week's sales and transactions.

PRICES CURRENT.

TORONTO, ONT.

TORONTO, Aug. 28, 1895.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00 36 00
1x10 and 12 dressing and better	20 00 22 00
1x10 and 12 mill run	16 00 17 00
1x10 and 12 common	13 00 14 00
1x10 and 12 spruce culls	10 00 11 00
1x10 and 12 mill culls	10 00 11 00
1 inch clear and picks	28 00 32 00
1 inch dressing and better	20 00 22 00
1 inch siding mill run	14 00 15 00
1 inch siding common	12 00 13 00
1 inch siding ship culls	11 00 12 00
1 inch siding mill culls	9 00 10 00
Cull scantling	8 00 9 00
1 1-2 and thicker cutting up plank	24 00 26 00
1 inch strips 4 in. to 8 in. mill run	14 00 15 00
1 inch strips, common	12 00 13 00
1 1-4 inch flooring	16 00
1 1-2 inch flooring	16 00
XXX shingles, 16 inch	2 30
XX shingles 16 inch	1 40
Lath, No. 1	2 00
Lath No. 2	1 80 1 85

HARDWOODS—PER M. FEET CAR LOTS.

Quality, 1s and 2s unless otherwise specified.

Ash, white,	1	to 2 in.	$26 00	$28 00	Cherry	1	" 1½ 50 00 60 00
" "		2½ to 4	30 00	32 00	"	2	" 4.. 60 00 65 00
Ash, black, 1sts and 2nds,	1	to 1½ in.	21 00	23 00	Elm, soft	1	to 1½ $14 00 $15 00
					" "	2	" 3.. 15 00 16 00
Ash, black, 1sts and 2nds,	2	to 4 in.	23 00	25 00	" rock	1	" 1¼ 16 00 18 00
Ash, M.R.,	2	" 1½	18 00	20 00	" "		1½ " 3.. 20 00 22 00
" "	1	" 4..	20 00	24 00	Hickory	1½	" 2.. 28 00 30 00
Birch,	2	" 1½	24 00	26 00	Maple	1	" 1½ 16 00 18 00
"		" 4..	26 00	29 00	"	2	" 4.. 18 00 20 00
" sqrs.	4x4	" 8x8	28 00	32 00	Oak, red, p'n	1	" 1½ 28 00 30 00
Basswood	1	" 1¼	16 00	18 00	" "	2	" 4.. 30 00 32 00
"		1½ " 2..	19 00	19 00	" white	1	" 1½ 28 00 30 00
" m. r.	1	" 1¼	14 00	16 00	" " "	2	" 4.. 30 00 35 00
Butternut	1	" 1½	23 00	25 00	" quart'd	1	" 2.. 48 00 52 00
"	2	" 3..	25 00	28 00	Walnut	1	" 3.. 85 00 100 00
Chestnut	1	"	22 00	25 00	Whitewood	1	" 2.. 32 00 36 00

OTTAWA, ONT.

OTTAWA, Aug. 28, 1895.

Pine, good sidings, per M feet, b.m	$30 00 35 00
Pine, good strips, " " "	26 00 30 00
Pine, good shorts, " " "	18 00 25 00
Pine, No. 1 dressing sidings, per M feet, b.m	19 00 24 00
Pine, " " strips, " " "	17 00 20 00
Pine, " " shorts, " " "	15 00 17 00
Pine, 10 s.c. and better stock, " " "	15 00 18 00
Pine, 8 s.c. " " " "	13 00 14 00
Pine, " sidings " " "	13 00 15 00
Pine, " strips " " "	11 00 13 00
Pine, " shorts " " "	8 50 11 00
Pine, box culls " " "	9 00 12 00
Pine mill culls " " "	9 00 10 00
Lath per M	1 30 1 75

QUEBEC, QUE.

QUEBEC, Aug. 28, 1895.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	16 @	22
For fair average quality, according to average, etc., measured off	20	26
For good and good fair average, " " " " "	25	30
For superior " " " " "	32	40
In shipping order " " " " "	36	42
Waney board, 18 to 19 inch " " " " "	36	42
Waney board, 19 to 21 inch " " " " "	38	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	40	49

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	22	30

BIRCH.

16 inch average, according to average and quality	21	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $40 to $43 for 3rd quality.
Bright spruce, according to mill specification, $40 $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality. F.O B. batteau.

SAGINAW, MICH.

SAGINAW, Mich., Aug. 28, 1895.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$45 00	Selects, 1 in., 8 in. and up wide	$38 00
1¼, 1½ and 2 in.	45 00	1¼, 1½ and 2 in.	40 00
2½ and 3 in.	50 00	2½ and 3 in.	45 00
4 in.	55 00	4 in.	50 00

FINE COMMON.

1 in., 8 in. and up wide	33 50	2½ and 3 in., 8 in. and up wide	40 00
1¼, 1½ and 2 in.	35 00	4 in.	45 00

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	25 00	2½ and 3 in., 7 in. and up wide	35 00
1¼, 1½ and 2 in.	30 00	4 in.	38 00

STRIPS. A AND B (CLEAR AND SELECTS).

1¼ in., 4, 5 and 7 in. wide	34 00	1 in., 4, 5 and 7 in. wide	32 00
6 in. wide	36 00	6 in. wide	36 00

FINE COMMON OR C.

1¼ in., 4, 5, 6 in. wide	30 00	1 in., 6 in. wide	30 00
1 in., 4, 5 in. wide	28 00		

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24 00	1 in., 4, 5, 6 in. wide	23 00

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in	17 00	1 in., 4, 5 and 7 in.	17 00
1 in., 6 in	18 00	1 in., 6 in.	18 00

NO. 2 FENCING OR NO. 4 FLOORING.

1 in., 4, 5 and 7 in.	14 00	1¼ in., 4 to n.	14 00
1 in., 6 in.	14 50	No. 3 fencing, 1 in., 6 in.	13 00

SHELVING.

No. 1, 1 in., 10 in. stocks	25 00	No. 2, 1 in., 7 and 8 in. stocks	19 00
1 in., 10 in. and up wide	26 00	1 in., 10 in. stocks	21 00
1 in., 12 in. stocks	29 00	1 in., 12 in. stocks	24 00
1 in., 12 in. and up wide	30 00	1 in., 10 in. and up wide	22 00
1¼ in. 1½ and 2 in., 8 in. and up wide	29 00	1 in., 13 in. and up wide	25 00

BARN BOARDS OR STOCKS.

No. 1, 12 in.	20 00	No. 2, 9 in.	14 00
10 in.	17 50	8 and 7 in.	14 00
9 in.	17 50	No. 3, 12 in.	13 00
8 and 7 in.	17 50	10 in.	12 00
No. 2, 12 in.	16 00	9 in.	12 00
10 in.	14 00	8 in.	12 00

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$10 00	1 in., 13 in. and up wide	$12 00
1 in., 6 in. wide	11 00	1¼, 1½ and 2 in., 7 in. and up wide	12 00
1 in., 7 in. wide and up	11 00		

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9in. wide	17 00	1 in., 10 in. and up wide	17 00
1 in., 6 in. wide	17 00	1¼, 1½ and 2 in., 8in. and up wide	17 00

COFFIN BOARDS.

No. 1, 1 in., 13in. and up	20 00	No. 1, mill culls	9 00
No. 2	17 00	No. 2, or red horse	7 00

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23 00	No. 2	19 00
No. 1 (nearly clear)	21 50	No. 3	16 00

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16ft.	$ 8 50	Hemlock, 2x4 to 10, 12 to 16 feet	8 00
18 ft.	10 50	2x12	8 50
20 ft.	11 50	Add $1 to each additional 2ft. in length.	
22 and 24 ft	12 50		

SHINGLES, 18-IN.

Fancy brands, XXXX	3 20	Standard brands. river made, XXXX	2 85
Clear Butts	2 00	Clear Butts	1 85

WHITE PINE LATH.

No. 1	1 75	No. 2	1 35
		Hemlock	1 25

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA N. Y., Aug 28, 1895.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in.	$47 00	50 00	No. 3, 1¼ to 2 in.	16 00	17 00
2½ and 3 in.	50 00	53 00	Shelving, No. 1, 13 in and up, 1 in.	31 00@33 00	
4 in.	54 00	56 00	Dressing, 1¼ in.	25 00	26 00
Selects, 1 in.	38 00	39 00	1¼ x10 and 12		26 00
1¼ to 2 in.	40 00	42 00	1½ in.	24 00	25 00
2½ and 3 in.	47 00	50 00	2 in	26 50	28 00
4 in.		52 00	Mold st'ps, 1 to 2 in.	33 00	35 00
Fine common, 1 in.	35 00	37 00	Barn, No. 1, 10 and 12 in.	21 00	23 00
1¼ and 1½ in.	37 00	38 00	6 and 8 in.	20 50	22 00
2 in	34 00	35 00	No. 2, 10 and 12 in.	16 50	17 00
3 in.		45 00	No. 3, 10 and 12 in.	14 00	16 00
4 in		45 00	6 and 8 in.	13 50	15 50
Cut'g up, No. 1, 1 in.	26 00	28 00	Common, 1 in.	16 00	18 00
1¼ to 2 in.	32 00	33 00	1¼ and 1½ in.	18 00	20 00
No. 2, 1 in.	16 00	17 00	2 in	19 00	22 00
No. 2, 1¼ to 2 in	22 00	23 00			

NEW YORK CITY.

NEW YORK, N. Y., Aug. 28, 1895.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$28 00	@ 40 00	Building orders	$26 00 @ 37 00
Decking	44 00	50 00		

SPRUCE.

6 to 9 in.	13 00	14 00	10 to 12 in.	15 50	16 00
6 to 12 in.	14 50	15 50	Lath	1 85	2 00
9 to 12 in.	15 50	15 75			

BOSTON, MASS.

BOSTON, 28, Aug. 1895.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$11 50	12 00	¾ inch	$ 9 25	9 75
Coarse No. 5	15 00	16 00	11-16 inch	8 50	9 00
Refuse	13 00	13 20	⅝ inch	8 00	8 50
Outs	9 00		Clapboards, sap ext.	44 00	46 00
Boxboards, 1 inch	10 75	11 00	Sap clear	40 00	43 00
⅞ inch	9 75	10 00	Sap, 2nd clear	32 00	35 00
			No. 1	23 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in.	$50 00@52 00		Fine com., 3 and 4 in	43 00	45 00
1¼, 1½ and 2 in.	52 00	53 00	No. 2, 1 in. Fine com.	28 00	30 00
3 and 4 in.	58 00	60 00	1¼, 1½ and 2 in.	29 00	31 00
Selects, 1 in.	43 00	45 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in.	45 00	47 00	No. 2	36 00	37 00
3 and 4 in.	55 00	57 00	No. 3	28 00	30 00
Moulding boards, 7 to 11 in. clear	35 00	37 00	Cut ups, 1 to 2 in.	24 00	32 00
60 per cent. clear	32 00	34 00	Coffin boards	19 00	20 00
Fine common, 1 in.	40 00	42 00	Common all widths	22 00	26 00
1¼, 1½ and 2 in.	40 00	41 00	Shipping culls, 1 in.	15 00	15 50
			do 1¼ in.	15 50	16 50

SHINGLES.

Spruce	1 30	1 50	Second Clear	1 75	2 00
Cedar, extra	2 50	2 75	Extra No. 1	1 00	1 25
Clear	2 25	2 50			

HEMLOCK.

Boards, rough	10 00@11 00		No. 2	7 00@ 9 50
Planed	11 50	12 00		

LATH.

Spruce			By cargo	1 80@ 1 90
By car	1 80@ 2 00			

LUMBERMEN'S SUPPLIES

SUGAR.

	c. per lb.	
Granulated	4⅝	4½
Extra bright refined	4	4⅛
Bright Yellow	3⅞	4
Medium Yellow		3⅝
Dark Yellow	3⅜	3½
Raw		

SYRUPS AND MOLASSES.

SYRUPS.

	Per gallon bbls.	½ bbls.
Dark	25	30
Medium	30	35
Bright	35	40
Very Bright	50	00
Redpath's Honey		40
" " 2 gal pails		1 25
" " 3 gal pails		1 50

MOLASSES.

	Per gal.	
Trinadad, in puncheons	0 32	0 35
" bbls	0 36	0 37
" ½ bbls	0 40	0 40
New Orleans, in bbls	0 30	0 32
Porto Rico, hdds	0 38	0 40
" barrels	0 42	0 44
" ½ barrels	0 44	0 46

RICE, ETC.

	Per lb.	
Rice, Aracan	3½	3¾
" Patna,		4¾
" Japan		5
" Imperial Secta		5½
" Extra Burmah	3⅞	4
" Java Extra	6½	6¾
" Genuine Carolina	9½	10
Grand Duke	6¼	6½
Sago	4¾	5½
Tapioca	4½	5½
White Beans, per bushel	1 75	

FRUITS.

FOREIGN.	c. per lb.	
Currants, Provincial, bbls.	3½	4
" " ½ bbls	3⅝	4⅛
" Filiatras, bbls	4	4½
" " ½ bbls	4¼	4¾
Currants, Patras, bbls	5	5½
" " ½ bbls	5¼	5¾
" " cases	5	6½
" Vostizzas, cases	6½	7½
" " ½ cases	6¾	7¾
" 5-crown Excelsior (cases)	8	8½
" " ½ case	8¼	8¾
Dates, Persian, boxes	4½	5
Figs, Elemes, 10lb. boxes	10	12
" 7-crown	16	18
Prunes, Natural Figs, 28lb bxs		
" Bosnia, casks	4	4½
" " cases	5½	7
" " bags		
" Anchor C, bags		
" " E, "		
" " G&J, cases	5	5½
Raisins, Valencia, off-stalk	4¾	
Selected	5½	6

CANNED GOODS.

	Per doz.	
Apples, 3's	$1 00	$1 10
" gallons	2 25	2 50
Beans, 2's	0 85	0 95
Corn, 2's	0 90	0 95
" Epicure	1	15
Peas, 2's	0 85	0 95
" Sifted Select	1	45
Peaches, 2's	2 00	2 25
" 3's	3 00	3 25
Plums, Gr. Gages, 2's	1 85	2 00
" Lombard	1 50	1 60
" Damson Blue	1 50	1 60
Pumpkins, 3's	0 90	1 00
" gallons	2 10	2 25
Tomatoes, 3's	0 85	0 90
'Thistle' Finnan Haddies	1 35	1 40
Salmon, talls	1 25	1 35
" flats, No. 1	1 50	1 60

CANNED MEATS

(CANADIAN.)

Comp. Corn Beef 1lb cans	$1 65	$1 70	
" " 2 "	2 55	2 75	
" " 4 "	4 80	5 00	
" " 6 "	7 50	7 75	
" " 14 "	18 00	18 50	

COFFEE.

GREEN.	c. per lb	
Mocha	28	35
Old Government Java	25	32
Rio	20	21
Plantation Ceylon	29	38
Porto Rico	24	26
Guatemala	24	23
Jamaica	22	23
Maracaibo	24	24
Caffaroma, 1 and 2lb tins, asstd		30

DOMESTIC.

Apples, Dried, per lb	6	6½
" Evaporated	8	10

TOBACCO AND CIGARS.

British Consols, 4's; Twin Gold Bar, 5's	59c
Ingots, rough and ready, 8's	57
Laurel, 3's	49
Brier, 7's	47
Index, 7's	44
Honeysuckle, 8's	56
Napoleon, 8's	50
Victoria, 12's	44
Brunette, 12's	44
Prince of Wales, in caddies	48
" " in 40lb. boxes	48
Bright Smoking Plug Myrtle, T & B, 3's	60
Lily, 7's	47
Diamond Solace, 12's	50
Myrtle Cut Smoking, 1lb. tins	70
¼ lb. pg., 6 lb. boxes	70
oz. pg., 5 lb. boxes	70

SHAFTING, PULLEYS, ETC.

IN designing a mill or manufacturing plant, says C. R. Tompkins, M. E., one of the most important features, aside from the arrangement for good and sufficient power, is the line of shafting and the necessary pulleys for the purpose of transmitting the power to the several machines to be used. Now, it is just as important that good judgment be manifested in this part of the plant as in any other. The fact is that much needless expense is often caused in the first instance, besides a continual loss of power in the second, by an injudicious selection of the shafting.

A line of shafting unnecessarily heavy, with pulleys and couplings to match, not only involves a greater expense in the first place, whether it is purchased by the pound or foot, but the extra amount of friction on the journals caused by that weight is a factor that should also be taken into consideration. It is a well-known fact that the frictional resistance with all bodies in sliding contact is in direct proportion to the weight pressing them together, so that the weight of a line of shafting with heavy pulleys, no matter what the speed may be, will exert a constant frictional resistance in proportion to the weight.

While there can be no question as to the economy in all cases of using a lighter shaft at greater speed than was formerly the case, still it is not advisable under any condition to go to extremes in either case, for the reason that, with a little forethought and calculation in the first instance, we may avoid either.

As a rule, in all modern mills and factories, the tendency has been toward lighter shafting and pulleys of small diameter, with a corresponding higher speed, and there is no question but much more satisfactory results have been obtained. The shortest and most reliable rule that has been found to obtain the torsional strength of all sizes of shafting, is to multiply the cube of the diameter by 600, and this product by the number of revolutions per minute, and divide by 33,000 for the horse-power. The ultimate torsional strength of a shaft is not the power required to twist it off, but a power not quite sufficient to give it a permanent set.

Now, according to this rule, which has been verified in many cases, a shaft 3 inches in diameter at 200 revolutions per minute should not be required to safely transmit the 32 horse-power, while by the same rule a shaft of 2 inches diameter of the same quality of iron running at 300 revolutions will safely transmit 43 horse-power. Now, all other things being equal, it is evident that where not over 35 horse-power is required, a 2-inch shaft at 300 revolutions per minute is the most economical. For example, the weight of a line of 3-inch shafting 40 ft. long, without couplings and pulleys, is 955 pounds, while a 2 inch shaft of the same length weighs 424 pounds, a difference in weight of 531 pounds. Now, the frictional resistance, as before stated, is in proportion to the weight, and without any lubrication is estimated that it amounts to 25 per cent., but with a good lubrication this may be reduced, according to the best authorities, to 8 per cent.

Now, taking 8 per cent. as the average, we find that with a 3-inch shaft we have a constant frictional resistance of 76.40 pounds to contend with, while on the contrary, the frictional resistance upon a 2-inch shaft amounts to but 34 pounds. Here an important question arises which has been frequently discussed, and that is whether the speed has anything to do with the frictional resistance.

One authority says that "with hard substances and within the limits of abrasion, friction is as the pressure, without regard to surface, time or velocity." In another place the same author states as follows: "A regular velocity has no considerable influence on friction; if the velocity is increased the friction is greater, but this depends on the secondary or incidental causes as the generation of heat and the resistance of the air."

Now, without entering into a full discussion of this question, if we take the question of speed into consideration, the argument is still in favor of the lighter shaft. We found the frictional resistance in the 3-inch shaft without taking the speed into consideration to be 76.40 pounds. Now, if we multiply this by the speed, as some contend it should be, we have a total resistance of 15,280 pounds per minute to overcome, while with the 2-inch shaft by the same proposition we have 10,200 pounds per minute to overcome, showing a difference in frictional resistance in favor of the 2-inch shaft of 5,080 pounds per minute.

Now, as to the question of pulleys. In order to obtain say 900 revolutions from a pulley driven from a 3-inch shaft at 200 revolutions per minute, it will require a pulley 36 inches in diameter, while the same power and speed may be obtained from the 2-inch shaft at 300 revolutions from a pulley 24 inches in diameter.

Now, in the foregoing argument in favor of lighter shafting and higher speed, the torsional strength of the shaft has only been taken into consideration, and while the torsional strength of a shaft of a certain diameter may be amply sufficient to transmit the required power with perfect safety, still the lateral strength must also be considered. A shaft, no matter what the size may be, in order to fulfill all the conditions of practical use, must possess sufficient lateral strength to stand the pull of the belts, together with the sudden shocks which may be sustained when heavy machines are started suddenly, and for this reason, under peculiar conditions, it may be advisable to use a shaft a trifle larger than the rule calls for. But under ordinary conditions, if the distance between the boxes or hangers is in proportion to the size of the shaft, it will not be found necessary to vary much from the foregoing rule.

One of the most common faults in erecting a line of shafting is in too great a distance between the bearings, and it is often the case that a shaft abundantly heavy is rendered ineffective from this cause, and when a machine is started the shaft springs, so as to cause the belt to slip, unless the pulley happens to be close to the bearing.

While it is good practice in all cases where the conditions will admit to run all heavy pulleys as close to the bearing as possible, still it is not always practical to do so, consequently the size of the shaft and the distance between the bearings should be so calculated that there will be sufficient lateral strength to admit of placing the pulleys upon any part of the shaft between the bearings.

There is no question but as a general rule a shaft that possesses sufficient torsional strength to perform the work, with a modern allowance for contingencies, will, if the bearings are placed at a proper distance apart, also possess sufficient lateral strength for all practical purposes.

In practical experience it has been found that the most reliable rule for this purpose is to take three times the diameter of the shaft in inches for the distance from center to center of the bearings in feet. Thus a shaft of 2 inches in diameter should be 6 feet from center to center of its bearings. One of 2½ inches would call for 7 feet and 6 inches, while one of 3 inches may be 7 feet, and so on.

WHY SAP FLOWS IN TREES.

DISCUSSING the flow of sap in trees, one writer presents the following interesting theory: The maple tree is active in the summer and passive in winter. Pressure, suction and zero are conditions of the tree when not in leaf, when at rest and passive. Varied weather as to temperature is the case of these varied conditions. Under certain conditions the whole tree may be in pressure, while another part of the same tree may have been in suction. When the tree is in pressure, it is throwing out moisture sap, whether tapped or untapped. When the tree is in suction, it is reversed, taking in moisture of water, whether the tree is tapped or not. When the tree is tapped the pressure is visible. To make the suction visible, connect a glass tube to the spout, a round wooden one, by rubber, fill the tube with water or sap, or even syrup, when the tree is in suction, and you will see the contents passing down the tube and of course passing into the tree. Pressure and suction exists all the same if the tree is not bored, but, being unseen, it is recognized little even by vegetable physiologists. Pressure may be measured with the steam gauge, and also with a mercurial gauge, while suction can be measured with a mercurial gauge only.

The highest pressure that I have noticed was 34 pounds on a square inch. This would hold a column of water over 60 feet high. The pressure of the atmosphere at the sea level is 15 pounds upon a square inch. This amount of pressure is exerted on every square inch of the outside surface of the tree and is balanced by the same amount of internal pressure, so that the 34 pounds of internal pressure was in excess of the outside pressure; hence, even if the tree is not tapped, there must be moisture passing to the surface through the pores and connecting with the atmosphere until equilibrium is restored, and suction or zero is reached. If certain conditions produce pressure, then reversed conditions must produce suction, the opposite condition. When the tree is neither in pressure nor suction, then its condition is zero. In good sap weather, as a general law, the tree is in pressure during the day and in suction through the night. In poor sap weather zero conditions prevail.

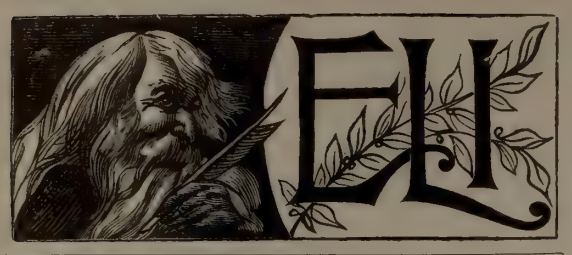
Pressure. What is it? This can only be understood by an understanding of the internal make-up of the tree. It is supposed that there are 100,000,000 cells in every cubic inch of maple wood. These cells are supposed to be like small boxes, with covers, piled one upon another, so that there are two partitions between every box or cell. These cells are filled with gases, air and water, together with some other materials or elements. Now we are prepared to understand the philosophy of the pressure. As the sun warms up the outside of the tree, the air and gases expand in all the cells so warmed up, occupying a larger space, so that the pressure must be proportionate. It is not so much the expansion of the cells as it is their expansible contents. The moisture or watery parts are forced out through the pores of the tree, and if a small maple tree is carefully scraped to the wood, instantly the whole surface will be covered with tiny drops of moisture, showing what is taking place all over the surface. If a tree is bored, the pressure is liberated so much, and if a gage is attached to the tree, it will show it and even measure the amount. Now a vacuum results. As a cool night is coming on, these expansive elements are contracting, doubly increasing the vacuum. Now pressure changes to suction, and the glass tube shows it. The equilibrium of the tree is restored.

CUT OF CANADIAN LOGS.

AN interesting contribution to the discussion of the saw-log trade and lumber duties, is the following from the Lumber World, of Buffalo:

"According to reports from Saginaw and other points in Michigan, the present season will witness the sawing of large amounts of Canadian logs in Michigan mills. The total that will cross Lake Huron from Canada to Michigan this season is set down at 350,000,000 feet of logs. So large an importation of logs, much of them by firms who own mills in Canada would seem to mean that the Americans operating in Canada do not intend to let their American mills fall into decay. It may also mean that they do not find the operation of saw-mills in Canada either so easy, so attractive, or so profitable as they expected to find it. Again, it may mean that they find the transportation of logs by lake so cheap that they find at least as much profit in sawing on this side as they find in the sale of lumber sawed in Canada and brought over by lake and rail. Viewed in any light, the movement is so large as to form an interesting feature of the trade. It is suspected that the Americans operating in Canada do not expect to see the present free lumber tariff standing two years from the present time, and that their expectation of a restoration of the tariff in 1897 or 1898 will prevent them from going to great expense to erect large mills in Canada. With Canadian saw-millers rushing their mills to their full capacity, with many Americans operating saw-mills on both sides of the border, and with American mills cutting about an average of lumber, in addition to the very large amount of scorched lumber that has been and is being 'cut to save it,' there is no immediate prospect of an advance in the prices of any of those lines of lumber concerned in these transactions in the markets of the United States."

SAWS should run at high speed to accomplish the best results. Short, slim teeth can be run on lighter cuts. High-speed saws will stand heavier feed in proportion to the length of teeth than the slower speeds. Long teeth will not hold corners well. A saw properly adjusted at a high speed will not run out in slabbing, nor into the cut after passing the center of the log.



PENDING the decision of the Board of General Appraisers of the United States in the case of dressed lumber, the subject is proving one of discussion in Canadian lumber circles, as well as among lumbermen across the border. An Ottawa lumberman considers the position taken by American lumber journals as very amusing, not to say inconsistent. "No reasonable person," said he, "can doubt that the American government intended that this classification should cover what is generally understood in Canada, as well as the United States, as flooring, clap-boards, or any lumber running through a planer. But with that ingenuity displayed some years ago in allowing canned fish to be admitted free and afterwards imposing a duty on the cans, American authorities now try to twist and distort the meaning of the Act so as to destroy the object for which it was intended at the time. Further, Canadian lumbermen are glad to know that it is a small number of specially interested parties who tried this game, and not the majority of American dealers, who are generally ready to liberally interpret the law and carry out any business they make." Another Ottawa dealer stated that many American manufacturers have taken advantage of the removal of the duty from dressed lumber by the Canadian government, and not a few of them, with their immense facilities and extensive machinery, have been able to send dressed lumber into the Dominion and thus compete with Canadian manufacturers. The impression seems to prevail in Ottawa that the Canadian custom authorities will not levy the reciprocal duties until the decision of the Board of Appraisers in New York is given out.

* * * *

As has been remarked before, if self interest is allowed to guide a decision in this case, it is easily understood the view that will be taken by a certain section of the United States lumber trade. But this is not an equitable or statesmanlike position. And it is a question whether it is the wise and business-like view. United States lumbermen have found already, as a result of the free tariff clauses of the Wilson bill, that a very decent and growing market for what is termed dressed lumber is to be found in Canada. The Timberman tells us that the sale of tongued and grooved yellow pine in Canada has assumed considerable proportions, and if the decision of the Board of Appraisers is sustained it will mean that a considerable market is lost to Southern operators, and a readjustment of trade relations, so far as lumber is concerned, would be necessary. The fact is that it is difficult to say what will be the final outcome of this question, and whilst I am not going to pronounce myself an out and out free trader, it does seem that here is a case that illustrates where free trade best suits two countries. Each finds a market for its particular product in the other country, and why not give things a free swing, and let each, without any customs incumbrances, push trade to the best of their ability.

* * * *

The summer season coming well nigh to a close, I find lumbermen talking freely of the prospects for the fall. One opinion prevails, that July and August have been duller than the average summer months. This has been the case to the extent that lumbermen have queried whether the quietude that has prevailed could rightly be charged altogether to the summer season. My own impression is that this has been the main cause, for, even with commerce generally climbing upwards these months have been dull in every line of trade. The good times we have heard so much of has been in a confidence in the future, rather than immediate activity. And that this feeling of confidence has been well grounded is shown in the turn that the lumber trade is taking as it commences to go out of the month of August. Business for the past week has been a deal more healthy than for many weeks before, and the presence of United States buyers on the market here has furnished further evidence of improvement. A recent visitor was Mr. T. S. McCool, a somewhat familiar face in Canadian lumber quarters. He is now chief buyer for Uptergrove & Bro., of New York. I have reason to know that he did not leave Toronto without making glad the heart of some of our lumbermen by placing orders with them. It would be unwise, but I don't think there is any danger of it, for lumbermen to suppose that any great boom would take place this fall, and as a consequence become extravagant in their operations. But I notice this, that the feeling is gathering momentum, as the change approaches, that not only the worst of the depression has gone by, but that the turn has actually come. Of course, we have been beguiling ourselves in this way for a number of years as each fall season has come around, but there seems good reason to believe that this fall differs from some other falls. A different tone will take hold of the lumber reviews that will be written from this out, an agreeable change from the doleful tune that has too often been played. How true it is that every cloud has a silver lining.

* * * *

A brief account in our British Columbia letter of the application of electricity to logging operations in that province furnishes another instance of the extent to which this science is becoming useful for commercial purposes. It almost looks, as a writer in an electrical journal has said, that this will be a world of electricians before many years have rolled by. The butcher, the baker, the candlestick maker, the car driver, the gas lighter, the hod carrier, jack tar and all the rest of humanity will be electricians of some calibre. It will be, I suppose, as with everything else that gets on top, everyone will want to count in, if possible, with the successes that are scored. But all pleasantry aside, electricity is performing wonders in the world of commerce, and even the inventor of the steam engine may fear that his supreme position will some day have to be vacated. There seems to be no reason why for logging purposes, as a means of propelling shortlined logging railroads, and for cutting down and sawing trees, that this new power should not be largely used. It is easier work than can be done by the steel saw for the little platinum wire to take a great tree of the forest in its tender embrace, and with deadly grip fell the giant to the earth. It has been proposed to utilize the wire by stringing it in a straight line, bringing it to white heat by the electric current, and apply it to a tree as we do an ordinary saw. This plan, I am told, has been in vogue for some little while in England. We would hear less then of the sawdust evil, for the sawdust dump would not be in it. Eight trees, it is said, can be brought down by this process in the time required to cut one down by axe or saw.

* * * *

Everybody, I suppose, has read Mark Twain's account of how he edited an agricultural paper. It was left to that American humorist to cause pumpkins to grow on apple trees, and all the other absurd transmogrifications of nature to take place. But I do not know that Mark Twain wrote anything funnier in that sketch of his than what has appeared recently from the pen of one Flora Moon, who, as a woman, tells of the things she saw in a saw mill. She wanted to start at the beginning and undertake to follow a log to the saw and then see a board cut and follow it until it was on the cars. What did she see? In her own language she saw a log coming up on the back porch and pulled on to what the lumbermen call a deck, but what to the eyes of Flora Moon was simply a floor. She saw a man with the awfullest dirty hands yank a piece of iron, and a great block iron fixing came up through the floor and hit the log a pop that knocked it clear across the mill and then it popped back out of sight. She was told by a Swede that the fellow guilty of this act was known as a "steam nigger," but she failed to see any of the African around about and asked the Swede if he supposed she was green. Like the tricks that it is said are played upon the boys who attend the electrical schools in different parts of the country, when they are sent off for a bucket of steam, this young lady soon got the impression that the men around the mill had been posted about her coming, and just lied to her from one end of the mill to the other. They spoke about a dog, and a whole lot of things she knows are not found in any saw milll. She got some information as to what might be done with all the sawdust that accumulated around a saw mill. One considerate gentleman suggested to her that she should agitate for the organization of a company to manufacture dolls, as there was no stuffing so cheap and valuable for dolls. Flora had her experience before she got through with the boys that day.

* * * *

WITH hardwood dealers basswood has been one line in liberal demand this season. The question is raised why this wood should be classified as a hardwood, for it possesses many of the elements that are indigenious to other woods. It certainly borders more closely to the one than to the other. But, after all, it does not make much matter under what classification it comes, so long as it proves a good product for the lumber dealer, and this is the case, for it is coming into increased uses for cheap furniture, carriage bodies, inside finishings, and especially for mouldings and furniture frames. Canada has a good supply of basswood to furnish to all who want it.

FIRING STEAM BOILERS.

IF an engineer must hire the fireman, let him look first for a sober man ; next see that he is neat, careful and reliable; next ascertain if he wants to learn something new each day. If the man is a "know-it-all" it will not do to take him into the fire room. No matter what his other qualifications may be, he will not prove a financial success. His introduction to the coal pile will mean a considerable hole in the owner's pocket book. The new fireman, if he understands his business, and especially if he has a new boiler, will start a slow fire. He will be easy on that boiler for a day or two ; he will start the fire with wood, if possible, as that fuel can be regulated closer than any other form.

For a medium sized boiler, say 5x16 feet, he will be very lazy in getting up steam the first day. Probably three or four hours will be consumed in getting up the pressure. While this is being done he will have a good look at every seam and every rivet that is within his reach. He will take pains to let the air out of the boiler as soon as the pressure begins to start. This is easily done by leaving a gauge cock or two open, or by raising the safety valve if the lever variety is used.

After the new boiler has been gradually worked up to a pressure, he will let it stand an hour or to, then open the blow-off at surface, and give a chance for all the oil and light dirt to run out. After this the boiler may be put to work in earnest, and if the above directions be followed he will have very little trouble from leaky seams or tubes.—Tradesman.

OBSTINATE THUMPING.

SOMETIMES an engine which usually runs well develops an obstinate pound or thump, which persists in spite of all the doctoring that can be done to the machine. In vain the engineer will go from the wrist pin to the cross head, and from eccentric to bearing. Even the fly wheel and the manner in which it is keyed upon the shaft will be investigated, to see if the thump is located therein. After all these things have been tried in vain, just give the engine a trifle more compression and note the result. Probably it will cure or make it worse. In the latter case change the valve again and give a little less compression than there was before. In nineteen cases out of twenty the change in compression will do the business. The philosophy of the business is this: The compression is too little or too great to allow the engine to run smoothly over the centre; and at that point the piston gives a "yank," which causes wrist pin and connection and sometimes the main bearing to vibrate to the extent of the lost motion, forming the thump or pound, which is so objectionable to the good engine runner.

Christie's mill at Brandon, Man., has finished its cut of lumber for this season.

A very serious bush fire has been raging in the neighborhood of Canyon Creek, British Columbia, and within the timber limits of the Golden Lumber Company.

THE NEWS.

—W. Harris has parchased from John A. Bobier the saw mill at Port Talbot, Ont.

—A raft containing 7,000,000 feet of lumber recently passed through the St. Clair river.

—John Philp, of Grand Valley, Ont., has purchased a new 60 h. p. engine for his saw mill.

—An electric light plant has been placed in the St. Anthony Lumber Co's. mill at Whitney, Ont.

—Cameron Bros. have commenced to rebuild their saw mill at Hawkesbury, Ont., which was burned some time ago.

—Chew Bros., Midland, Ont., have a gang of men cleaning out Blair river as a channel for log-driving next spring.

—The Hawkesbury Lumber Co., of Hawkesbury, Ont., recently closed down four of their mills on account of low water.

—The cup presented by the Georgian Bay Lumber Co., to be played for annually by the G. T. R. employees, is valued at $150.

—Mickle, Dyment & Son's shingle mill at Severn Bridge, Ont., is shut down for the season, having made a short season's run.

—Col. F. M. Pope, of Robinson, Que., has placed a new Leonard engine in his saw mill. He has a large stock of logs to cut this season.

—J. O. Gilbert & Son, of Bishop's Crossing, Que., have added a large planing, matching and moulding machine to their steam saw mill equipment.

—The boom at Moore & Macdowall's saw mill at Prince Albert, N. W. T., broke recently, and released 500 logs, which went down the stream and were lost.

—The second annual celebration of the Arnprior Lumber Mills Association was held on Saturday, August 10th, and consisted of a trade procession and games.

—On the 8th of August, Daniel Cooligan, a saw mill hand of Buckingham, Que., was drowned in the tail race of the mill. He slipped while moving a jam of logs.

—The Anderson Furniture Co., of Woodstock, Ont., has been incorporated by the Ontario Government, to manufacture and deal in lumber and furniture of all kinds.

—The St. Francis Lumber Co., which lately bought the limits of the Brompton Mill Co. and the P. M. Partridge limits, have decided to build a saw mill at East Angus, Que.

—The owners of lumber vessels are petitioning the secretary of war to replace the red second class buoy at the entrance to the cut in the Saginaw river with a Pintseh gas buoy.

—A large quantity of logs and pulp wood have gone adrift and been lost at Portneuf, Que., owing to the high water. They belonged to Mr. Lemay, whose loss will be heavy.

—J. W. Howry & Sons, of Fenelon Falls, Ont., have finished operations on their limit at Whitefish river. They are said to be negotiating for another limit on the North channel.

—At Severn Bridge, Ont., in one day, Traiton Gammon sawed 27,000 shingles on a horizontal saw, and Walter McClelland trimmed them on a saw jointer. Can anyone beat this?

—A couple of sticks of British Columbia pine recently arrived at Kingston, to be used in the construction of a dredge. The sticks were seventy feet long and three feet square. The freight on the timber from Hastings, B. C., amounted to $700.

—Young Bros. & Co's. mill at River Hebert, N. S., has closed down for want of water. Their steam mill at Newville will cut in the vicinity of six million feet of long lumber and five million laths this season. The output of the two mills for the season is expected to be about ten million feet of long lumber and eight million laths, which will be the largest cut they have ever made in one season.

—The towing steamer "Daisy," owned by H. Calcutt, of Peterboro', was burned about two miles east of Hastings, on the Trent river, on the 3rd of August. The crew had a narrow escape, having to jump in the water and swim to the crib of the drive.

—Mr. Parmelee, Deputy Minister of Trade and Commerce, has issued a circular to a number of leading lumbermen, calling their attention to a letter received a few days ago from a gentleman in Constantinople, with reference to Turkey offering a good field for Canadian lumber.

—The mill men employed by the Ontario and Western Lumber Association, at Rat Portage, Ont., went on strike on the 8th of August for an increase of wages. Last spring wages were reduced from $1.50 to $1.35 per day, and the men demanded that the wages be raised to the former rate.

—The Co-operative Sash and Door Factory, of Kingston, Ont., has concluded its first year's business. A division of profits will not be made this year, as it has been decided to carry the funds forward to the end of another year. The profits would have given the employees a bonus of four per cent. on their wages.

—Forest fires have recently done considerable damage to timber lands in the vicinity of Moose Mountain, N. W. T., to prevent which the Dominion Government have decided to establish a permanent reserve there. The Moose Mountain country is forty miles long and thirty miles wide, and contains some valuable timber.

—Two wealthy lumbermen, Messrs. E. M. Fowler, of Chicago, and Arthur Hill, of Saginaw, accompanied by Mr. M. N. Quinn, lumber broker, of Saginaw, visited Pembroke, Ont., a fortnight ago. They own large tracts of timber on the Madawaska river, and their mission was to arrange for getting their logs cut in Pembroke. They were prepared either to erect a mill or give the contract out for cutting the timber on the limits. A valuable mill site was shown them by Mr. Thomas Hale, but the drawback seemed to be the lack of additional railway facilities, which will probably prevent the erection of the mill here.

CASUALTIES.

—Louis McAdam, of Stewartville, was killed a fortnight ago while breaking a jam of logs on the Madawaska river.

—R. D. Thuxton, lumber dealer, of Lindsay, Ont., was drowned in the river at that place on the 11th of August.

—Geo. W. Thompson, employed in the sash factory at Deseronto, Ont., was seriously injured recently while running a swing saw.

—H. Newens, an employee of the Cookshire Milling Co., Sawyerville, Que., was killed recently by being caught in the shafting of the saw mill.

—A young man named Henry McNutt, aged 19, employed in a saw mill at Canning, N. S, was caught by the belt and thrown against the engine wheel, receiving injuries from which he died almost instantly.

—Marshall T. Greene, president of the Chicago Lumber Company, was drowned at Highland Park on the 16th of August, while rowing on the lake.

—On the 20th ultimo the boiler in William Gordon's planing mill at Windsor, Ont., exploded, shattering the mill and killing an employee named Thompson.

—While engaged in operating a sawing machine in the Anderson Furniture Co's. factory at Woodstock, Ont., James Manzier had his hand drawn into the machine, completely serving the thumb and third and fourth fingers.

—W. C. Cone and R. J. Pringle narrowly escaped death recently at the Conger Lumber Co's. mill at Parry Sound Ont. Mr. Pringle was working at the friction in connection with the gang saw, and standing on the drive belt when the bell rang to start the gang. Pringle did not hear the alarm and was immediately thrown crossways of the belt when it started. Cone, reached forward to save his companion when he was caught by the moving belt and both were carried forward, falling on the floor in the lower part of the mill. They received severe injuries, but no limbs were broken.

TRADE NOTES.

Mr. Archibald Campbell, of Toronto Junction, who recently purchased one of the Parmenter patent dry kilns for his extensive cooperage works at that place, states that he is well pleased with it. A model of this kiln will be on view at the Industrial Exhibition, Toronto.

The Dodge Wood Split Pulley Co., of Toronto, have been given the contract for supplying the split pulleys, and split friction clutch pulleys for the Ottawa Porcelain & Carbon Co.'s extensive new works at Ottawa.

Mr. F. J. Drake, of Belleville, Ont., has entered into a contract with the Canadian Locomotive and Engine Co., to manufacture his celebrated saw and shingle mill machinery. Mr. Drake will superintend the work himself, and first-class workmanship may be expected.

The Dodge Wood Split Pulley Co., of Toronto, have supplied R. Thackeray, of Ottawa, with a very neatly designed rope drive for the transmission of the power required in the new extension just erected to his extensive planing mills. They have also supplied the required belt pulleys.

The Dodge Wood Split Pulley Co., of Toronto, have in hand two mammoth rope drives, for the E. B. Eddy Co., of Hull, Que., each drive to have a guaranteed capacity of h. p. The drives are used in the transmission of power from new McCormack water-wheels, being installed for the purpose of increasing the pulp grinding capacity of the company. The E. B. Eddy Co. are of the opinion that the rope drive is a long way ahead of any other means of transmission, especially for heavy work.

The Robb Engineering Co., of Amherst, N. S., have been appointed agents in Nova Scotia for the Dodge Wood Split Pulley Co., of Toronto, and will carry a full stock of pulleys in all sizes for immediate delivery. They will also handle the Dodge patent split friction clutches and couplings, special dynamo and motor pulleys, heavy saw mill pulleys, rope driving, etc. The Robb Engineering Co., being the leading mill supply people in the Maritime provinces, this will, no doubt, prove a valuable agency for the Dodge Co., and be a great convenience to pulley users in that district.

PUBLICATIONS.

The Timbermon, of Chicago, has celebrated its ninth anniversary by the publication of a special and very beautiful edition. Always bright, clever, newsy, and not least of its good qualities, courageous, it has given added emphasis to these features in the issue of 176 pages now before us. Matters of practical interest to the trade of all lands are discussed in its editorial pages, and it abounds in special papers, descriptive of particular lumber districts, and of the markets and trade of all leading sections of the country. It is most creditably printed, and its pages are enlivened with first class illustrations of various matters suggested by the great lumber industry of the continent. To a lumber journalist one of the most interesting features of the paper is the chapter headed Nine Years in Lumber Journalism, being a resumé of the editor's experiences, observations, etc., the article illustrated with portraits of Mr. J. E. Defebaugh, the editor-in-chief, and proprietor of the Timberman, and his clever and good looking staff.

An occasional assignment shows that there are concerns yet making furniture that should have quit two years ago.

Makers of veneers and veneer machines report good business. Prospects for fall business in everything connected with furniture making are encouraging.

Lumbermen's Supplies

We are making a Specialty of **Lumbermen's Supplies,** and are offering, with other goods, a **good Japan Tea,** fine draw and make, at **12½ cents.** Get a sample of this splendid Tea suitable for the Camp.

H. P. Eckardt & Co.

WHOLESALE GROCERS - TORONTO.

CAMP SUPPLIES

Being extensive operators in the lumber business, as well as Wholesale Grocers, we are exceptionally well qualified to fill orders for Lumbermen's Supplies.

MAIL ORDERS GIVEN PROMPT ATTENTION.

DAVIDSON & HAY

Wholesale Grocers TORONTO

BEARINGS AND JOURNALS.

CAST iron makes one of the very best bearing surfaces for a shaft if it is never allowed to lack for oil. But if it gets dry trouble is at hand. When a cast iron bearing gets dry it will do lots of mischief in a brief period of time. When it wants oil it wants it real bad, and it wants it right away; if it does not get it it seizes and tears the journal with great intensity of desire, as it were. This is particularly the case during the first few days of use. After considerable use, well supplied with oil, the surface becomes glazed and is not so likely to do damage from a little neglect in the way of oiling. Still the danger is there, modified in degree only. Cast iron bearings are not so much used as they would be but for this ever present danger.

A well-known steam engine builder and mechanical engineer, when he put his now well-known steam engine on the market, several years ago, knowing the value of cast iron bearings, determined to overcome what he believed to be a prejudice, and used it for main bearings and elsewhere about the engine. He was forced to give it up after a year or so of trial, proper attention not in many cases being given to oiling, with the stereotyped results.

When cast iron is used for a bearing the box should be made so as to cut off not less than ⅛ of an inch from each end in squaring up, as the ends are likely to be chilled a little in the mould, and unless cut off for a little distance in there will be a narrow ring of metal that is harder than the rest of the bearing surface, and the journal will be cut. For a similar reason a liberal allowance should be made for boring.

Generally speaking, the bearing and journal should not be made of the same material, although this may sometimes be unavoidable. Cast iron appears to be about the only exception, a cast iron journal and bearing running together nicely, but for the exception previously mentioned, that is, when there is danger of getting dry.

Cast steel does very well if both journal and bearing are hardened, and the same is true of wrought iron when case-hardened. But in both these instances, the journal and bearing are special, that is, they are not such as are made for ordinary purposes, their cost being too great.

Almost the universal rule at the present time is to use some kind of lining metal, of which babbit metal, made according to the original formula, is an excellent example. Many cheap substitutes for this are made and erroneously called babbitt metal, but their chief merit is usually covered by their quality of being cheap. In this respect cheapness oftens covers a good deal of lead and a little antimony. There are, however, several patented alloys for lining boxes, some of which possess undoubted merit.

Babbitt metal proper consists of two pounds copper, four pounds antimony and forty-eight pounds tin.

A substitute for this which is said to give good results is composed of 11½ pounds copper, 15½ pounds antimony, 47 pounds tin and one pound of yellow brass. These are melted together and two pounds of tin for each pound of the mixture is added.

Neither of the above named alloys is cheap except in the sense that what is good is generally the cheapest in the end.

In lining boxes both the shaft or babbitting mandrel, as the case may be, as well as the boxes, should be made quite warm; this will prevent the lining metal from chilling and blocking up its own passage and will also modify to some extent the inevitable effects of shrinkage.

Sometimes, in the instance of brass shells, the surface is tinned, the lining metal then adhering to the tin and preventing the lining from being shaky when cold.

In crank shaft boxes connecting rod boxes and other first-class machinery, the lining metal is stretched after becoming cold by hammering with a round power hammer, then bound to size.

In more common machinery, a babbitt mandrel a little larger than the shaft is used, and the boxes go just as poured.

When it is necessary to babbitt a shaft in place, in order to compensate for the contraction of the metal, a piece of paper may be wrapped smoothly around it and held in place by a fine thread wound three or four times spirally, or, more properly speaking, vertically, around it. This paper, if of the right thickness, when removed after babbitting will leave a good running fit between the journal and bearing. For a shaft about 2-inches in diameter ordinary letter paper will serve the purpose, while heavier paper can be used for larger shafts.

THE man who takes the trouble to invent little tools and jigs for helping along his work is a valuable man to have, and the right kind of a foreman will encourage him by taking an interest in it, suggesting points or other applications, and in other ways showing him that his efforts are appreciated. All jigs may not be economical and all plans suggested for work may not be useful, but the right kind of a foreman will have his men feel free to discuss these questions before the tools are made, and by so doing save the cost of various experiments.—Machinery.

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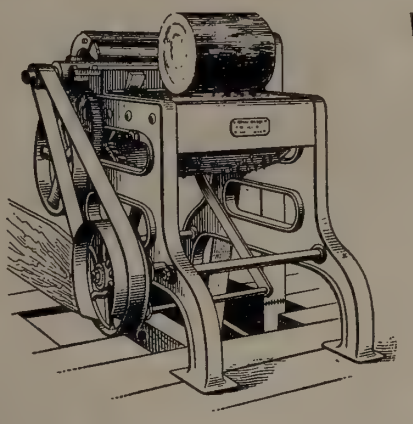

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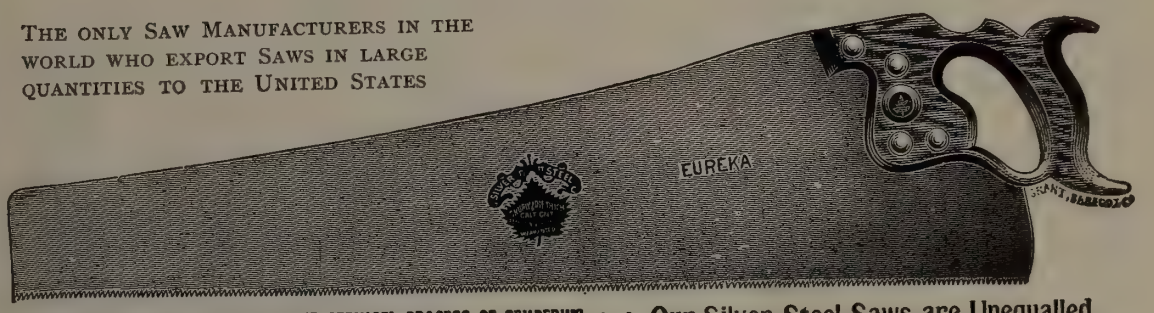

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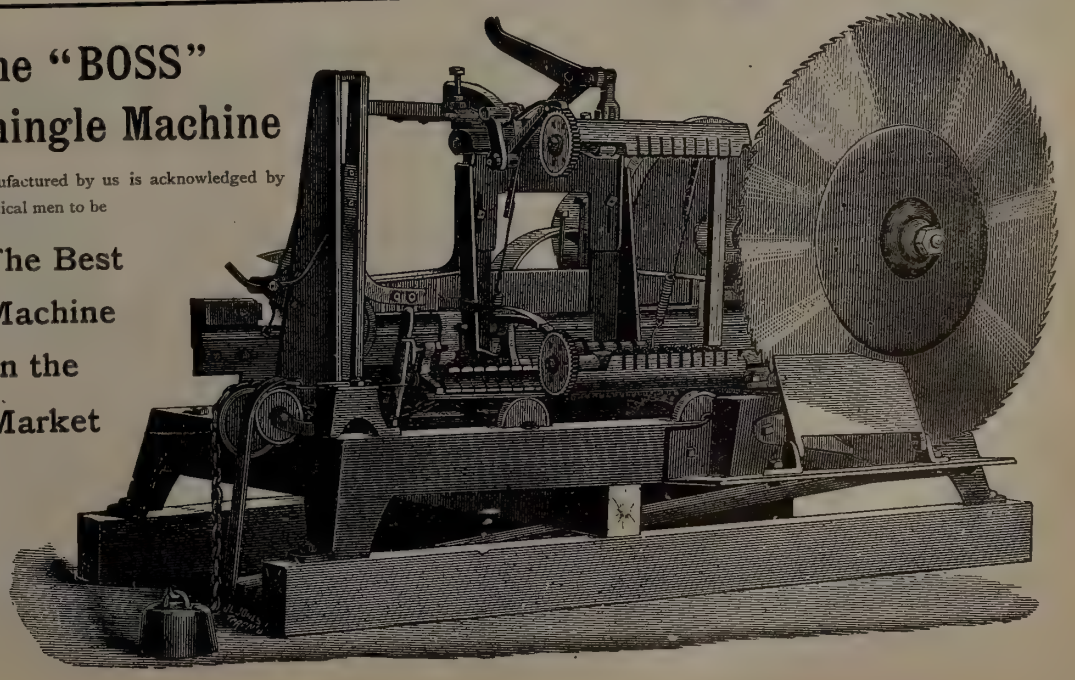

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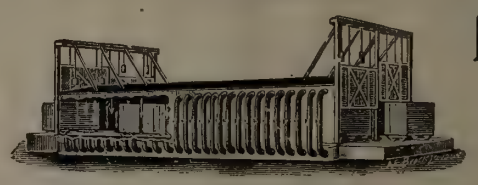

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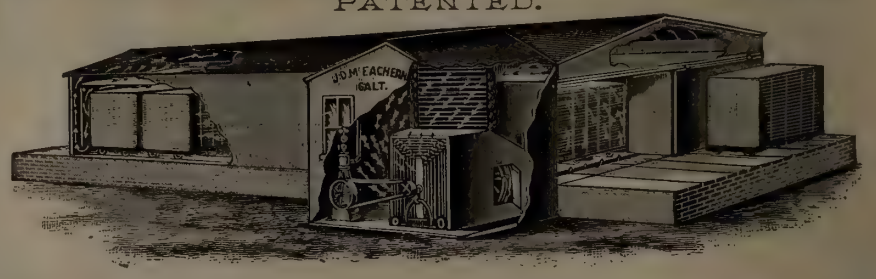

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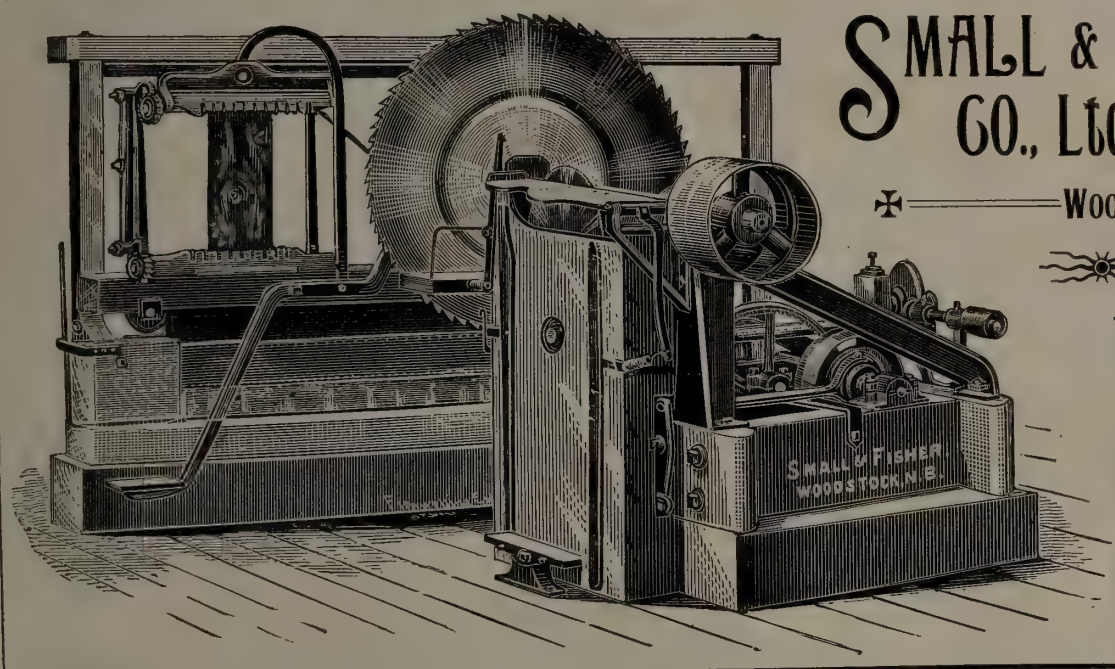
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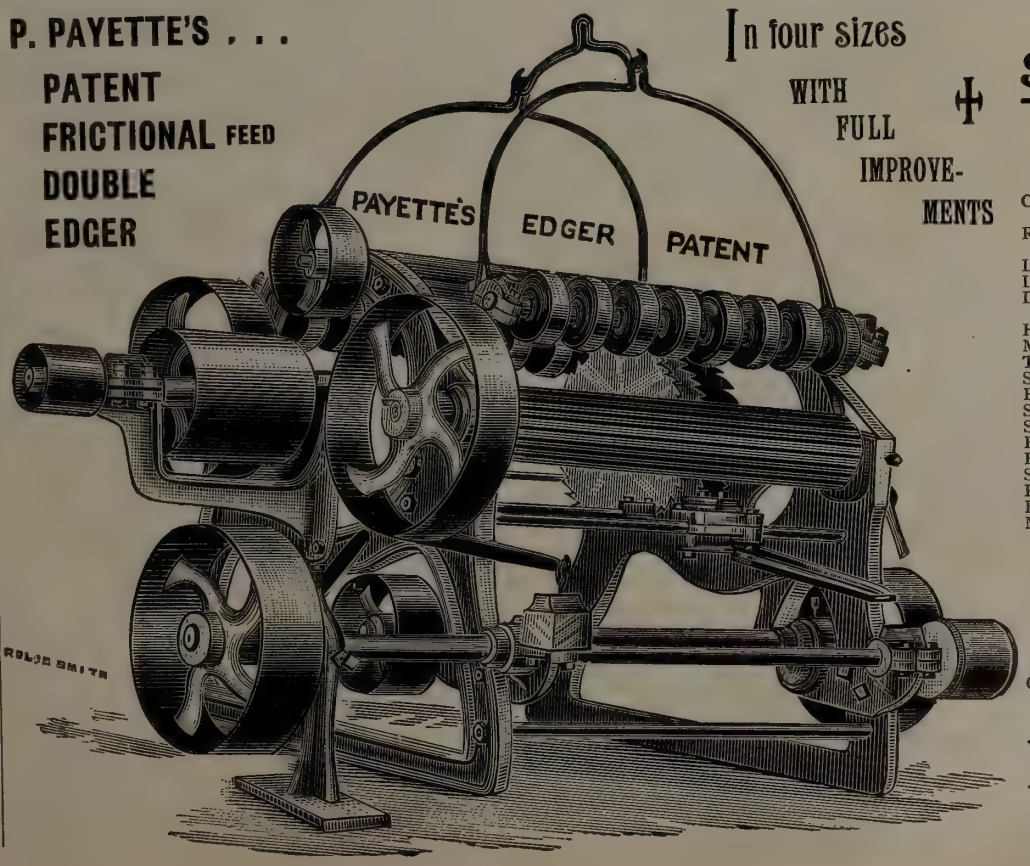

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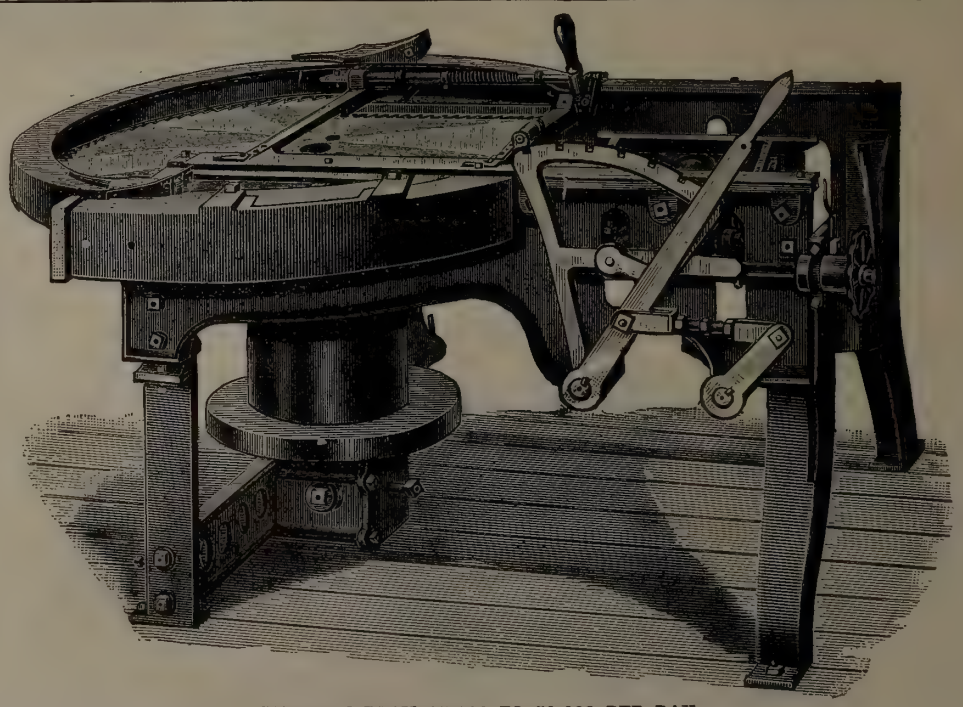

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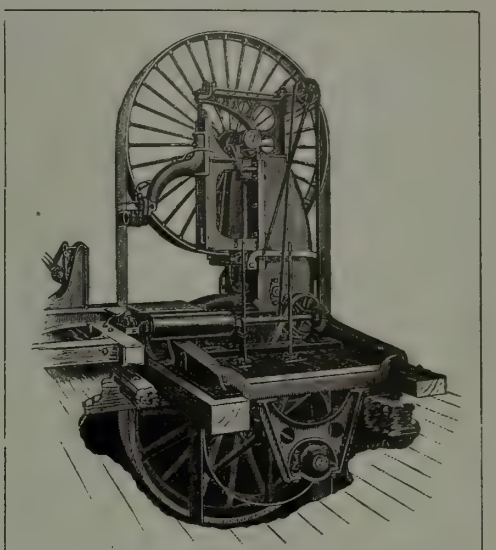

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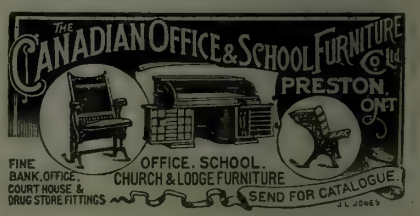

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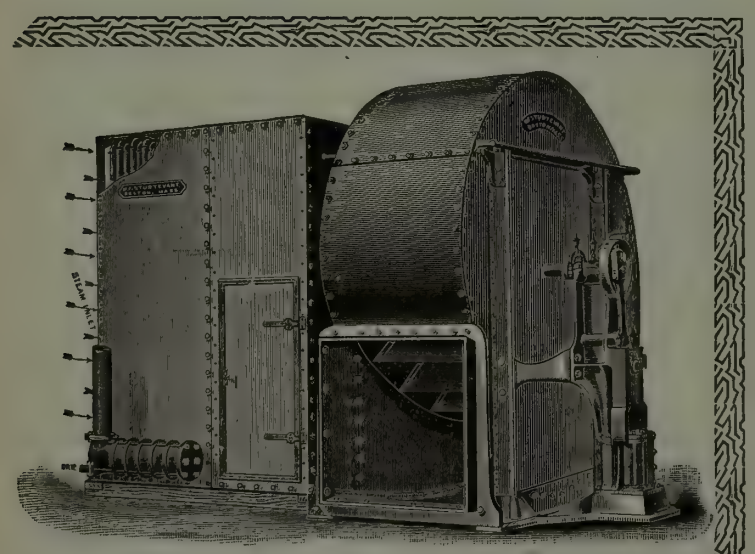

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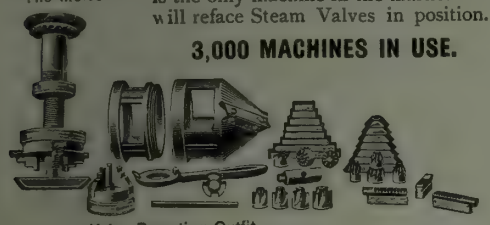

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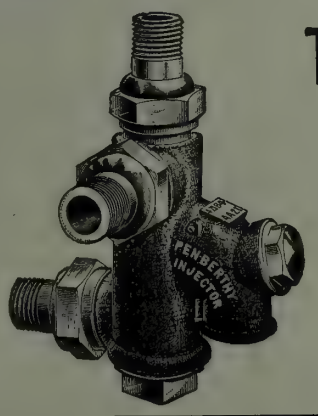

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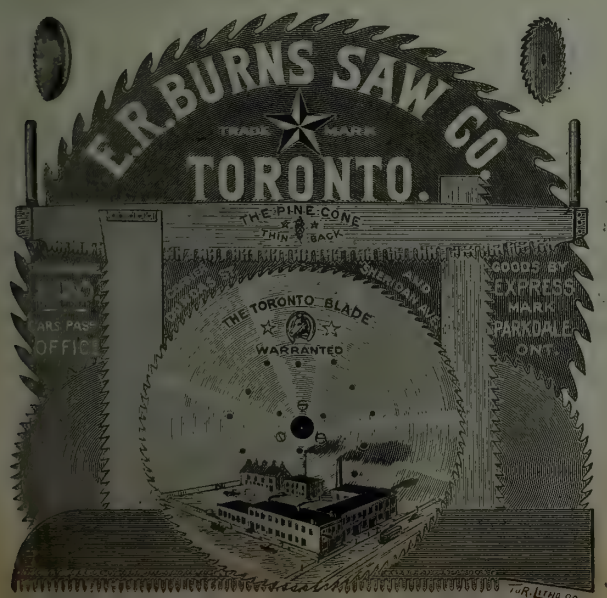

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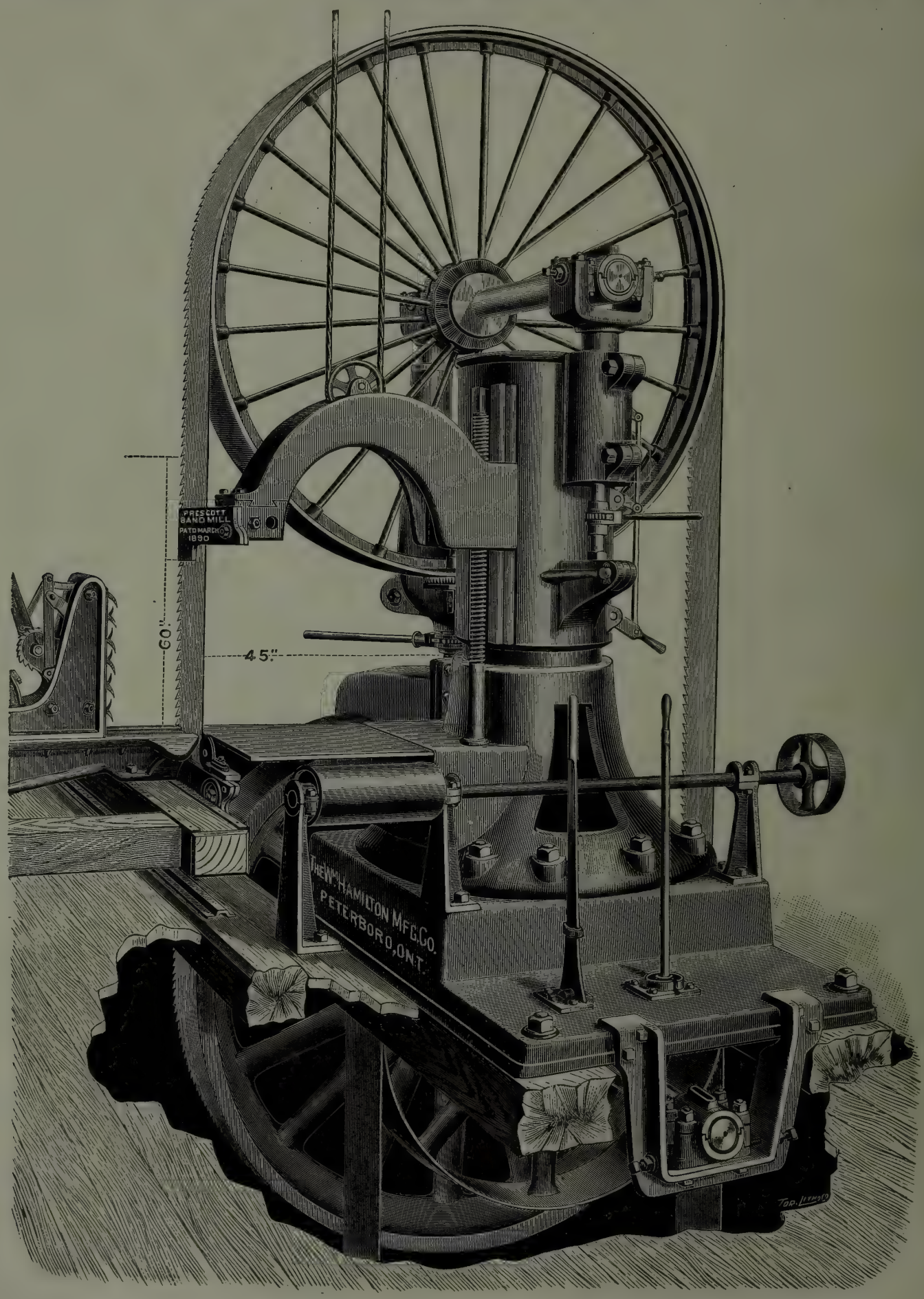

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THE CANADA LUMBERMAN

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UNITED ASSOCIATIONS OF LUMBERMEN.

SIXTH ANNUAL CONVENTION AT BUFFALO.

THE Sixth Annual Convention of the United Associations of Lumbermen was held at Buffalo on the 3rd, 4th and 5th of September. It was one of the most important meetings yet held by the organization, and was of great interest to lumbermen generally. Its meetings are never popular in the sense of being generally attended by the trade at large, as its membership is made up of delegates from the various retail organizations east and west. As the record shows, however, there was a liberal sprinkling of members of the retail trade, other than delegates, in attendance, and the manner in which the wholesale trade of Buffalo and Tonawanda entertained the visitors was in keeping with the reputation previously established in that respect.

On the program were eighteen papers to be read, on subjects touching all branches of the trade, and embracing the best thought of the members on matters of paramount importance to the industry whose interests they had met to consider. Two papers on mutual insurance among lumbermen created great interest and provoked considerable discussion, bringing out, as might be expected, considerable difference of opinion.

At the opening session President John W. Barry occupied the chair, and Secretary J. L. Lane was present to call the roll. Some sixty delegates answered to their names, including a number from Canada. The association was welcomed to Buffalo by the Mayor of the city in a brief address, to which president Barry replied as follows :—

On behalf of the United Associations of Lumbermen, it is my privilege, it is my pleasure, to extend to you and to the city of Buffalo our most hearty thanks. We accept your welcome in the spirit in which it is given, for we recognize it as the real, genuine "all-heart grade," sawed true and plump. In the language of the lumberman, it is "clear and well manufactured;" a welcome after the lumberman's own heart. However, we would be wanting in that nice discrimination as to the proprieties of conditions and circumstances, did we not recognize the fact that this welcome is extended us, not in a personal way, but in behalf of the great lumber industry which we represent. For be it known to all that the great lumber industry has more capital invested in it than any other industry. For proof of this I cite you to the census of 1890, from which you will learn that the capital invested in the lumber industry is double that invested in any other. Yea, more, that this capital exceeds one-tenth of the aggregate capital invested in all manufacturing industries. We, being the representatives of this trade, receive these courtesies. We are the accidents of time, and the recipients of favors due to position. Truly, it is better to to be born lucky than rich, if, like us, you can be lucky most of the time. But the city of Buffalo has for us added charms. We feel that we are visiting one of the landmarks of the great republic. Why, it is within the memory of man that Madison vetoed the canal bill on account of the pressure brought to bear upon him by the New England states. For, said they, it will never do to open up this waterway to encourage the people to go to the west. Think of it! Buffalo the west. But true to western characteristics you crossed the then plains, as of old the pilgrims crossed the sea, to make out of the west, as they of the east, the "home of the free." You built the canal without national aid. It is within the memory of men living here that Governor Clinton was towed in his little Seneca Chief into the canal, and after a most rapid trip of nine days found himself in New York Bay, and amid the booming cannons and the shouts of an excited populace he raised on high the little green keg of water which he had brought from Lake Erie and mingled it with the turbulent waters of the great Atlantic, thus sealing for all time the commerce of Buffalo, a commerce which in proportion to population is greater than that of any other city in the world.

But, sir, pleased as we are with all this, it is my unpleasant duty to mention the one objection to your welcome. As was said before, we find it "all heart," "strictly clear and well manufactured," a genuine lumberman's welcome, but after due trial and strict examination, I find it to be not "strictly dry"—in fact it is "wet stock." Now you are well aware that wet stock is very obectionable to lumbermen, but happily on this occasion this objection does not hold, for the delegates to the present convention, and more especially those from Kansas and Iowa, as well as the members of the press, were selected with special reference to their ability to handle "wet stock" to the best advantage, so that this objection will for the present be passed unnoticed, uncorked and unknown. But sir, in all seriousness, we meet your greeting with greeting, for your roses of welcome we tender you the sweet forget-me-nots of memory. These courtesies will not be forgotten. We could not if we would, and we would not if we could.

Gentlemen of the Convention : It seems but fitting at this time that something should be said as to the future of the organization, and as to the work of your present officers. Two years ago at Cleveland I was honored with the presidency, and I then and there resolved to do all in my power to make this organization a truly representative one of the whole lumber trade. I could not see the object of having it wholly retail, for have not the retailers their local associations in which the unswerving devotions of the wholesalers to the retailers is annually recounted in unbroken concatenations of prose, poetry and song? Neither could I see the object of having it wholly wholesale, for does not each recurring moon find the wholesalers in session discussing the unkicking, unthinking propensities of the retailer, and vainly endeavoring to reduce the price list just in time for him to lay in his season's stock. No, not an organization for one, but for both. After much work and voluminous correspondence by myself and with the best of help we secured a fairly good representation of the entire trade at the Denver meeting last year. Indeed, we had a paper from a member of the Mississippi Valley Lumbermen's Association, one from the Southern Lumber Manufacturers' Association, and one from the Mississippi Association. On being re-elected last fall, after a conference with your secretary, it was decided to push this line of work to the end that at this meeting this Association could be organized into a real national association to which all differences between lumbermen might be referred, as a court of final resort. For so long as brother differs from brother in politics, so long as sister differs with sister on religion, so long as husband differs with wife on family affairs, we must expect that even lumbermen will have differences on business affairs. Indeed when we think of it the wonder is that there are not more differences, for in every transaction between two real persons there are in reality involved six distinct personalities. This is what is known as the personal trinity. For instance, take a transaction between myself, you and your secretary; there is Lane, the real Lane that God made, Lane as he sees himself and Lane at I see him. Three distinct personalities. Then there is Barry, the real Barry that God made, and known only to his Maker, Barry as he sees himself, and Barry as Lane sees him. Now among the the six persons to this deal is it any wonder that differences should arise? But this organization is well calculated from its cosmopolitan character to settle these differences, for generally when differences are fully understood there is little difficulty in settling them amicably. Our firm in an experience of 23 years never had a claim which, after being shown to be just, was not freely and willingly allowed. But whether these changes will be made or not it is with you, gentlemen, to say. We can go no further. But whether or not these changes, or any changes, shall be made, each one that comes here will be the better for coming. You will return to your homes with a broader charity and a firmer faith—faith that leads man from the known to the unknown—faith that is the essential element of all human progress. You will carry with you a brighter hope; sweet

> "Hope that, like the taper's gleaming light,
> Adorns and cheers the way,
> And still, as darker grows the night,
> Emits a brighter day."

The secretary made a few remarks urging the importance of the association, and then submitted the financial statement, which showed receipts $312.75; expendlture $77.73; balance on hand $235.02.

The first paper discussed was one by Mr. L. A. Mansfield, of New Haven, on "The Contractors' Credit System," after which the subject of "Insurance" came up, being introduced by Mr. W. C. Johnson, of Fitchburg, who as president of the Massachusetts Retail Association and of the Lumber Mutual Fire Insurance Co., was well qualified to deal with it. He gave statistics showing the vast sums paid in premiums by lumbermen. The cost of insurance is about twice as much as the aggregate of fire losses. He suggested a number of remedial changes through legislation. A supplementary paper on the same subject was read by Edward Henson, of Philadelphia, and he suggested that a committee be appointed to investigate the workings of three mutual companies now operating, and that a standard insurance committee be established by the United Associations. W. G. Hollis, of Minneapolis, of the fire insurance company organized by the Northwestern Lumbermen's Association, spoke of the risks in the west, and described them as much different from eastern hazards, and said the result was very satisfactory after a trial of eighteen months. No dividends are paid and the policy holder is charged a proportionate amount of losses, expenses, etc. A deposit is made by each policy holder, which is forfeited if the assessment is not paid. L. R. Hawes, of Sandusky, also described the operations of a lumbermen's mutual fire insurance company in which he is interested.

F. L. Wagar, secretary of the Alabama association, spoke briefly on the benefits of the united organization, and congratulated the members on the happy results attained.

At a subsequent session President Barry spoke in highly complimentary terms of the lumber press and the valuable service they render to the trade.

A paper by C. L. Blakeslee, of Albany, was read by S. H. Beach, of Rome. It was entitled "The Wholesale Consumer," and was an able argument in favor of retailers, and the acknowledgement and protection of their rights and interests. In discussing the paper, E. M. Willard, of Philadelphia, spoke of the enormous growth of the lumber interests of Buffalo and Tonawanda, and the mutual interests between wholesale and retail dealers and manufacturers. Mr. Drake, of the Texas association said the wholesale consumers are enumerated in the by-laws of the body, including the state of Texas, penitentiaries, foreign bridge companies, and all dealers who annually use 200,000 feet of lumber, and this plan leaves nothing to be decided by arbitration committees.

Other papers dealt with such subjects as "Influence of United Associations," "Local Associations," "The Territory of the Retailer," "Early Days of the Retail Trade," "What Constitutes a Regular Dealer," "Management of Retail Yards," "The Attitude of the Retailer to the Wholesaler and Manufacturer," "The Wholesaler," "The Scalper," etc, etc. The papers are to be printed in pamphlet form for distribution.

A resolution was passed recommending that all arbitration committees consists of nine members, three chosen by each of the contending parties and three by the six thus chosen.

The following were elected officers for the ensuing year:—President, G. A. R. Simpson, Minneapolis, Minn.; first vice-president, R. W. English, Denver, Colo.; second vice-president, C. W. English, Mont Clair, N. J.; secretary, John L. Lane, Kansas City, Mo.

The third day of the Convention was given up to the social feature. The delegates, with other invited friends, were taken to Niagara Falls as the guests of the Wholesale Lumber Dealers Associations of Buffalo and Tonawanda. They went by steamer to the terminus of the electric railway on the Canada side, over that road to Queenston, across to Lewiston, then back to the Falls by the new Gorge Railway. Dinner was served at the International Hotel, after which the party visited the works of the Cataract Construction Co. and Niagara Falls Paper Co., then back to Buffalo by steamer. It was a delightful trip and the visitors thoroughly enjoyed themselves.

The headquarters of the Convention were at the Iroquois Hotel, in the parlors of which a reception was held. The meetings took place in the handsome room of the Builders' Exchange, one of the finest business blocks in the city.

A carriage drive about the city, headed by a tally-ho coach and four, was not the least enjoyable feature of the meeting.

CORRESPONDENCE

Letters are invited from our readers on matters of practical and timely interest to the lumber trades. To secure insertion all communications must be accompanied with name and address of writer, not necessarily for publication. The publisher will not hold himself responsible for opinions of correspondents.

UNIFORMITY OF GRADING.

To the Editor of the CANADA LUMBERMAN:

SIR,—I would like to call the attention of the lumber trade to some of the difficulties which have been felt by all, more or less, and which the dull times and close competition necessarily attendant thereon have emphasized. I allude to the want of uniformity of grading and inspecting lumber between us and our best customers, the United States. I think it should be our aim to remedy this evil, and the only way it can be done is by the united co-operation of all the people interested on this side of the line. Our Boards of Trade and our representatives in Parliament might take it up, but first become united and decide definitely what reforms we want, and then have our representative bodies take the matter up with the Boards of Trade and Associations of lumber dealers in the U. S. In this way much more may be accomplished than if the matter is left to individual effort.

What do we want? In my estimation we want uniformity of grading and laws to cover the same; we want a common standard, so that all may know when a certain grade is spoken of exactly what is meant—a standard that will not fluctuate with the rise and fall of the market. Let the prices be high or low, this standard will be the measure of quality of what we have to buy or sell. As the value of gold depends on its fineness and its abundance or scarcity, so let our standard of quality be the same. I need hardly remind my lumber friends of the trouble and annoyance that is caused by the difference in meaning attached to common names and terms, as for instance, "Common" or "Fine Common," would mean in the American markets an entirely different and much superior grade to what it does here; the same with the term "Dressing," which here means almost anything that will hang together long enough to go through the planer. On the other side it is a grade that must have two clear edges, and the defects must be in the nature of small sound knots. Generally it must be of a quality to make tight work, that would not allow water to leak through it. There are other discrepancies that will readily occur to the dealer, such as No. 1 Culls in the New York market and No. 1 Culls at the mills on the Georgian Bay.

If we can get uniformity in our names of grades, and also in our understanding of what the quality should be, then the question of price can be left to take care of itself; but now a dealer who finds himself with a large stock on hand may be inclined to say, "I am prepared to give my customers any quality they want. I will sell them shipping culls at a low figure and let them call it what they like, so long as I get my money. I will make three or four kinds of Box, or Dressing, and sell them at different prices. If a man wants a cheap lot, I will give him one out of which all the best and widest boards have been taken, and then I can sell the wider lots for more, and thus get an average." This reasoning may look all right on the face of it, but it is bad for the individual who adopts it, and it is bad for the rest of trade, as a lot of lumber sold of a certain quality at a certain price, fixes that as the market price of that grade, and if a lot is sold at a lower price than the regular market rate, the fact that it is a "doctored" lot is suppressed, and thus it has a depressing effect on the market. I say, keep up your grades and keep them uniform. If the supply of any kind of timber runs out, and the quality of the logs will not make lumber of the thickness, width or clearness set by the rules laid down, then there might be a revision of the rules and a modification of the standard made, but these changes should only be made when absolutely necessary and at a meeting of the representatives of all parties concerned.

Another reason why we should have a common standard of inspection is: Our customers on the other side buy of us goods of a certain quality, which we undertake to furnish according to our rules of inspection, delivery to be at point of shipment. Well, the goods go on to New York or Boston and very often when they reach there they are refused for trivial reasons, or an inspector is put on and the goods remeasured and inspected, and great discrepancies reported and allowances demanded, or threatened refusal of the goods and consequent handling and storage charges. Now these discrepancies could only occur for two reasons. First—want of uniformity in our inspection of lumber, called by the same in the two markets. Second—dishonest inspectors at either or both ends. If the same system of grading existed in both countries, the inspector who shipped would get so near the right grade that the receiving inspector would not dare make such reports as are too common now. It would be too palpable and glaring a steal that his employer could not afford to allow him to "make his wages and a little more that way."

The same reasons hold good for a rule or standard of inspection that will govern, and that can be enforced between the buyer and seller in our own market. The absence of this has led to conflicts between dealers and manufacturers. The dealer has sold a quality that has an actual definition and description in the New York or Boston market, and he makes his bargain with the manufacturer for this grade, but when he sends his inspector to ship it, the mill man finds the inspection different to what he expected it would be, or as some other person tells him it ought to be. He "fires" the inspector and will not let the purchaser have the lumber sold, thus entailing loss of profit the buyer should have made on the goods, and the buyer's time and expenses. In small lots of lumber, to try and enforce by law a bargain thus made, would cost more in time and annoyance than it would be worth. If this should be repeated in a number of purchases, the dealer is often put to a great deal of inconvenience, and suffers considerable loss besides. He has to fill the orders he has taken and must get it of the quality called for in his sale. In order to do this, what constitutes a certain grade should be plainly laid down, so that the consumer or dealer who buys in the United States, and the dealer or manufacturer here, may all understand what constitutes the grade sold, and hence avoid confusion, annoyance and loss; and it will also to a large extent prevent the "wobbling" dealer from doing his peculiar style of business—the wobbler being the man who will sell by any inspection and buy the same way.

In order to determine matters of dispute between parties to a purchase or sale, Boards of Trade and Lumbermen's Associations should have power to appoint qualified inspectors and graders—not that it should be imperative that all transactions should be determined by such inspection, but that in event of a disagreement between the buver and seller, such an inspector, appointed either by Government or Board of Trade or Association, might be called in to act as official arbitrator as to the grading or quality. This would in a large measure get over the difficulties occurring between our dealers here and the manufacturers; and our friends on the other side, seeing and knowing our grades were established, would have more confidence in getting their purchases from us properly inspected here, and some who have calculated somewhat on our differences of grading to ask for large allowances, would find that we were working too closely to a common line to ask for or expect any such allowances or deductions. It would also have the effect of developing trade between the two countries. One great difficulty we have always had to encounter here was this difference of grading. It is one of the reasons that has led to Saginaw, Bay City and Buffalo doing a larger trade than Collingwood, Waubaushene or Toronto. In the former cities they laid themselves out to make their lumber conform to the demands of the Eastern market, and they got the business. Our dealers and manufacturers have too long tried the other line of "How poor can we get our customers to take our lumber and how much can we make them pay for it." When lumber is in brisk demand this may apparently work all right, but when dull times come the buyer is apt to say, "These people salted me when I had to buy from them; made me take culls and pay big prices; now I can get all I want elsewhere and get just what quality I buy. I will let these Canadians keep their stock till they want to grade it as we require it for our markets." In that way the want of uniformity in grading tells against us. A market becomes great or otherwise according as traders find it suits their requirements. If they can get what they want, as they want it and when they want it, then there will be competition and an enlargement of the market; but if they find that while there are plenty of goods, they are not put up to suit their trade, and no disposition is shown on the part of the sellers to try and put their goods up as wanted or ship them in the time wanted, the buyers are going to quit that market and it is going to decline.

There is too much of the latter style about our ways of doing business, and particularly in regard to grading. Will some of the influential men in our trade take this question up and try and bring it to a satisfactory issue. If this can be done I feel it will prove of the greatest service to the lumber trade of this country. The grain trade of Canada is one of our most important industries, but I do not think that it distributes as much money to as large a number of people as does the lumber industry, and yet they have a grain standard by which all purchases and sales are regulated, and it works for the benefit of both farmer and grain merchant and establishes confidence in our grades among the buyers in England or the continent. Why should not the same rule work in the lumber trade? It is of national as well as of local importance, for what an army of men are dependent on lumbering operations. The railways and their employees, the vessels and their crews, are all interested in the question of whether the lumber business is brisk or dull. The uniformity of inspection will not make lines either good or bad of itself, but it will materially assist in the building up of trade.

ONE INTERESTED.

AUTOMATIC SPRINKLERS

THE automatic sprinklers with which many of the larger mills are equipped have greatly demonstrated their value and the worth of the protection they give, during the year past, by stopping incipient fires before they had become actual ones. They have also demonstrated another thing, namely, that they are not good for anything, in fact are worse than nothing, because they produce a false feeling of security, like a revolver that when you need it is too rusty to turn the cylinder, or operate the hammer, unless they are kept in good, solid working order. If they are neglected, allowed to get rusty, or the apparatus working stiff and unreliably, or the water supply is allowed to get short, they cannot be expected to do their work any better than a night watchman in the same condition. Machines that work automatically, that are allowed to get out of working order and are not kept fully up to their proper standard of efficiency, are no better than the human working machine that is allowed to run down and lose his self-respect and interest in his work and the welfare of his employer.

AUSTRALIAN TIMBER.

EVEN in far away Australia the Government is taking the care of the forests into its own hands and the colonies have each a forestry department, under the supervision of a conservator, so that the wanton destruction of timber which formerly went on is not now permitted. Among the woods for which Australia is noted are blue gums, gray gums, memeto, mountain ash, red gum, iron bark, karri and jarrah trees, and from these are cut timber suitable for railway sleepers, bridge work, piles, wharf work and other engineering and building purposes. Some of these timbers are said to be almost indestructible when exposed. They also take a very high polish and are useful for ornamental purposes. The Jarrah wood has lately been brought into prominence to a great extent as a timber suitable for pillng as it resists the attack of the teredo navalis. Then there are the blackwoods of Victoria and Tasmania and a cedar of New South Wales and Queensland, admirably suited for fine cabinet work. Kauri pine is said to make an excellent wood foi boat building, house fitting and many other purposes, being close grained and free from knots, which is characteristic of Australian woods in general. Quite a business has been worked up in exporting these woods to England and the continent where they are laid down at as low prices as many Sweedish, Canadian and American woods.

WATEROUS ENGINE COMPANY'S NEW WORKS.

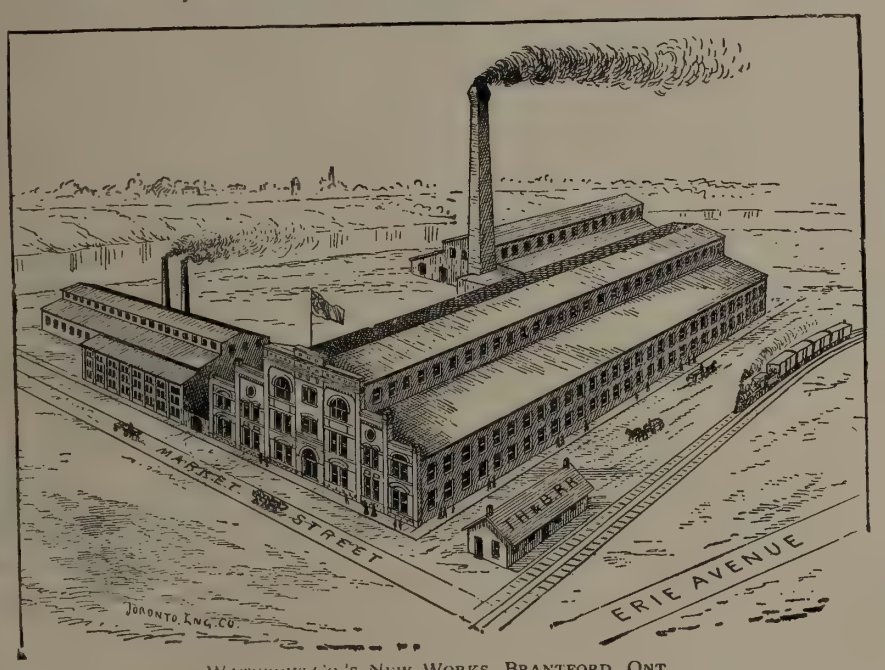
THE accompanying cut illustrates the new buildings being erected in Brantford by the Waterous Engine Works Co. Ltd. The buildings are what may be called gallery construction. The main one is 300 feet long and 120 feet wide, having a central space of 40 feet wide running to the roof, over which a traveling crane will be operated. On each side of the centre is a 40-foot space with a gallery the full length of the building.

The foundry, or moulding shop, is 80 feet wide and 100 feet long, with a central space of 40 feet and two side spaces of 20 feet each; in one of the latter the cupolas will be placed. On one side of the foundry is the pattern room or vault, separated by a solid and heavy fire wall. The power house is 40 x 60 feet, and in this building next to the main building will be the wash room of the men. The building will be large enough to contain the boilers, engine, dynamo, pumps, air compressor, etc.

It was thought advisable to place the blacksmith shop, boiler shop, and main building together to avoid any long distance between them. Thus the blacksmith shop, which is 50 x 80 feet, is between the main building and the boiler shop; one wall of the main building forms one side of the blacksmith shop, and the wall between the blacksmith shop and the boiler shop forms the other wall, so the blacksmith shop, main building and boiler shop are all connected. The boiler shop is 87 x 120 feet.

Lighting is done from the sides and the roof. Heating will be by the hot blast system, and for water, an excellent supply has been found on the premises. Railway tracks will enter the main building and the boiler shop, and other tracks will be laid in the yard, from which shipments can be made and material received without the need of teaming. The works when completed will be capable of giving employment to at least 400 men. Every care will be taken and arrangements made to insure their convenience, and to permit of handling the work to be done with the least possible labor.

The company are pushing the work forward as fast as possible, and expect by the 1st of January, 1896, to be fully settled in their new premises. They have occupied their present site for 51 years, and although they have rebuilt, enlarged, and secured all available space, they have entirely outgrown the premises. For the past year they have been forced to run much of the time from 15 to 17 hours per day, although employing 240 men in premises not adapted to more than 150 to 170 with comfort.



WATEROUS CO.'S NEW WORKS, BRANTFORD, ONT.

ASPEN WOOD FOR MATCHES.

WE are nor aware that aspen has ever been employed in Canada for making matches. There is indeed no occasion to use it, pine being so plentiful, but experiments made in other countries show that it is particularly well fitted for this purpose.

The manufacture of matches in Germany, which has risen to be an industry of importance, employs pine, poplar, aspen, linden and birch woods. Of these woods, aspen has proved itself indispensible in the manufacture of matches by reason of its natural qualities and the ease with which it can be worked up. It is distinguished by its large structure, ready combustability, freedom from knots and uniformity of substance.

The flame of a match, as is well known, is conveyed to the wood from the igniting composition of sulphur, as in the case of lucifers, into which the splints are dipped. In the case of Swedish matches the sulphur is substituted by paraffin. The sulphur, where this is used, remains on the outside of the wood and dries at once. The paraffin, however, must penetrate into the wood, partly because the matches would otherwise stick to each other, but principally because the paraffin becomes fluid again at even low degrees of heat, and would penetrate the igniting composition and render it useless. For safety matches, therefore, a wood is required which has light and spongy pores, as found only in the aspen, whose bright white color further gives it an agreeable appearance. Poplar has a gray color and is brittle; birch wood becomes yellow and is seldom attainable in stout logs. These woods are also slow of combustion. Pine and fir woods take up little paraffin, owing to the resin they contain.

In order to keep the pores as open as possible, and also to work up the wood to the greatest advantage, the aspen splint is produced by flaking. Aspen possesses the quality of being flakable to a very high degree. The flaking is done by causing a knife to revolve around a log which rotates on its own axis. The wood is divided into ribbons of the thickness and width of a match; these ribbons are laid evenly, one above the other, and cut into square splints.

In consequence of the uniformity of the annual layers, aspen wood produces perfectly homogeneous ribbons or splints. This is not the case when other kinds of wood, like fir, etc., are flaked. The absence of all structure or grain further enables aspen wood to be flaked into thin shavings, which are worked by other machines into the familiar match boxes. Just this fact that both match splints and box shavings can be produced by one machine from one material calls for the employment of aspen wood.

Attempts have been made to flake fir and pine woods as substitutes for aspen, but it is not known that any results of importance have been obtained. The reason why the last-mentioned woods cannot be flaked is probably because of the difference in the annual rings between the spring and the fall wood—that is, between the inside of the ring and its extreme outside the difference is too great. The fall wood is too solid, the spring wood too soft, and the annual rings are of varying thicknesses, according to the location of the tree, while, even in the case of pine, the knife is apt to slip and cut ribbons of unequal thickness. In the case of aspen wood, each ribbon is like the other, a circumstance of the utmost importance for the further processes.

Match manufacturers require that the aspen wood should be free from rotten pith, and, as far as possible, free from knots—free from pith, otherwise the wood cannot be fixed in the flaking machine: free from knots, because the wood round the knots is decayed. The wood should be further straight grown and of loose texture. The aspen is available for match making as soon as the trunk has a diameter of 8 inches. The demand is greatest for trunks with a diameter of 10 to 24 inches. To attain this size a period of twenty-five to sixty years is neeessary, according to the nature of the soil, position, etc. Trunks from twenty to thirty-five years old are preferred to younger growths, for the reason that the method of manufacture produces the same amount of waste, whether the trunks be small or large.

The match factories which employ aspen wood are mostly situated in Silesia, Pomerania, Schleswig-Holstein, Bavaria, Rhine Province, Alsace-Lorraine, Rhine Palatinate, and the Duchy of Anhalt. These factories use on the whole 4,000,000 to 5,500,000 cubic feet of aspen wood, of which about 3,500,000 cubic feet are imported from Russia.

A FEMALE REPORTER IN A SAW MILL.

NATURALLY, I visited the big mill first. At the St. Paul and Tacoma Lumber Company's Mill I found everything going to beat all. Capt. Everett Griggs, the superintendent, told me that the best way to see how lumber was manufactured would be to follow a log to the saw, then see a board cut and follow it until it was on the cars. Well, I waited until I saw a log coming up on the back porch and pulled on to what they called a deck, but which in reality was the floor. A man with the awfullest dirty hands yanked a piece of iron, and a great black iron fixing came up through the floor and hit the log a pop that knocked it clear across the mill, then it popped back out of sight. I asked a Swede what he called it, and he said "a steam nigger." I didn't say anything, but I felt like asking the Swede if he saw anything green about me.

I am sure the men had been posted about my coming, and just lied to me from one end of the mill to the other. They spoke about "dog" and a whole lot of things I know are not in any saw mill. Well, they got that log on to some kind of a machine, drove something into it that looked like picks, then a man pulled another piece or iron and away went that log, and buzz—the big saw took it. Well, it wasn't a minute before they sawed off a great big board with bark on one side of it. They run it along on rollers so fast I could hardly keep up with it. I ran nearly the whole length of the mill to catch it. Just as I caught it two men pulled it against a round saw, and when I asked them where that board would go next they smiled and said it wasn't a board, but only a slab, and good for nothing but fire wood.

I went around to what they called the pond. It was full of logs. I asked a man how much lumber they got out of a log. He said sometimes they got 24 or 22 feet. Then I asked them what they did when they came to a log with a hole in it. He said they sawed it up until they came to the hole, then run it through the scantling machine and made lath of it.

Then I went to H. C. Foster's office. When I asked him how old a tree should be before it should be cut up, he said he has issued orders to all of his millers not to cut a tree under 148 years old nor over 219. He said when they were cut too young the lumber was liable to be too fresh and if cut too old much of it was bultus. That seems reasonable enough to anyone.

Then I asked him what he thought of cedar. He said that whenever cedar was indigenous and grows prodigious that the vivisection of them showed a longevity of them unparalleled since the days of the flood. The only trouble he had with cedar was in the tendency of the knot holes to work out and leave the knots sticking in the board. Many carpenters object to it for that reason. Again, a great many eastern carpenters fail to get their squares right angled before the spring building begins, and as a result often make bad joints and blame our lumber.

I then asked him for an opinion as to what could be done in the saw mills to do away with the sawdust nuisance. He said it should be saved and a company organized to manufacture dolls. No stuffing is so cheap and valuable as sawdust for dolls.—Women's Tacoma News.

The Cookshire Mill Co., Sawyerville, Que., are building a small mill for cutting pulp wood. This is the only move yet made towards replacing the property destroyed by the late fire.

Talk of building a large mill in Newfoundland to manufacture sulphite and ground wood pulp for the European markets is renewed. Some German experts have been looking over the field during the past two months.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

MONTHLY AND WEEKLY EDITIONS

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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

THE CHICAGO DRAINAGE CANAL.

EVERYTHING relating to the carrying trade on the great lakes is of such importance to the lumber interest that we do not require to apologize for referring at some length to the Chicago drainage canal, about which so much is being said in connection with the unprecedented low water, which has and is interfering so much with navigation, and which has been attributed in a large degree to the effect of the canal.

It will be remembered that the United States Government some time ago appointed a commission of engineers to inquire into the effect the canal was exerting on the water levels in the great lakes. This commission recently reported, and having been fortunate enough to secure a copy of the report from Washington, we are in a position to state how far the conjectures as to the effect of the canal on the lakes are correct, at least from the standpoint of the United States officials.

The commission consisted of Brigadier General O. M. Poe, U. S. Army; Major E. H. Ruffner, Engineers' Dept., U. S. Army, and Major W. L. Marshall, Corps of Engineers, all men well qualified, we should judge, to make an impartial inquiry. Their instructions were to consider and report upon "the probable effect of the operation of the Chicago drainage canal upon the lake and harbor levels, and upon the navigation of the great lakes and their connecting waterways." They met in Chicago on the 12th of August, and in company with with the officers of the canal made a trip over the line under construction.

In the report a brief description of the work is first given. This we may pass over, as we are concerned only with the effect of the work on the navigability of the great lakes. The commission point out that this effect can only be ascertained by a series of minute measurements and observations. These were to some extent taken after the canal was placed under contract, but further data are required before an accurate determination can be arrived at. These observations must be made at the Niagara river, the only outlet of the great lakes, supplemented by observations at the St. Clair river, where there is a considerable fall from the level of lakes Huron and Michigan.

The conclusion arrived at by the commission is that the levels of the great lakes (i. e., Michigan, Huron and Erie) will be lowered by the Chicago canal. To what extent remains to be shown by future investigation.

The water levels of the great lakes are very delicate. Storms, barometric changes, rain fall, and even tidal changes are felt. Records kept at Buffalo show a variation of as much as 13 feet between the lowest and highest readings. A series of very careful observations is therefore necessary to determine the effect of any one cause on the lake levels. The act authorizing the Chicago canal, and the intention of the trustees, contemplates the abstraction of 300,000 cubic feet of water per minute from Lake Michigan. This would probably permanently lower the water in the lakes three inches. But it is contemplated ultimately to enlarge the canal so as to abstract 600,000 cubic feet per minute, which would lower the lakes six inches. Mr. Johnston, assistant chief engineer, as the result of some observations made by him, thinks it may amount to seven inches. Any of these figures is enough to cause alarm to navigators.

As a rule vessels carry all they can take, so as to go out of one port and into that they intend to reach. Some harbors are deep enough for them to disregard this consideration, but it is the rule. If the average depth is reduced three or six inches they must load accordingly. A vessel that when light draws six feet, and loaded twelve feet, will, if the water is lowered three inches, lose three inches out of seventy two, or about four per cent. in capacity each loading; a vessel drawing twelve feet light and twenty loaded, would lose over three per cent. Should the load be reduced six inches these figures would be doubled.

The commission further point out that the effect of the canal on the inner harbour of Chicago itself, by creating a strong current, may be disastrous. With that, however, we have no concern, further than that it might effect the carriage of lumber to that city by vessel to a limited degree.

What is to be done, then? The commission recommend a series of close and accurate observations, and if it should be determined that the canal is going to seriously affect the navigation of the great lakes, the federal authorities at Washington must exercise their undoubted right to control what becomes not a state but a national affair, and take such steps as may be considered necessary to preserve the navigability of the lakes from injury.

There is one aspect of the case which the United States commission has not touched, and which has a special bearing upon the lumber interest. By a lowering of the levels of the great lakes the water will be drawn more rapidly out of the streams flowing into them. A very superficial knowledge of hydraulics will make this manifest. Many of our streams on which lumbering operations are carried on have diminished in volume, or have become subject to more rapid changes from flood to low water in consequence of the draining of swamps, the clearing of the forests and other causes arising from the settlement of the country. Anything that would tend to draw off their waters more rapidly must work injury to the lumber trade. The Canadian government has appointed an engineer to inquire into the effect of the canal on Canadian interests. We would suggest that he be instructed to investigate this feature of the case.

THE SPOOL BAR TRADE.

PRACTICALLY all the wood used for making spools for thread, in both Great Britain and America, is cut in the forests of Maine. The wood is shipped in the form of bars, from which the spools are turned in a lathe. So great is the quantity of lumber required each year for these seemingly insignificant articles that Maine will not be able to supply it much longer. About 4,000,000 feet is consumed per annum, 2,000,000 for export and 2,000,000 for domestic use. The business began in Maine twenty-five years ago, and the land which was cut over then is grown up with young trees, but they will not be ready to cut for twenty-five years more, as it takes fifty years for white birch trees to attain a growth to fit them for profitable use for the purpose indicated.

Spool bars are, however, being cut in considerable quantities in New Brunswick, the character of which province is in many respects similar to that of Maine, which it adjoins. One mill has recently shipped its season's cut to Scotland, and it is being equipped with steam power, which will enable it to make a larger output next year. Vast quantities of white birch are to be found on the Miramichi river, which will become available. The thread-makers cannot depend much longer on Maine for their supply.

There are large quantities of white birch up the Ottawa which should be suitable for spool bars. We are not aware that any of it has yet found its way to the market, but as the supply becomes exhausted in other places it will doubtless be turned to account, and prove a valuable asset, unless indeed the thread-makers should take to using some other material, paper for instance, for making spools.

EDITORIAL NOTES.

AN English paper gives the value of the wood pulp imported into Great Britain from Canada last year as $414,205. For the previous year it was only $178,255. These figures indicate a large and rapid growth and are extremely satisfactory. A further increase may be confidently looked for in consequence of a short supply of straw for the English mills.

ONE of the best opportunities for investment in timber lands on the Pacific coast is said to be North-Western Oregon. It is estimated there are nearly 30,000,000,000 feet of spruce, fir and cedar on the five streams emptying into Tillamook Bay. Who of our Canadian lumbermen will go in and capture it? If it was the other way, and the timber stood on Canadian soil, we venture to say some enterprising United States lumbermen would soon have it.

THE question how to dispose of sawdust has always been a difficult one with millmen, and even in steam mills, where it is used for fuel, the subject will not down, for more sawdust is produced than the ordinary furnace can burn. A new industry is being started in Ottawa, which it is hoped, will help to solve the difficulty and at the same time turn to useful account the waste product which has caused so much perplexity. A Mr. Olner has patented a process for converting the dust into fuel. What his method is has not been given out, but we presume it is some plan of mixing it with tar, or other inflammable material, and pressing it into blocks. He has associated with him Mr. John McLatchie, and a plant is being set up at the Chaudiere, where abundance of the raw material can always be obtained. The fuel will be tested on a locomotive of the C. P. R. It will be cheaper than coal, will give a quicker fire, is cleaner even than wood, and gives little smoke or ashes. It is to be hoped it will prove all that is claimed for it. Better burn the saw dust in our furnaces than allow it to fill up our streams and kill the fish.

VERY little lumber is being carried through the Welland Canal this season, a condition of affairs for which the vessel owners blame the tolls which are imposed by the Government. The toll on lumber is 30 cents per M feet, and on coal, which the vessels count on carrying back as return cargo, 20 cents per net ton, (the vessel being paid freight on the gross or long ton.) In both cases this is considered excessive as compared with the toll on grain. Anthracite coal makes a convenient return load for lumber carriers going to Oswego, but the toll prevents vessels taking on cargoes, and they pass through the canal light, and go either to Buffalo or an Ohio port for a cargo of coal for the upper lakes. The toll on bituminous coal going east also prevents many vessels from using the canal. The Erie canal is free and makes that route the cheaper to Oswego. Shippers would prefer to use the Welland Canal for lumber, as it would go through without transhipment, whereas by the Erie canal route it has to be transhipped from lake vessels to canal barges at either Buffalo or Tonawanda, being deteriorated by the handling. Only two or three vessels are engaged in lumber carriage through the canal this season, and they belong to parties who own the lumber and have lumber yards at Ogdensburg.

Free canals in the United States and cheap railway rates have drawn away the traffic in lumber and coal through the Welland Canal, which seems a great pity when we consider the advantages it possesses as a means of communication between the great lakes. Are not canal tolls, like toll gates, an antiquated restriction on trade? The latter have been almost universally abolished. Why not also the former? It would be a boon for the lumber trade.

THE much discussed question as to what constitutes dressed lumber is not settled. Nor is it likely to be for some time, much to the loss of Canadian lumbermen who put in machinery for planing, and tonguing and grooving, under the impression that such lumber would be admitted free of duty to the United States markets. It will be remembered that certain United States customs officials held that while lumber planed on both sides might be admitted free as dressed lumber, when tongued and grooved it becomes manufactured lumber and is subject to duty. The distinction is a somewhat finely drawn one, and like many of the interpretations put on the tariff by United States customs officials is aimed to prevent Canadians having access to their markets. The matter was referred to the board of appraisers, who listened to a great deal of conflicting testimony. When they give their decision it will not end the matter, for should the question be decided against them the United States mill men will probably carry it to the federal courts. In the meantime we are shut out of the market, or have to pay the duty.

A mill-owner at Gravenhurst takes a somewhat pessimistic view of the lumber situation in this country. He says he has never known the business to be in a worse state than it is at present. The yards are filled with lumber which cannot be sold, and there is little piling ground. The largest mill on the Northern road is not running, as it has a two years' stock on hand. One of the largest concerns is shipping all its good common to the United Kingdom, not only in the shape of deals, but one-inch and upward. The smaller mills, he writes, will all be wiped out. We fear our friend is of the lugubrious cast, and is one of that class of people who always look on the dark side. While it is true that the lumber business, like every other line, is dull, we do not think it is quite so bad as the Gravenhurst man would have us believe. At all events there is a rift in the cloud, and though the sunshine of prosperity has not fully broken forth, there is a fair prospect that the clouds will soon disperse, and that the lumber trade will wear a smiling face again. Let us look on the bright side and hope for the best.

Mr. R. E. Gosnell, librarian of the British Columbia provincial library, was recently in Toronto on a visit. Speaking of the outlook for lumber in the Pacific province he remarked that the foreign trade, upon which they mainly depend, has been very bad. Millmen have, he said, actually been losing money on their operations. Though prices have not risen, foreign demand is improving and he looks forward to a good time coming, when the timber of British Columbia, which he describes as the finest in the world, will prove a great source of wealth. When Mr. Gosnell was here the good news had not arrived of the reduction in duty on lumber entering the colony of Victoria, Australia, or he would doubtless have been in better spirits over the outlook. But it seems to us that the British Columbians do not cultivate as they might the vast market for lumber on the treeless prairies of the northwest. It is true settlement has been slow of late, but the magnificent crop of this year must give a great impetus to immigration, and while waiting for the opening up of Australian and other far away markets, more might be done to secure trade near at hand in our own country.

The old Egyptian monuments show that the saw was in use at least one thousand years B. C.

THE summer meeting of the American Forestry Association at Springfield, Mass., was held in a church. The subjects which came up for discussion mainly related to New England and New York forestry matters.

OUR friends in the United States contrive to mix a good deal of fun with their business operations, and when they meet in convention to deliberate on important interests, season their discussions with wit. One of the lumber organizations which recently met at Minneapolis is known as the Concatenated Order of Hoo Hoo, and has for its totem a black cat. Its chief officer is known as the Snark, and the other officeholders rejoice in such titles as Bojum, Scrivenoter, Bandersnatch, Custocatian, Arcanoper, Gurdon, etc. These names would suggest a school boy's organization for fun, but the Hoo Hoos exist for the purpose of regulating methods in the lumber trade. They evidently believe in the quotation which used to adorn the title page of Grip, that the gravest man is the fool. And why should we allow the sterner duties of life to drive out all its brightness?

* * * *

FOREST fires appear to have been unusually prevalent all over the United States this season. In the state of Washington particularly the clouds of smoke are so dense as to interfere with the salmon fishing on the Columbia and with navigation on Puget Sound and streams in the interior. Considerable areas of timber have been destroyed, but fortunately there has been little loss of life. These fires do not start themselves. They are frequently the result of carelessness, and they do infinite damage to the lumberman. There are strict regulations in force respecting the setting out of fires, but it is difficult to carry them into effect. Too much care cannot be exercised in this regard.

* * * *

HON. Mr. Hardy, Commissioner, and Mr. Aubrey White, Deputy-Commissioner of Crown Lands for Ontario, recently paid a hurried visit to Rat Portage and points along the north shore of Lake Superior. Mr. White informs me that the lumber trade at Rat Portage is very much depressed, with no immediate sign of recovery. Speaking of spruce and the supply for the Sault Ste. Marie pulp mill, he told me that there were reports of a good supply up the Nipigon river, but he and Mr. Hardy failed to find it, though they were not on an exploring expedition. He thinks any spruce which is to be found in Ontario south of the height of land is small in size and scattered. Most of our spruce is to be found in Quebec and the Maritime provinces.

* * * *

SOME idea of the demand for paper now-a-days may be formed from one fact. A large paper pulp mill has been built at the Canadian Soo, and will soon be in operation. The company, a United States one by the way, undertook to develop the water power there to the extent of 20,000 horse power, half of which they intended to use themselves and rent the other half. But after they got under way they determined to use the whole of it themselves. Yet the manager told Mr. White, Deputy Minister of Crown Lands, that they would not be able with their extensive plant to supply the New York World alone with the paper it requires. A gentleman from Australia recently visited the Sault and wanted to make a contract for all the pulp they could produce, which they had of course to decline.

* * * *

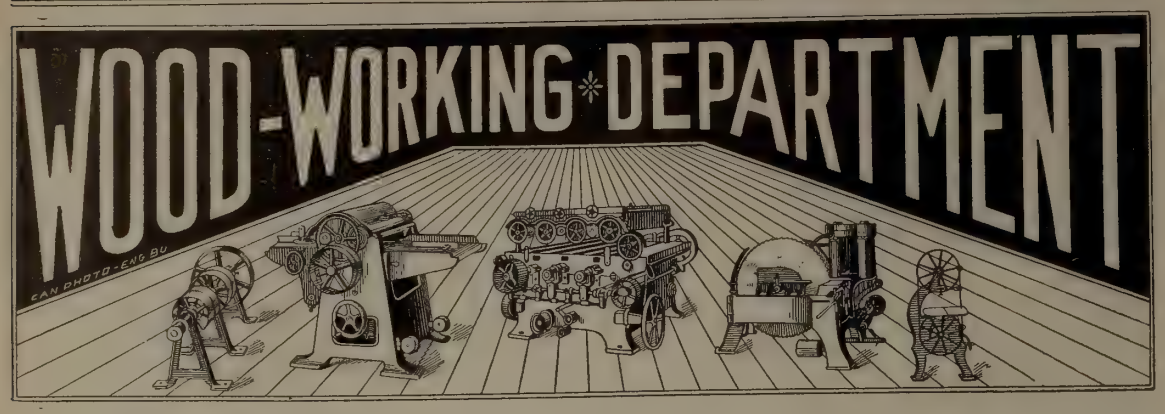
ANOTHER concession has been made which will help lumbering in British Columbia. An order in council has been passed at Ottawa reducing the dues on timber cut within the railway belt of that province. A rebate is also allowed on manufactured lumber exported from the province to foreign countries. These concessions were the result of representations made at Ottawa of what the provincial government had done. The latter had reduced the dues and granted a rebate on timber cut outside the railway belt, so those holding limits within the belt felt that they were placed at a disadvantage. They represented the matter at headquarters with the result stated. It will be recollected that while the provincial government holds the crown lands in general, the Dominion government took possession of a belt along the line of the Canadian Pacific Railway, for which compensation was made to the province. It will be seen that unless the two governments act together injustice may be done, and the passing of this order-in-council is simply the removal of an injustice.

* * * *

CAPT. James Murray, who died at St. Catharines on the 27th ult., was a well known figure in shipping, contracting and lumbering circles. He possessed in a marked degree the characteristics of the Scottish race from which he sprung, and to this is due in a large degree the success which attended his enterprises. In 1837, when five years old, he immigrated from Argyleshire, his native place, to this country, settling with his father's family on a farm in the county of York. Subsequently he went to St. Catharines, taking up his residence with an uncle. At sixteen he took to sailing, and in five years had reached the position of captain. Several years later he purchased a number of vessels and carried on shipping operations on an extensive scale, his vessels being known as among the finest on the lakes. He then took to contracting, and carried out extensive works on the Welland canal, along the lakes and on various railways. In conjunction with the firm of McArthur Bros., of Toronto, he established the Collins Bay Rafting Co., a well known company in the rafting and wrecking business, of which he was a director for some years. He was also president of the Casselman Lumber Co. His death was caused by an obstruction of the liver, and was quite unexpected, as he had been in his usual health up to within a few hours of his death. Capt. Murray is another example to young men of that energy and perseverance in the face of difficulties which is sure to win its way in the world.

* * * *

THE possibility of transporting timber in large rafts by sea instead of the more costly freighting by vessels or rail seems to have been settled, though it must always remain a risky business, and he who would save in freight must be prepared to take the risk of loss, which cannot but always accompany such an enterprise. Numerous attempts of the kind have ended in disaster, but several of these large rafts have recently reached their destination, and as experience teaches how to put them together so they may best resist the storms which put them to the test, shippers will be more ready to assume the risk of transporting timber in this way. If I mistake not, the first successful attempt to convey a raft in this manner was from a Nova Scotia port to New York. Another large raft has just been taken from the Columbia river to San Francisco. Capt. Robertson, one of the managers, made a similar attempt last year, but the raft was broken up, resulting in a loss of $40,000. Nothing discouraged, he made another attempt, and this time succeeded. The raft was put together at Stella, Oregon, and contained 7,000,000 feet. It was 525 feet long, 52 feet wide, and 30 feet deep, and drew 20 feet of water. The timber contained in it if put end to end would reach 90 miles. In shape it was like a huge cigar, having a middle girth of 139 feet, tapering to 40 feet at the ends. Over 60 tons of chain were used in binding it together. The saving in freight is estimated at $25,000, a sum worth taking considerable risk to save. The timber is for the use of the Southern Pacific Railway in the repair of its bridges and trestles. Instead of using a tug as has been done before, a powerful steamer was employed. It is in contemplation by the same parties to take a raft from Puget Sound next season. The great danger in such attempts is stormy weather, which works the chains loose and allows the timber to get out. In this last attempt it was so closely bound together that not a stick moved, and the great ocean on which it was afloat proved so true to its name, that no stormy weather was encountered. That portion of the Pacific is very open, there being no protection whatever from westerly winds, and had there been a big blow the trip might not have been so successful. While this attempt turned out well it is hardly to be expected that such methods of conveying timber to market will ever become popular. If it could be relied on it would be a good thing for lumbermen on both of our coasts.



"MODERN WOOD-WORKING MACHINERY."

THE above is the title of a little work which has reached the editor's table of the CANADA LUMBERMAN. It is one of a series on technical subjects, issued by Wm. Rider & Son, publishers of the Timber Trades Journal, London, the author being J. Stafford Ransome, Associate Member of the Institute of Civil Engineers, and the writer of works on "Modern Labor," "Capital at Bay," etc. It is really a re-publication of a former work on "How to Select Wood-Working Machinery," with new chapters added and the old ones thoroughly revised, as requires to be done in the newer editions of technical works, on account of the rapid developments which take place in this branch of mechanics.

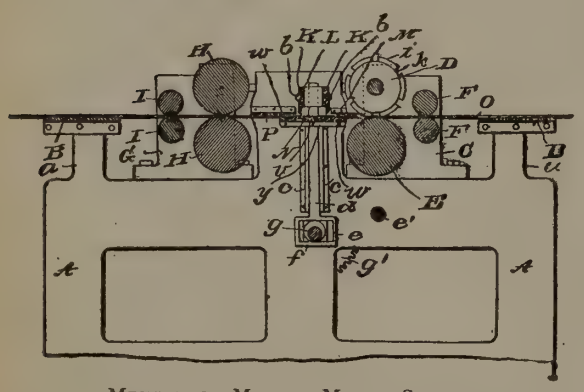
The general scope of the book is to point out the most suitable machines for wood-working, and the qualities to be looked for in such machines, giving instructions also how to obtain thorough knowledge of the machinery before rather than after purchasing. Why machinery fails to fulfil the expectations of its users is shown to arise from the following causes :

(1) Insufficient workmen, (2) Injudicious placing, (3) Imperfect foundations, (4) Insufficient horse power, (5) A badly governing motor, (6) Prejudice against its use on the part of foreman or men.

Any of these will entail serious loss to the owner of machinery, and probably there is not a wood-working factory in the country which does not suffer from one or other of them.

The book contains thirty-five chapters, covering all classes of machines and motors, and has seventy-two illustrations. It must prove a most useful hand-book to all who are actively engaged in wood-working, and the price (3/6) is so low as to be within the reach of anyone.

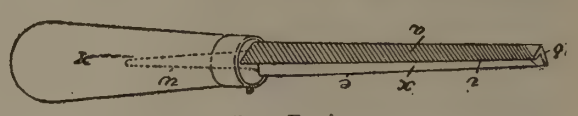
NEW CANADIAN PATENTS.



METHOD OF MAKING MATCH SPLINTS.

Patentee : The American Safety Head Match Company, assignee of Isaac D. Weaver, both of Lebanon, Pennsylvania, U. S. A., 5th July, 1895 ; 6 years.

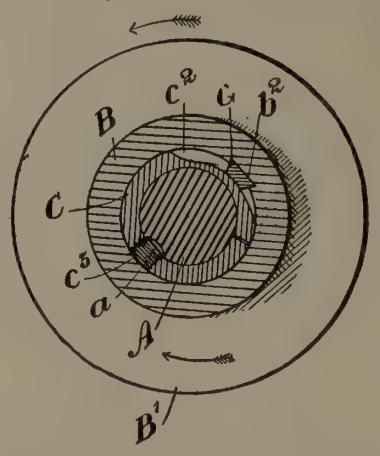
Claim.—The method of making match splints, which consists in slitting a sheet or slab longitudinally and leaving a back-bone or uncut portion between the slitted portions of the sheet, and then serving each alternate splint of the sheet at the back-bone of the match card. In a machine for making match splints, a revoluble cutter, and a pair of vertically reciprocating cutters having chisels to sever each alternate splint from each side of the back-bone of a match card, in combination with a driving shaft which operates the reciprocating cutter, a gear-wheel, a ratchet-wheel having a rock-arm supporting a pawl and a lever connected to a master gear-wheel and to said rock-arm and a suitable connection with the shaft of the revoluble cutter.



SAW FILE.

Patentee : The Arcade File Works, assignee of Alfred Weed, both of Anderson, Indiana, U. S. A., 5th July, 1895 ; 6 years.

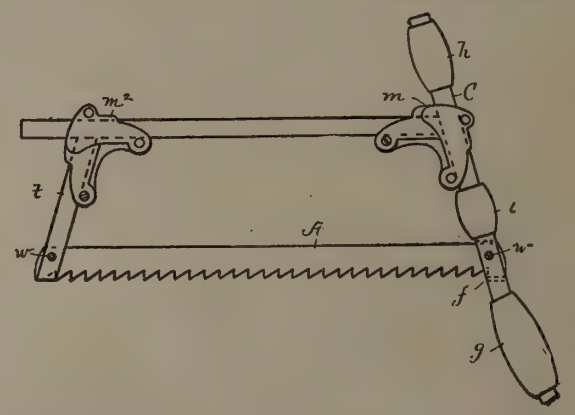
Claim.—The within described file having two flat faces, a, b, at an angle to each other, and with a groove at the back forming edges e, i to said faces, which edges are cut, substantially as and for the purpose set forth.



MATCHING HEAD FOR PLANING MACHINES.

Patentee : Cowan & Co., and Agnes Aussen Eby, assignees of Isidore Emanuel Eby, all of Galt, Ontario, Canada, 9th July, 1895 ; 6 years.

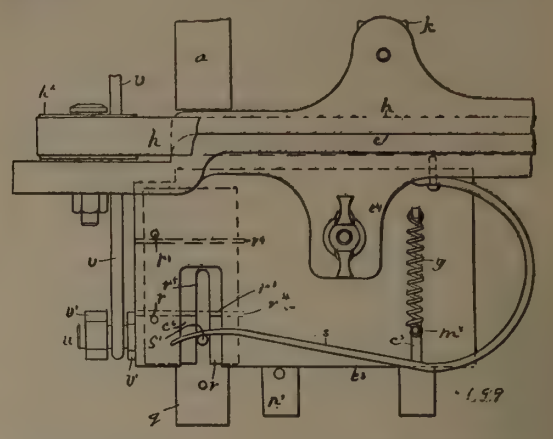
Claim.—The combination, with the matching head and cylindrical portion thereof, of a binding cam connection between the cylindrical portion of the matching head and the spindle, as and for the purpose specified. The combination, with the matching head and cylindrical portion thereof, of a spindle having a vertical slot, a screw stud extending through the sleeve into the slot in the pindle, a key secured in a recess in the inside of the cylindrical portion and designed to co-act with a cam groove in the sleeve, as and for the purpose specified.



FRAME OR BUCK SAW.

Patentee : Nathaniel H. Shaw, Somerville, Massachusetts, U.S.A., 12th July, 1895 ; 6 years.

Claim.—In a frame-saw, the frame comprising a metallic handle-bar, a spring-beam and a front bar, said beam being detachably connected to the handle-bar and the front bar by couplings. The herein-described frame-saw comprising the handle-bar and front-bar, the beam D, detachably connected and secured to the handle-bar by clamps m and m_2. The blade A, connecting the handle-bar and the front-bar, said handle-bar projecting below the blade and above the beam and provided at these points with non-metallic handles, substantially as described.



FEED MECHANISM FOR CORK CUTTING MACHINES.

Patentee : John Auld, assignee of Joseph Adelard, Lafrance, both of Montreal, Quebec, Canada, 16th July, 1895 ; 6 years.

Claim.—In feed mechanism for cork cutting machines, a horizontal conveyor travelling uninterruptedly in the same direction, and means for imparting an uninterrupted movement to such conveyor. In feed mechanism for cork cutting machines, the combination of the receiving hopper c, having agitator drum d and guiding groove e, the conveyor composed of travelling endless belt h and adjustable walls k, with means for operating such belt, the controlling devices consisting of the holder m and its carrier, the gate n and its carrier, and the stop p, the pusher q and the adjustable stop m^7 on the carrier of the holder, the adjustable stops n^4, n^5 on the carrier of the gate and the connecting plate q^2 on the pusher side, all suitably guided and supported, and together with the operating lever t, springs g and s, cross-bar u, a main shaft and intermediate cam-lever-and-rod operative connections and means of adjustment, all substantially as and for the purpose set forth.

POINTS ON BELTING.

I HAVE a few words to say about belts, particularly on planing and matching machines. I have found it good policy and a great saving of time to always have an excellent spindle belt for each matcher on hand, so it can be put on at a moment's warning, as what is more annoying and vexatious on a rainy day than to have a spindle belt gather dampness enough to loosen all the splices, and not have another one ready to put on? I find it saves time and is economy, as soon as I see signs of a belt giving out in this way, to remove it and put on my extra belt, then look over, reglue and peg all of the splices which have started, and lay that up for the next emergency.

I use common glue and three-eighths or five-sixteenths shoe pegs. A good awl can be made in a few moments by taking an old three-cornered file and grinding an awl on the end which goes into the handle, then break off a piece of the other end and grind it square on an emery wheel, grinding heavy enough to draw the temper so it will not cut the face of a hammer. Be sure not to get the awl too large, so that the pegs will fly out of the belt while running.

I never have had but one piece in spindle belts, as they run much smoother than where there are two or more pieces. I use Blake's belt studs or lacing. I prefer the studs where there is room enough for belts to run, so there is no danger of catching on castings or set screws and tearing.

My top cylinder belts I make endless, and find them much less trouble than to have them fastened with hooks, studs or lacing. Besides running much smoother and being easier on boxes and bearings, they run much longer without taking up, and when you see they are getting loose, a few minutes at night is enough to take a splice apart and shorten the belt up one-half or three-quarters of an inch, as the case may be. In cylinder belts and spindle belts not running over a binder, I find it better to peg the splices from the inside of the belt, as they are not as liable to pull out in that way.

I find by using belts in this way all through a mill I

get along with much less belting, besides having much nicer running belts. I use all of the belts in the mill on this principle. One time I had a belt 64 feet long and seven inches wide running a 44 inch resaw. This belt was in four pieces, and had three or four bad slices which had started to tear and been fixed up with belt hooks. I thought of ordering a new belt, but on looking it over and the old belting on hand, concluded to fix it up. I cut out all the poor slices, putting in new ones and joined all pieces in the same way, putting in five inch splices. Then I picked out some of the best pieces I had and lengthened it out to the required length, making a belt all in one piece. It ran just as well as a new belt, and, as it is running yet, I cannot say as to its lasting qualities.

It would be very expensive, indeed, to put up shafting rigid enough to absolutely prevent all deflection, and any deflection disarranges a short belt more than a long one.

I believe all shafts deflect some, but if the load on the belt was absolutely constant the shaft deflection would adjust itself as soon as started, remaining adjusted until a different tension of the belt permitted another deflection of the shaft. Any deflection of a shaft will disarrange the alignment of a pulley thereon, and at the same moment give slack to the belt to the extent of the deflection of both shafts, and the pull is all on one side of the belt; that is, the side of the belt which travels to the driving pulley pulls and stretches, while the side of the belt which travels towards the driven pulley sags and takes up the slack caused by this stretch on the other side.

Very short belts or belts running vertically ought to be provided with a self-adjusting tightening device on the slack side. In case of long horizontal belts the weight of the slack side is of more value to take up the slack caused by the stretch of the full side, than the weight of the same side of a short belt. Then the slack of alignment caused by shaft deflection or otherwise, is not so injurious with long belts.

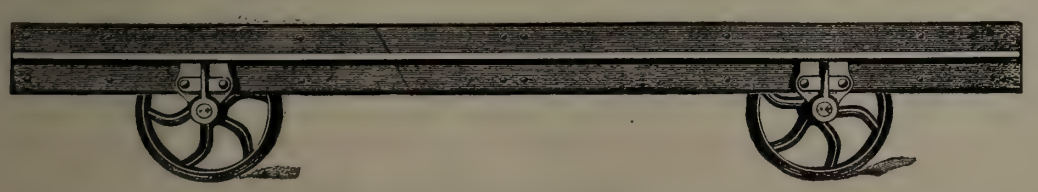
So, where it is not convenient to use long belts, the shaft should be larger and have close, strong bearings; if the shaft bearings, etc., must be weak, then use belts as long as possible.

Another thing about belts: The tight or pull side ought to be at the bottom and the slack side on top; then, when the belt pulls and stretches at the bottom, the top sags and takes up the slack thus made and laps more on both pulleys. But if the loose side is at the bottom, the sag will cause the belt to leave both pulleys to some extent and have less lap.—The Wood Worker.

METAL TRUCKS FOR LUMBER DRY KILNS.

THE Huyett & Smith Manufacturing Company, of Detroit, Mich., have applied for a patent on a dry kiln truck, a cut of which is herewith presented.

The advantages possessed by this truck over the ordinary wooden bunk, or any other metal truck on the market, will be more apparent upon an examination of the truck itself, but we shall endeavor to point out some of the reasons why it seems destined to displace the others.



Metal Truck for Lumber Dry Kilns.

The ordinary bunk which is usually made up by mill owners themselves, they simply buying the wheels, axles, boxes and bolts, in the first place weighs 120 lbs., and is a very cumbersome and clumsy thing to handle, requiring two men to carry it back from the dry to the green end of the kiln; not only that, but as it is subjected to such a high temperature and dry atmosphere inside the kiln, when coming out into the open air and being exposed to all kinds of weather, it is soon checked and split, requiring constant repairs.

On the other hand this truck weighs only seventy pounds, the sides being made of heavy sheet steel formed into their peculiar shape by a very heavy press designed especially for this work. The wheels and boxes are made of malleable iron, and although weighing less than half what they would if they were made of cast iron, they are stronger and will stand any kind of a blow without breaking.

The light weight of the truck makes it possible for one man to carry it without difficulty. The material of which it is made up is, of course, in no way affected by sudden changes of the temperature and humidity of the air to which it is subjected, so that the life of these trucks is almost unlimited, and in case of a fire, should the kiln burn down, these trucks would be very likely to be preserved in perfect condition.

The manufacturers of this truck are getting them out by the thousands, having special machinery adapted for their manufacture, and in this way are enabled to put them on the market at an extremely low figure, so that they are within the reach of all mill owners, and although costing a little more than the ordinary wooden bunks, the difference in price is bound to be saved within a few months.

DISHES MADE OF WOOD.

THE oval scooped-out dishes of wood, which have become so farmliar at the grocery for doing up butter, lard, and other commodities, and at the Sunday-school picnic as a receptacle for pie and pickles, are manufactured in Traverse City, Mich., and the factory turning them out is the largest in the world. The company buys the standing timber on a tract of land and works up everything in it. The factory consumes about 12,000,000 feet of lumber annually.

The logs, as they are cut in the forest, are floated down the Boardman River to the mill booms and, as they are wanted, are hoisted into the saw mill, where they are cut. For the butter dishes, maple is the only wood used. The outer slabs of the maple logs are slashed off and cut to dimensins of firewood. Then a few layers are sliced off for lumber. After the slabs and lumber are cut, a piece of timber, about six inches in thickness and eight inches wide, is left the length of the log, and this is the part reserved for the butter dishes.

The heavy timber is cut into blocks ten or twelve inches in length and boiled in huge vats until thoroughly softened. The hot blocks are places in machines, which scoop out the butter dishes at the rate of 200 a minute. A curved knife revolving on a spindle does the work, the block being automatically advanced with each revolution of the spindle, and a knife working up and down taking off a slice just the thickness of the plate, so as to leave the surface the same as before. The dishes are scooped out of the solid wood exactly as they are found at the grocery.

As the dishes fall from the machine they drop into a funnel, which carries them to the dry kilns. Through the drying process they pass automatically and finally fall upon a long table, where a row of girls sort them and prepare them for packing. It takes about twenty minutes for the plates to go through the drying process, and not a hand touches them until the girls sort them for packing. Ten machines are working constantly on the oval butter dishes and the capacity of the works is approximately 600,000 a day.

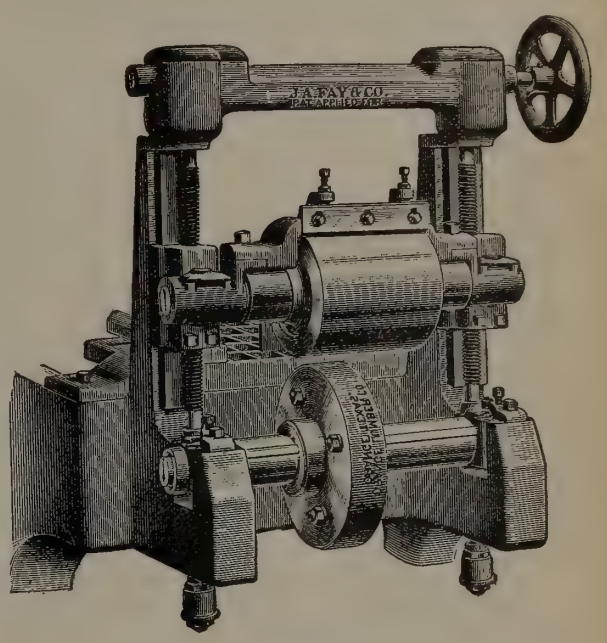
The most wonderful machine in the shop is that which manufactures the wire end dishes. For these the logs are cut into bolts, boiled, and then converted into veneers the thickness of the material used in the plates. Still hot and steaming the veneers are fed through a machine which cuts the veneer to the required shape and size, marks the folds, folds them and sews the ends of the dish with wire, and finally deliveres the dish complete at the other end. The machines turn out the wire-end dishes at the rate of a 100 minute, and the factory facilities are for 200,000 a day.

LUMBER STAMPING MACHINE.

WE present to the readers of the Canada Lumberman an illustration of a new lumber stamping machine, which appears to be an improvement on anything of the kind that has been used in the past. It has been placed on the market by J. A. Fay & Co., of Cincinnati, Ohio.

Manufacturers of lumber pursue the proper course who affix to their products a private stamp or mark as a means of identification, but up to the present time the methods pursued have been crude and expensive in application. The impression left by a hammer on the end of a piece of flooring, ceiling, moulding, etc., gives that piece an individuality which it retains until a saw removes the end, after which it may be the product of any mill which suits the dealer's purpose. A pot of paint may inartistically proclaim the maker of certain flooring until the saw is again brought into play.

In the following illustrated description is revealed the remedial invention designed to impart to the product of any particular mill an individuality which cannot be obliterated, the product being indelibly stamped or branded with the maker's name and other distinguishing marks



Lumber Stamping Device.

at short distances throughout its entire length, so that, in case of any division of the piece, each length will still bear the brand. Each piece of flooring, ceiling, moulding, etc., may by this invention be so marked that the customer can know at a glance whose manufacture it is and of what grade, thus preventing other mills and dealers from foisting on him inferior stock, or stock of one mill for that of another, and also enabling the manufacturer to identify his stock when occasion may arise. The mill making the stock may also provide each machine in use with some particular mark or number, thus identifying the product with the machine and locating the blame for inferior workmanship upon its author.

The improved method and apparatus, which is adapted to use on any make of machine, consists of a die, of any particular desired name, mark or number, supported on a shaft mounted on bearings adjustable in recesses, these bearings being provided with lips to prevent lateral displacement and the shaft with shoulders to prevent endwise movement. The die is provided with set screws to adjust it to different heights, and set nuts to hold it firmly in place. An idler roll, mounted on a shaft supported in bearings on a housing gibbed to standards, above the die, holds the lumber or other stock against it, so as to insure a proper impression on the material as it passes over the die. Screw rods, properly ground, and with a hand wheel to operate them, are provided to raise and lower the roll for different thicknesses of stock.

The device, attached as a general thing, to the feeding out end of the machine, is automatic in its action and does not operate to the detriment of the speed of the machine, the stamping being done while the lumber is being dressed by the machine.

Lumber manufacturers will at a glance realize in this the solution they have long sought for avoiding the unpleasant controversies which frequently arise.

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THERE is no little excitement among lumbermen in this city over the action of one or two soreheads on the other side of the line as to what constitutes dressed lumber. Up to date the term included flooring, tongued and grooved, and these were admitted as such till a short time ago, when, as a local shipper puts it, a few "small big" men raised the point that dressed lumber means a board dressed on two sides only, and that flooring, tongued and grooved, comes under the classification of "manufactured goods." One of the largest lumber merchants in the United States is at present in the city, and in conversation with Mr. Peter Whalen on the subject said: "It is not honest on the part of the Americans to claim as they are doing. Flooring has always been looked upon as within the law of dressed lumber, and although it would be much better for me if it were classed as manufactured goods, still I cannot honestly say that it would be right to class it so." Meantime the Ottawa as well as other shippers are watching developments, as the classification of flooring as manufactured goods means the beginning of another tariff trouble in the lumber and timber business.

Mr. J. R. Booth, who has suffered losses by four large fires during the past year, is again a loser from the same cause, a fire having occurred on the 28th ult. at his log-hauling station near Calendar. Damage to the extent of $20,000 was done, on which there is an insurance of about $11,000. The station is a distributing centre for Mr. Booth's logs which come down Lake Nipissing. At Calendar they are conveyed overland by cars to the Mattawa waters. The property destroyed was a valuable one. It consisted of large storehouses, sleeping house, offices, stables and other buildings. All the firm's cattle and horses escaped.

The gang Pitman saw at Edwards' mill, New Edinburgh, broke a few days ago and caused one saw to stop. A heavy bar of iron, 7 by 2½ inches, was shortened by compression. The job of repairing the break is quite a heavy one.

A new industry is being started here, namely, the manufacture of fuel from sawdust. Mr. John McLatchie, surveyor, and Mr. Olney, inventor of the process, which the new industry is to test, are placing a plant in the old Rochester building at the Chaudiere. Should it turn out a success it will help to settle the question of disposal of sawdust.

Mr. J. R. Booth's lumber mill at the Chaudiere is being operated day and night, giving employment to 350 hands. When a representative of the LUMBERMAN visited it recently he was impressed with the fact that everywhere about the establishment systematic methods prevail. Operations proceed like clockwork, and the conversion of the raw material into lumber and other marketable products apparently takes place with the greatest conceivable saving of time and material. The statement may be the more readily understood when it is known that the band mills are operated at a speed of about two miles per minute. The mills and yards are at night brilliantly illuminated by upwards of fifty electric arc lamps, the current being supplied by the Company's own electric plant. At this mill, as elsewhere, there is a noticeable change in the character of the logs which are being converted into lumber. The quality of the timber is inferior to what it was say ten years ago, when mill owners went over the limits and cut only the choicest trees. Timber is not now so plentiful, and as a consequence less perfect material is being brought to the saw.

OTTAWA, Can., Sept. 22, 1895.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

A PARTY of nine prominent lumbermen, of Wisconsin, have been on a visit to this province with the view of investing in timber limits. They first visited Puget Sound and then crossed over to Victoria. They expressed themselves well pleased with the timber resources of this province, and it is probable they will secure some limits before they leave. They say there is plenty of timber for a long time to come, in the East, notwithstanding what people may say. They report business looking up in the East and say the lumber trade must recover in sympathy with other lines.

Mr. J. M. Gordon, of Ottawa, Inspector of Dominion Lands Agencies, is paying his semi-annual tour of inspection to the Coast. He says that the amount of land sold in British Columbia during the past year has been very satisfactory considering the times. The magnificent harvest in Manitoba and the North West Territories this year will, he thinks, be an incentive to immigration next year. He is inspecting the timber lands owned by the Government. He says that considerable satisfaction is caused by the fact that the government has recently met the requests of the timber men in allowing, instead of 5 per cent. duty on the selling price, 50 cents per 1,000 feet, and a rebate of 40 cents on timber exported from the Province.

Dr. Watt, ex-M.P.P. for Cariboo, writes to a local paper urging the passing of legislation to preserve the forests, which, he says, are just as important to the successful working of the mines as is water. Great destruction has been wrought by fires, the losses being incalculable. Had the doctor not been defeated at the last general election he proposed to introduce legislation which would have had a tendency to preserve the forests.

A wedding took place at 7 a. m. recently at the residence of ex-Chief of Police McLaren, Vancouver. The bridegroom was Mr. Hugh McDonald, of the Brunette Saw Mill, New Westminster, and the bride, Miss Sophie Bowes, niece of ex-Chief McLaren. Rev. E. D. McLaren officiated. Mr. and Mrs. McDonald left on the morning train for Whatcom.

British Columbia yellow cedar commands as high a price as $80 a thousand feet in the British market. An English firm, tempted by this price, is said to have secured 15,000 acres of cedar limits.

The C.P.R. is about to replace the long bridge by which their line crosses the Columbia at Revelstoke, with a new structure. Car loads of timber are now arriving for it and work will be commenced as soon as the water is low enough.

The Victoria Lumber & Manufacturing Co. will probably commence cutting at the Chemainus mill next spring, as the lumber market shows signs of improvement.

The Sayward Saw Mill Co., Victoria, will shortly put in a band mill.

Mr. Lidgate, who recently left here for the East, will open a lumber yard at Qu'Appelle, Assa.

R. Stevenson has completed his saw-mill on the Similkameen, near Princeton.

"Doc" Tomlinson is erecting a saw mill on Sheep Creek, just north of the boundary.

The C.P.R. is carrying quantities of B. C. shingles from the Sound to Eastern points in the United States. The Northern Pacific cannot supply cars, their rolling stock being pretty well taken up carrying grain and ore.

The duty collected in August in Vancouver was $2,000 more than in the corresponding month last year, and the inland revenue $2,000 more. This looks well for a revival of business.

The news of the reduction of the duty on lumber entering the colony of Victoria, Australia, has been received with satisfaction here. It is expected to give a great impetus to our lumber trade, as Australia is one of the principal markets to which we must look for the sale of our timber.

Mr. Wm. Tierny, of Vancouver, gives notice of application to the provincial lands department for a special license to work some 900 acres of timber lands in the New Westminster district. J. W. Hartney, of Vancouver, gives similar notice as to five tracts of land. H. H. Spicer & Co., of the same place, seek a license to cut timber on Gambier Island, Howe Sound.

Considerable interest is manifested in a gigantic combination which is said to be in process of formation at San Francisco, to include all the pine lumbermen on the Pacific coast of the United States. They assert that they cannot compete with British Columbia, where operators have only to lease their limits and pay for the logs as they take them out, and that in consequence British Columbia lumber is taking the place of what is produced at home, causing the shutting down of many of their mills, reduction of wages, and the carrying on of business at a loss. It is asserted that the combination will not raise prices locally, but that if it did no harm would be done. The Central Lumber Co., recently organized at San Francisco, is said to be the nucleus of the big combine.

NEW WESTMINSTER, B.C., Sept. 20, 1895.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN].

CONSIDERABLE feeling is manifested in connection with the neglect of some of the lumber surveyors in St. John to take out warrants from the City Council. Those who have passed an examination and secured a license are displeased that others should share in the work without a license. It is the intention of the Council to ask the Legislature for authority to compel all applicants to pass an examination. Three examiners will be appointed, who will be paid $1 each per candidate, besides the usual fee of $4.50 for a warrant. The permit will have to be renewed yearly or the authority will be cancelled.

Hon. J. B. Snowball is already sending men and teams to the woods. They will operate on the Tabusintac. Wm. Richards is sending men and teams to commence the winter's logging.

The Restigouche lumbermen have had a fairly good season. Much less shingle manufacturing was done this year than last. Owing to the collapse of the U. S. shingle market the mill owners turned their attention to the production of deals for the British market.

The recent advance in freight has caused English buyers to show more anxiety in securing spruce deals to cover prospective requirements, and sales are being made more freely, with a prospect of an advance in price. New Brunswick birch has also sold well in the Liverpool market. All of which helps to make our lumbermen more cheerful.

Mr. James Carr, of Woodstock, who ships large quantities of hemlock bark, has recently purchased a block of 10,000 acres, chiefly wilderness, near the Newbury station on the C.P.R. The property was given by the Government a number of years ago to the Iron Works Company, to foster the mining industry. Mr. Carr's purchase also includes Mr. George Upham's rotary saw mill on the Gibson branch of the C.P.R. It is understood Mr. Upham intends building a mill on the Tobique.

ST. JOHN, N. B., Sept. 24, 1895.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

ALPENA, Mich., has enjoyed a fair run of orders thus far this season, and for the eight months ending September 1st had shipped 74,400,000 feet of long lumber. Most of the mills have a fair supply of logs, which will be increased before the season closes by the receipt of at least four rafts from the Canada shore.

Following the example of the Saginaw men the Detroit lumbermen have organized an association. They intend to make a test to determine what the 80 per cent. law of the state board of policy commissioners amounts to.

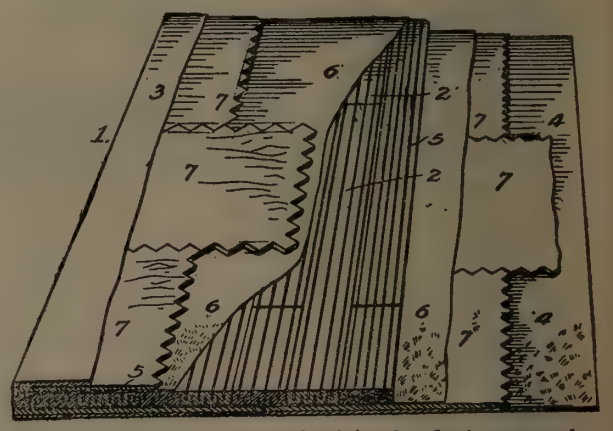
The Mershon case caused an animated discussion at the Buffalo convention. This is the matter in dispute between W. B. Mershon, of Saginaw, Mich., and the Pennsylvania dealers in which the former's goods have been back-listed on account of his dealings with builders in Philadelphia, contrary to the rules of the Pennsylvania dealers. The dispute is to be settled by arbitration.

It begins to look as if millmen along the Saginaw river would go into the winter with as large stocks, if not larger, on the mill docks than at the close of navigation last year. Prices for lumber are fully as low as during the worst period of the price panic in July and August. When an intending purchaser stops at Saginaw to enquire prices, he moves along to other points in the pine district, and that is the last we see of him. The natural inference is that somebody is selling lumber at less than cost, or perhaps giving it away, for local prices are held as near the cost of production as possible. There is a fair inquiry for better grades, but coarse lumber is going into pile at a rate which causes consternation among manufacturers. Mill after mill has been forced to shut down, having exhausted all their piling space.

SAGINAW, Mich., Sept. 24, 1895.

ARTIFICIAL LUMBER.

AMONG the patents recently granted at Ottawa is one for artificial lumber, to Geo. S. Mayhew, of Minneapolis, Minn. This new product is shown in the accompanying cut, and though the claim as filed in the patent office is long-winded, as such claims usually are,



the substance of it is contained in the final paragraph, which is as follows:—

The combination, in an artificial material or composition material, of the thin wooden sheets arranged edge to edge, with carrying webs for adhesive material applied to opposite sides of said wooden sheets, thin wooden veneers arranged across grain to and secured upon said veneers, said wooden sheets provided with the closely arranged indentations in opposite sides, said veneers having serrated interlocking edges, and the whole secured together by an adhesive material and subjected to a heavy pressure and dried, substantially as described.

CANADA LUMBERMAN

WEEKLY EDITION

The Lumberman Monthly Edition, 20 pages } $1.00 PER YEAR { The Lumberman Weekly Edition, every Wednesday

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Weekly Lumberman, published every Wednesday. Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

Lumberman, Monthly. A 20-page journal, discussing fully and impartially subjects pertinent to the lumber and wood-working industries. Contains interviews with prominent members of the trade, and character sketches and portraits of leading lumbermen. Its special articles on technical and mechanical subjects are especially valuable to saw mill and planing mill men and manufacturers of lumber products.

☞ Subscription price for the two editions for one year, $1.00.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type, and no display is allowed beyond the head line. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue.

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ABOUT ONE MILLION FEET WHITE PINE lumber. For further particulars apply to CANADA LUMBERMAN or D. O'CONNER, Sudbury.

WANTED.

3 IN. HARD MAPLE. 150,000 FT. NO. 1 AND 2, all 14 ft. Name lowest cash price delivered at Brooklyn, N. Y. Address: MANUFACTURER, 457 7th street, Brooklyn, N. Y.

TENDERS WANTED

TENDERS WILL BE RECEIVED AT THIS Department up to and including the seventh day of October next, for the right to cut the pine trees over seven inches in diameter on the stump, in the township of Hodgins, in the district of Algoma.

Parties making tenders will state: (1) The amount they are prepared to pay in lump sum, as bonus for the right to cut all the pine trees over seven inches in diameter on the stump, or (2) The amount they are prepared to pay per thousand feet board measure for the timber cut into saw logs, and the rate they are prepared per thousand feet cubic, on timber made into square or waney board timber. The timber when cut, to be subject to the following rates of dues: On saw logs $1.25 per thousand feet board measure; on square or waney timber $25 per thousand feet cubic. No pine trees of a less diamater than seven inches on the stump shall be cut. The Department reserves all timber except the pine, together with the right to dispose of such other timber at any time, and purchasers of the other timber will have the right to cut the same and to make roads and do whatever may be necessary in the premises to cut and remove the same. Terms of payment: If tender be accepted for lump sum, one-third cash, balance in three and six months notes for balance to be endorsed by parties satisfactory to the Department.

If tender be accepted at a rate per thousand feet, payment to be made as cutting progresses. A marked cheque for one thousand dollars must accompany each tender.

The highest or any tender not necessarily accepted.

For further particulars apply to P. C. Campbell, Crown Timber agent, Sault Ste. Marie, Ont., or Department of Crown Lands, Toronto.

(Signed) A. S. HARDY.

Department of Crown Lands.
Toronto, 5th Sept., 1895.

WANTED-

A POSITION AS LUMBER SALESMAN FOR a Pine Mill. Have one of the best trade connections west of Toronto, also east to Montreal.
Apply P. O. Box 537, TORONTO.

FOR SALE.

450 FT. OF SECOND HAND 1 IN. STEEL wire cable; also one good shingle mill drag saw, good as new; also two double frictions complete. Above all made by the Wm. Hamilton Co., of Peterboro. Write us for particulars.
J. W. HOWRY & SONS, Fenelon Falls.

WANTED.

UNLIMITED QUANTITIES OF ALL KINDS of hardwood piece stock principally. Pl. oak, Cl. ash and P. elm kiln-dried from 2½ inch and up wide and 21 to 55 inches long, either planed or rough. Apply for specifications. Splendid chance to work up lower grades with but little offal. Address P. O. Box 2144, New York City.

FOR SALE—EXCEPTIONAL OFFER.

SIX MILLION FEET OF CHOICE, RICH YELlow, poplar lumber and squares. All thicknesses and grades. Well manufactured stock out of fresh cut large logs. Shipments direct from mill, immediate or future delivery in car load lots or quantity to suit. Lowest freight rates. Address,
P. O. Box 2144, NEW YORK CITY.

FOR SALE

LUMBER BUSINESS IN NEW BRUNSWICK, consisting of Steam Saw and Planing Mill; also one hundred miles of spruce limits. Mill almost new and in good running order; property must be sold to wind up an estate.
IRVING R. TODD,
Milltown, New Brunswick.

AN EXPERT OPINION.

Mr. Ed. Germain in speaking of the condition of trade, said that in his opinion, if dealers would call in their salesmen lumber would advance 50 cents a thousand within sixty days. The stocks at all eastern and interior points are small, but manufacturers are crowding their product upon the market, and when a dealer is drummed by possibly a dozen different salesman he will buy only as his necessities demand, for the reasons that when the lumber manufacturer is so anxious to unload, prices are likely to drop, and he is not disposed to buy on a falling market. "We all know," said Mr. Germain, "that better times are coming, but the difficulty is we do not know just when they will arrive." Mr. Germain is carrying only 11,000,000 feet of lumber on hand whereas he usually carries two and three times as much. His factory is now principally engaged in the manufacture of doors and mouldings for the export trade, which he is developing at a rapid rate. He works about 200 men but has a capacity for three times as many. He owns 20,000 acres of Jack pine in northern Michigan, the product of which he brings by cars to Saginaw and cuts in his own mill.

About 850 standard deals arrived at Glasgow per steam liners from Quebec and Montreal, during the second week of September.

CURRENT TRADE CONDITIONS.

ONTARIO.

THE piling grounds at the mills continue to fill up but there is no outward movement to note and prices remain substantially the same. As to the future, dealers do not care to predict. While they hope for the best, they do not venture to anticipate any immediate improvement. The Michigan mill men who hold limits on the Georgian Bay and north shore of Lake Huron are hurrying their logs across, and as they will be pretty well stocked up they are not likely to do quite so much in the woods the coming winter. An improvement has taken place in shipments from Ottawa to the United States. Orders have been coming in and middlemen report considerable activity. The European and South American markets are reported dull, although shippers say that the latest advices hold out some encouragement of an early revival of demand for stock for shipment to Europe. There will be a good demand for small spruce in the western part of the province to supply the new pulp mill at Sault Ste. Marie. The local demand for lumber is slightly improved. Bill stuff is what is mostly required.

QUEBEC AND NEW BRUNSWICK.

Spruce is in rather better demand in the eastern markets, at least the better classes of wood. There is an over supply of undesirable lengths, and such has to be sold at low prices. The same is true of hemlock. Spruce clapboards sell readily. Further developments in this class of wood are awaited with interest. Some assert that the wealthy men will take revenge on those who kept out of the association and finally broke it up, by cutting prices and driving them out of the market. On the other hand the growing demand for pulp wood (and spruce is the best for the purposes) will tend to keep up prices, and if the spruce trees cannot be made into lumber with advantage, they will be converted into pulp logs. While, therefore, the future of spruce is somewhat uncertain, the lumbermen of the lower provinces hope for the best.

BRITISH COLUMBIA.

Two circumstances inspire the hope that there is a better time coming for the lumber trade in the Pacific province. One is the reduction in dues for timber cut in the railway belt. The other is the reduction in duty on lumber imported into Victoria, Australia. Victoria has always been a highly protected country, so far at least as timber is concerned, and the reduction will naturally stimulate shipments thither. It is true the reduction does not take effect till 1st January next, but it takes some time for cargoes to reach there, and unlike the St. Lawrence, where shipments will soon cease for the season, they can go on from British Columbia ports all the year. On the other hand, as a damper, comes the story of a big combination against B. C. lumbermen on the part of the west coast men in the United States. British Columbia saw mill men ridicule such a thing, alleging that business is as dull with them as with Puget Sound and other mills, and that any combination must include them in order to advance prices, which are low indeed. The B. C. mill men are quite prepared to go into it. Either new markets will have to be found in China, Japan and Australia, or a reduction in the output will have to be made, before the trade reaches a thoroughly satisfactory busis. In the shingle trade business is fair. There are those who think the present preference for west coast cedar shingles will not last, and that the pine shingle of the east will retain its hold, but such an opinion is based on the fact that the pine shingle is better made. If it is simply a question of make the west coast men will soon remedy that. Cedar is so much more durable than pine that it will always be preferred for shingles, and there is no good reason why a cedar shingle should not be as smooth and well made as a pine one.

UNITED STATES.

General trade throughout the United States shows further improvement for the second week of September. While values in some lines of staples have receded, we are glad to state that in lumber they have not gone back, in fact in some lines they have strengthened. At a meeting of the Skillings, Whitney & Barnes Lumber Co., one of the largest concerns in the United States dealing in white pine lumber, held on Friday, the price of the better grade of pine lumber was advanced $2 per thousand feet. There is less of the better grades of white pine in sight at the present time than there was one year ago, and the demand is more active. The demand for Southern yellow pine is brisk and the mills have considerable orders ahead. In the West it is not quite so good, and in the East there has been some cutting of prices. There seems to be a race for favor between this class of pine and Douglas fir for house finish. Each will always have its backers. On the west coast, at San Francisco, receipts have jumped away up, and Puget Sound has helped to supply what has gone in. From the Sound there is not the same cry for cars to carry lumber and shingles east. 100 Burlington cars are on their

way thither to load. In hardwood things look promising. Oak is in good demand; so is maple flooring. A western combination of hardwood men has been formed, so that prices will probably be stiffer in the future. In fact they are steadily improving all the time, and are on the whole probably better than for some years, notwithstanding some local complaints. This arises from the growing demand for hardwood for finishing city houses. In Buffalo transactions are not up to anticipations, but those who push for business generally find it.

FOREIGN.

Regarding the trade in general in England, the improvement which was so conspicuous in July continued in August. A revival has undoubtedly set in, in which the timber trade participates. It is true there has been a shrinkage in the general volume of imports of wood, but looking at the over-production of the past and the unremunerative prices of the present, this is a salutary feature. In London a good deal of quiet trading has been done, partly owing to the fact that not so much wood is offered by auction and dealers have to supply their wants in other ways. In Liverpool both square and round timber are moving freely, and scantlings are inquired for. Prices have not improved, but the tendency is upwards. At Bristol a complaint is made by the local press that the wood trade of the port has declined a half this year, but it looks as if this was the result of want of proper railway facilities. The trade which is Bristol's loss is probably some other port's gain. From Australia comes news of a falling off in the demand for all kinds of timber except Oregon, but values remain firm, with advances in lines in short supply or held in a few hands. As for the outlook in England for Canadian timber, Denny, Mott & Dickson tell us in their last circular that stocks of waney and square of first-class quality are being firmly held, as future shipments from Quebec are likely to be few, shippers having little to dispose of and requiring an advance to tempt them to sell. Good oak is light in stock and in fair demand. Elm moves slowly, but prices are steady. There is a prospect of a growing trade with France in Canadian timber. Under the new treaty lumber will go into that country at the minimum tarift rates. Tne importation amounts to 40,000,000 annually of which Canada sends less than $125,000 worth. The Montreal Chamber of Commerce is taking the matter up and report the possibilities encouraging. It is suggested that the proper authorities send some one to France to inquire into the character, size and description of lumber which would suit the French market.

STOCKS AND PRICES.

Several Canadian cargoes are now being sent to Australia, and Mr. Larke our commissioner there thinks they will find a good market.

Moffatt & McGregor, of Tilbury, shiped the largest elm raft the other day that ever crossed Lake St. Clair, there being 3,253 logs containing 700,000 feet.

Sheboygan, Mich., firms will put fifty million feet of logs in Canadian waters this winter for local mills. The prospects are good for the biggest season on record.

A check has been placed upon lake rafting thus far this season by the low stage of water in all the streams emptying into Georgian Bay, where millions of feet of Canadian pine logs, owned by Americans, have been hung up.

C. K. Eddy & Sons, of Saginaw, have started their camps in Canada and will cut 12,000,000 feet there this season. J. W. Howry is also preparing to operate in Ontario.

The season's cut of the St. Anthony Lumber Company, 30,000,000 ft., has been purchased by the Export Lumber Company, and will be shipped to the American market over the Ottawa, Arnprior and Parry Sound and Canadian Atlantic railways.

The Spanish River Boom Company has rafted during the season 180,000,000 feet of logs averaging $10 a thousand. Of these 140,000,000 went to the United States and 20,000,000 to Canadian mills. The boom company have a mill at Spanish river which cut 30,000,000 feet of lumber this season.

Messrs. King Bros., of Quebec, are making some 40,000 logs for the Fortier saw mill between Thetford mines, and Robertson station. Mr. B. R. Bishop, not far from the same neighborhood, will cut next winter fully a million feet of timber which will go to the Rousseau mills at Robertson station.

The shipping and towing business on the Ottawa river is becoming slower as the season advances. In lumber shipments the season has been of the poorest and shows not the slightest sign of bettering. Since the closing down of the Hawkesbury Lumber Company's mills on account of low water in the bay opposite Grenville, the supply of logs on the lower reach of the river has fallen off, and a surplus is now being laid up which will be of use when the mills start next spring.

Rafts were en route across the lake last week to the Saginaw river as follows: Tug Mocking Bird, 21,556 logs, 2,197,720 feet, from Spanish river, and consigned to the Minnesota Lumber Co.; Manistique, 32,336 logs, 1,228,763 feet, Spanish river, consigned to C. K. Eddy & Sons; Manistique, 2,028 logs, 1,737,485 ft., Spanish river, consigned to Edmund Hall, Detroit; Waldo Avery, 30,557 logs, 3,750,000 feet, Byng Inlet, consigned to Holland & Emery Lumber Co.; Niagara, 42,200 logs, 3,502,600 feet, Spanish river, consigned to Bliss & Van Auken; Sweepstakes, 1,500,000 feet, from Little Current, consigned to J. W. Howry & Sons; Sweepstakes, 40,369 logs, 3,730,000 feet, Spanish river, to Jas. Hurst; Onaping, 38,089 logs, 4,050,036 feet, Spanish river, for Hale & Booth.

BUFFALO AND TONAWANDA.

Owing to political disturbances in the West Indies, the usual demand from that quarter for the rougher grades of lumber has fallen off considerably. This has glutted the home market with cheap lumber, and depressed prices of several grades.

It is estimated that there is in Buffalo hands at present 40,000,000 feet of hardwoods. One dealer has printed a list of thirty varieties of hardwood. Buyers are scouring Canada for oak and chestnut and are securing but little. Mahogany is also much in demand. A little of this variety has reached Buffalo from South Africa. The present brisk demand for hardwoods is largely attributable to the fact that for doors, blinds, flooring, &c., hardwood is being substituted for pine. Messrs. Goodyear & Co., who own extensive hardwood limits in Pennsylvania, cut a large figure in this market. Michigan is regarded as one of the most promising sources of hardwood supply for the future.

The bulk of the white pine supplied to this market comes from Duluth. Local buyers who visited the Georgian Bay district in the early part of the season reported that lumber was being held at high prices, presumably because other markets had been found for it.

Most of the shipments to eastern markets are going by rail. One reason for this is that the severe competition between the railways has greatly reduced freights, while another is that eastern buyers are buying in a hand to mouth way, and require that their orders shall be filled as promptly as possible.

FIRES.

Mr. B. B. Miller's saw mill and lumber yard at Wiarton were burned recently. Loss $10,000. Small insurance.

The slab dock running into the bay from the mill at Collingwood caught fire from sparks recently. The engines worked for five hours before extinguishing it, but the loss is not heavy.

Ross' pulp and saw mills at Sherbrooke have been burned for the third time. They had only recently been rebuilt. Two large boilers exploded during the fire, but no one was hurt.

The saw mill of Mr. Joseph Tremblay, at Pointe aux Trembles, has been burned down. Loss $4,000. The fire originated in the sawdust, which was ignited by a child playing with matches.

A recent fire at Halifax, N. S., partially destroyed the Nova Scotia Sugar Refinery cooperage and stock, the Hayes cooperage and stock, one of the street railway's stables and other property. Loss $15,000.

The Moore & Galloway Lumber Co.'s mills at Fond du Lac, Wis., have been burned, the flames have swept over 32 acres. The property destroyed included 10,000,000 feet of pine and hemlock lumber, and warehouses filled with sash, doors and blinds, the company's mill, barns and offices, and a number of railway cars. Loss, $250,000. Insurance, $100,000.

The loss by the burning of D. O'Connor's planing mill at Ottawa will amount to about $20,000, with $9,000 insurance. The lumber in the yard was saved. Though the fire occurred at midday, when the workmen were about, it spread so rapidly that they could not save their tools. The origin is unknown. The fire broke out in the turning department. It is not likely the mill will be rebuilt.

TIMBER LIMITS CASE.

Mr. Justice Taschereau has dismissed at Montreal the action of F. X. Stafford against the estate of the late James McCready. Mr. Stafford sought to have an account rendered him of the sale of certain timber limits and also to have the estate condemned to pay him $1,900. He alleged that the late James McCready had commissioned him to sell two timber limits, 16½ and 50 miles respectively on Lake Temiscamingue, he to receive half the price of the smaller limit as his commission. The court held that the mandate given by Mr. McCready to Mr. Stafford was one which was revocable at any time, and by the death of the principal it had been cancelled naturally.

SHIPPING MATTERS.

Freights are low from St. John, N. B., the rate to British ports being 37s 6d, to New York $2.25 and to Boston $2, with very little inquiry.

The steam barge Africa and schooner Severn loaded at the P. S. L. Co.'s docks at Parry Sound last week for Buffalo, carrying over 1,000,000 feet.

At Greenock two full cargoes of assorted wood—waney oak, elm and ash logs, etc.—had just arrived from Quebec at latest advices, and two more were expected.

The Sarmatian, Allan liner, has discharged a parcel of 150 standards at Glasgow. They are Gilmour's fine deals of various qualities, a large portion of which have been sold ex-ship, principally of first quality.

Price Bros. & Co., of Restigouche county are loading a vessel a Campbellton for South America. The river has been dredged there, and hereafter they will ship from Campbelton instead of Dalhousie.

8,000,000 feet of deals to Great Britian, and 2,000,000 feet long lumber, 3,000,000 lath, nearly 2,000,000 shingles and 300 cords of wood to the United States were the shipments from St. John, N. B., for the first week in September.

The Hawaiian schooner Americana, 839 tons, sailed from Victoria, B. C., Sept. 5, for South Africa with a cargo of 1,008,097 feet, valued at $8,379. The American bark Enoch Talbot, 1,194 tons, arrived Sept. 9, and loaded at Vancouver for California.

The following shipments were made from the port of Montreal during the week ending September 17th: Lycia, 3,036 deals, 1,787 boards, to Liverpool; Hurona, 1,869 boards, 15,612 deals, to Newcastle; Amarynthia, 15,845 deals, 3,167 ends, to Glasgow; Lake Ontario, 1,325 deals, to Liverpool; Merrimac, 32,159 deals, 4,583 ends, to London.

The Norwegian ss Herman Wedel Jarlsberg, 1,940 tons, Capt. Reimers, is reported on the way from Kuchmotza to Vancouver to load lumber at the Hastings mills. The bark Omega has been chartered to load at Blakely, for Shanghai at 47s 6d, and the barkentine Spinway has gone to the Sound to load on owner's account for Freemantle, Australia.

The following lumber shipments were made from the Port of Montreal during the week ending 23rd September: Warwick, 15,108 deals, to Glasgow; Roman, 30,825 deals, to Liverpool; British Queen, 13,000 deals, 7,269 ends, to London; Christiana, 5,351 deals, to Hamburg; Bengore Head, 5,938 pieces lumber, 1,678 boards, to Belfast.

The following vessels are reported loading lumber at British Columbia ports for foreign: At Vancouver: Nor. ship Prince Amadeo, 1,581 tons, for Halifax; Br. bark Shakespeare, 767 tons, for South Africa; Am. bark Enoch Talbot, 1,194 tons, for California; Nor. bark Prince Louis, 1,323 tons, for Cork, U.K., f.o., at Vesuvius Bay; Am. bark Arcturus, 1,007 tons, mining props, for Santa Rosalia. Total, 5 vessels; 5,975 tons.

BUSINESS DIFFICULTIES AND CHANGES.

Messrs. Hugh McLean & Co. is the name of a new firm of wholesale lumber dealers, recently established in Buffalo. The members of the firm came from Ottawa, and they are said to have already succeeded in making a favorable impression in the Buffalo market. They make a specialty of hardwoods.

LUMBER FREIGHT RATES.

LUMBER freight rates for pine on the Grand Trunk Railway have been made a fixture, as below. Of any intended change due notice will be given lumbermen.

General instructions in shipping by Grand Trunk are embodied in these words in the tariff schedule: On lumber in carloads, minimum weight, 30,000 lbs. per car, unless the marked capacity of the car be less, in which case the marked capacity (but not less than 24,000 lbs.) will be charged, and must not be exceeded. Should it be impracticable to load certain descriptions of light lumber up to 30,000 lbs. to the car, then the actual weight only will be charged for, but not less than 24,000 lbs. The rates on lumber in the tariff will not be higher from an intermediate point on the straight run than from the first named point beyond, to the same destination. For instance, the rates from Tara or Hepworth to Guelph, Brampton, Weston or Toronto, would not be higher than the specific rates named from Wiarton to the same points. The rates from Cargill and Southampton to points east of Listowel and south and west of Stratford will be the same as from Kincardine, but in no case are higher rates to be charged than as per mileage table published on page 9 of tariff.

Rates from leading lumber points on pine and other softwood lumber, shingles, etc., are as follows: From Glencairn, Creemore, Aurora, Barrie and other points in group B to Toronto, 6½c.; Collingwood, Penetang, Coldwater, Waubaushene, Sturgeon Bay, Victoria Harbor, Midland, Fenelon Falls, Longford, Gravenhurst and other points in group C, to Toronto, 6½c.; Brace, bridge to Toronto 7c.; Utterson, Huntsville, Navor-Emsdale, Katrine to Toronto, 7½c.; Burk's Falls, Berriedale and Sundridge, to Toronto, 8c.; South River, Powassen and Callender to Toronto, 9c.; Nipissing Junction and North Bay, 10c. Rate from Goderich, Kincardine and Wiarton to Toronto, 6½c. These rates are per 100 lbs. Rates from Toronto east to Belleville are 7½c. per 100 lbs.; to Deseronto, 9c.; to Brockville and Prescott, 10c.; to Montreal and Ottawa, 11c. The rates on hardwoods average about from 1c. to 2c. per 100 lbs. higher than on softwoods. For rates on railway ties, mahogany, rosewood, walnut, cherry, and other valuable woods, application must be made to the district freight agent.

On the Canadian Pacific the rates on pine and softwoods may be illustrated as follows: Cache Bay, North Bay, Sturgeon Falls and Warren, to Toronto, 10c.; Algoma, Cook's Mills, Massey, Spanish River and Whitefish to Toronto, 13c.; Ottawa to Toronto, 10c From Ottawa, Hull, Aylmer and Duchesne Mills to station on the Lake Erie and Detroit River, Erie and Huron, Toronto, Hamilton and Buffalo, and Michigan Central Railways, the rate is 14½c. per 100 lbs. Regulations apply as to minimum size of carload of 30,000 lbs., and an advanced rate is charged for hardwoods.

Lumber freight rates on the Canada Atlantic Railway are as follows: Ottawa to Toronto, 10 cents per 100 lbs; Ottawa to Oswego, $1.90 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Montreal, $1.00 per M ft., (3,000 lbs. and under per M ft.); Arnprior to Montreal, $1.50 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Quebec, $2.00 per M ft.; Arnprior to Quebec, $2.50 per M ft.; Ottawa to Buffalo, 12 cents per 100 lbs.; Ottawa to Port Huron and Detroit, 14 cents per 100 lbs. Ottawa to New York, five carloads or over $3.00 per M ft.; Arnprior to New York, $3.50 per M ft.; Ottawa to Boston, Portland and common points, local 15 cents; exports 13c. per 100 lbs.; Arnprior to Boston, Portland and common points, local 17 cents; export 51 cents per 100 lbs.; Ottawa to Burlington, 6 cents per 100 lbs.; Ottawa to Albany, 10 cents per 100 lbs.; Arnprior to Albany, 12 cents per 100 lbs.; Ottawa to St. John, N. B. and common points, 20 cents per 100 lbs.; Ottawa to Halifax, N. S. and common points, 22½ cents per 100 lbs. Minimum carload weight for shipment of lumber, lath, shingles, etc., is 30,000 lbs., and rates quoted above are in cents per 100 lbs., except when quoted per M ft. the minimum carload charged is 10 M ft., lumber not exceeding 300 lbs. to the M feet. Ottawa rates apply on shipments from Rockland and Hawkesbury.

MODIFICATION OF HARDWOOD RATES.

THE Grand Trunk Railway and Canadian Pacific have made the rates on hardwoods from certain points to Toronto and Hamilton as follows. The regulations are over the signature of Mr. John Earls, W.D.F.A., of the G. T. R., and given in reply to a letter from Toronto hardwood men:

"After careful consideration we have come to the conclusion that, on and after Jan. 1st, 1895, a modification will be made in the present arrangements for hardwood lumber, to the effect that the rate will be 7½c. per 100 lbs. from our Northern and Northwestern branches to Toronto and Hamilton. This rate, however, will not apply from main line points and the straight run between Toronto, Sarnia and Windsor; also that so far as rates on common lumber to points like Guelph, Galt, London, Woodstock, Ingersoll, etc., from all lumber shipping stations the rate will be the same on hardwood as on pine." On the old principle, we suppose, that half the loaf is better than none, hardwood men have something, possibly, to be thankful for, though there is no good reason why the rates generally on hardwood should not be as low as on pine. It is understood that the C. P. R. rate will be made uniform at 7½c. from same points.

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DRY HEMLOCK, ROCK AND ELM SLABS for sale at 75 cents per cord on cars. No edgings.
J. E. MURPHY, Hepworth Station, Ont.

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Having Brown Ash 12, 14 and 16 ft. firsts and seconds, inch Bass firsts and seconds 12 feet, or any other Hardwood Lumber, can sell same for cash by addressing
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Inspection at mill.

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LUMBERMEN'S SUPPLIES
Davidson & Hay, Toronto
Eckardt, H. P. & Co., Toronto.

MACHINERY
Bertram, John & Sons, Dundas, Ont.
Darling Bros., Montreal.
Drake, F. J., Belleville, Ont.
Eastman Lumber Co., Eastman, Que.,
Payette, J. E. & Co., Penetanguishene, Ont.
Northey Mfg. Co., Toronto, Ont.
Small & Fisher Co., Woodstock, N. B.
The Wm. Hamilton Mfg. Co., Peterboro', Ont.
The Waterous Co., Brantford.
Williams, A. R., Toronto.

SAW MANUFACTURERS
Burns, E. R., Saw Co., Toronto, Ont.
Shurly & Dietrich, Galt, Ont.

WHOLESALE LUMBER DEALERS
Buffalo Hardwood Lumber Co., Buffalo, N. Y.
Donogh & Oliver, Toronto.
Elias & Bro., G., Buffalo N. Y.
Gilmour & Company.
Haines & Company, Buffalo, N. Y.
Maitland, Rixon & Co., Owen Sound Ont.
Reid Co. of Toronto, The

MISCELLANEOUS
Can. Office and School Furniture Co., Preston, Ont.
Canada Atlantic Railway.
Can. Photo Engraving Bureau, Toronto, Ont.
Dominion Leather Board Co., Montreal.
Dodge Wood Split Pulley Co., Toronto, Ont.
Electrical Apparatus, Royal Electric Co., Montreal.
Flint & Pere Marquette Railroad.
Emery Wheels, Tanite Co., Stroudsburgh, Pa.
Illinois Central Railroad Co., Chicago, Ill.
Injectors, Hamilton Brass Mfg. Co.
Lumber Truck Wheels, Montreal Car Wheel Co.
Lumbering Tools, Thos. Pink, Pembroke, Ont.
Magnolia Metal Co., New York.
Machine Knives, Peter Hay, Galt, Ont.
Penberthy Injector Co., Detroit, Mich.
Silver Solder, P. W. Ellis & Co., Toronto.

Business Wisdom: The world over, in village, town or city, the successful business man, the man who has the money and knows how to keep it, the man with credit and tangible property, is almost invariably the man who has been honest in his business transactions.

The Price Lists that here follow will be revised each week up to the hour of going to press, and in connection with these we would draw attention to the week's trade review under the heading of "Current Trade Conditions" on the first page, immediately followed with matter marked "Stocks and Prices," which presents the lumber situation of the week, together with a record of the week's sales and transactions.

PRICES CURRENT.

TORONTO, ONT.

TORONTO, Sept. 25, 1895

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		2 30
XX shingles 16 inch		1 40
Lath, No. 1		2 00
Lath No. 2	1 80	1 85

HARDWOODS—PER M. FEET CAR LOTS.

Quality, 1s and 2s unless otherwise specified.

Ash, white, 1 to 2 in.	$26 00	$28 00	Cherry	1 " 1½	50 00	60 00
" " 2½ to 4 in.	30 00	32 00	"	2 " 4 in.	60 00	65 00
Ash, black, 1sts and 2nds, 1 to 1½ in	21 00	23 00	Elm, soft	1 to 1½	$14 00	$15 00
Ash, black, 1sts and 2nds, 2 to 4 in	23 00	25 00	" "	2 " 3 in.	15 00	16 00
Ash, M. R.,	2 " 1½	18 00	20 00	" rock	1 " 1¼	16 00	18 00
" "	1 " 4 in.	20 00	24 00	" "	1½ " 3 in.	20 00	22 00
Birch,	2 " 1½	24 00	26 00	Hickory	1½ " 2 in.	28 00	30 00
"	" 4 in.	26 00	29 00	Maple	1 " 1¼	16 00	18 00
" sqrs. 4x4	" 8x8	28 00	32 00	"	2 " 4 in.	18 00	20 00
Basswood	1 " 1¼	16 00	18 00	Oak, red, p'n	1 " 1½	28 00	30 00
"	1¼ " 2 in.	19 00	19 00	"	2 " 4 in.	30 00	32 00
" m. r.	1 " 1¼	14 00	16 00	" white	1 " 1½	28 00	30 00
Butternut	1 " 1½	23 00	25 00	" "	2 " 4 in.	30 00	35 00
"	2 " 3 in.	25 00	28 00	" quart'd	1 " 2 in.	48 00	52 00
Chestnut	1 "	22 00	25 00	Walnut	1 " 3 in.	85 00	100 00
				Whitewood	1 " 2 in.	32 00	36 00

OTTAWA, ONT.

OTTAWA, Sept. 25, 1895.

Pine, good sidings, per M feet, b.m	$30 00	35 00
Pine, good strips, " " "	26 00	30 00
Pine, good shorts, " " "	18 00	25 00
Pine, No. 1 dressing sidings, per M feet, b.m.	19 00	24 00
Pine, " " strips, " " "	17 00	20 00
Pine, " " shorts, " " "	15 00	17 00
Pine, 10 s.c. and better stock, " " "	15 00	18 00
Pine, 8 s.c. " " " " " "	13 00	14 00
Pine, " sidings " " "	13 00	15 00
Pine, " strips " " "	11 00	13 00
Pine, " shorts " " "	8 50	11 00
Pine, box culls " " "	9 00	12 00
Pine mill culls " " "	9 00	10 00
Lath per M	1 30	1 75

QUEBEC, QUE.

QUEBEC, Sept. 25, 1895.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	16 @	22
For fair average quality, according to average, etc., measured off.	20	26
For good and good fair average, " " " " "	25	30
For superior " " " " "	32	40
In shipping order " " " " "	36	42
Waney board, 18 to 19 inch " " " " "	36	42
Waney board, 19 to 21 inch " " " "	38	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	40	49

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	22	30

BIRCH.

16 inch average, according to average and quality	21	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $40 to $43 for 3rd quality.
Bright spruce, according to mill specification, $40 $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality. F.O.B. batteau.

SAGINAW, MICH.

SAGINAW, Mich., Sept. 25, 1895.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$45 00	Selects, 1 in., 8 in. and up wide	$38 00
1¼, 1½ and 2 in.	45 00	1¼, 1½ and 2 in.	40 00
2½ and 3 in.	50 00	2½ and 3 in.	45 00
4 in.	55 00	4 in.	50 00

FINE COMMON.

1 in., 8 in. and up wide	33 50	2½ and 3 in., 8 in. and up wide	40 00
1¼, 1½ and 2 in.	35 00	4 in.	45 00

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	25 00	2½ and 3 in., 7 in. and up wide	35 00
1¼, 1½ and 2 in.	30 00	4 in.	38 00

STRIPS. A AND B (CLEAR AND SELECTS).

1¼ in., 4, 5 and 7 in. wide	34 00	1 in., 4, 5 and 7 in. wide	32 00
6 in. wide	36 00	6 in. wide	36 00

FINE COMMON OR C.

1¼ in., 4, 5, 6 in. wide	30 00	1 in., 6 in. wide	30 00
1 in., 4, 5 in. wide	28 00		

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24 00	1 in., 4, 5, 6 in. wide	23 00

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in	17 00	1 in., 4, 5 and 7 in.	17 00
1 in., 6 in.	18 00	1 in., 6 in.	18 00

NO. 2 FENCING OR NO. 4 FLOORING.

1 in., 4, 5 and 7 in.	14 00	1¼ in., 4 to n.	14 00
1 in., 6 in.	14 50	No. 3 fencing, 1 in., 6 in.	13 00

SHELVING.

No. 1, 1 in., 10 in. stocks	25 00	No. 2, 1 in., 7 and 8 in. stocks	19 00
1 in., 10 in. and up wide	26 00	1 in., 10 in. stocks	21 00
1 in., 12 in. stocks	29 00	1 in., 12 in. stocks	24 00
1 in., 12 in. and up wide	30 00	1 in., 10 in. and up wide	22 00
1¼ in. 1½ and 2 in., 8 in. and up wide	29 00	1 in., 13 in. and up wide	25 00

BARN BOARDS OR STOCKS.

No. 1, 12 in.	20 00	No. 2, 9 in.	14 00
10 in.	17 50	8 and 7 in.	14 00
9 in.	17 50	No. 3, 12 in.	13 00
8 and 7 in.	17 50	10 in.	12 00
No. 2, 12 in.	16 00	9 in.	12 00
10 in.	14 00	8 in.	12 00

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$10 00	1 in., 13 in. and up wide	$12 00
1 in., 6 in. wide	11 00	1¼, 1½ and 2 in., 7 in. and up wide	12 00
1 in., 7 in. wide and up	11 00		

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9 in. wide	17 00	1 in., 10 in. and up wide	17 00
1 in., 6 in. wide	17 00	1¼, 1½ and 2 in., 8 in. and up wide	17 00

COFFIN BOARDS.

No. 1, 1 in., 13 in. and up	20 00	No. 1, mill culls	9 00
No. 2	17 00	No. 2, or red horse	7 00

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23 00	No. 2	19 00
No. 1 (nearly clear)	21 50	No. 3	16 00

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16ft.	$ 8 50	Hemlock, 2x4 to 10, 12 to 16 feet	8 00
18 ft.	10 50	2x12	8 50
20 ft.	11 50	Add $1 to each additional 2ft. in length.	
22 and 24 ft.	12 50		

SHINGLES, 18-IN.

Fancy brands, XXXX	3 20	Standard brands. river made, XXXX	2 85
Clear Butts	2 00	Clear Butts	1 85

WHITE PINE LATH.

No. 1	1 75	No. 2	1 35
		Hemlock	1 25

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA N. Y., Sept 25, 1895.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in	$47 00	50 00	No. 3, 1¼ to 2 in.	16 00	17 00
2½ and 3 in.	50 00	53 00	Shelving, No. 1, 13 in and up, 1 in.	31 00@33 00
4 in.	54 00	56 00	Dressing, 1¼ in.	25 00	26 00
Selects, 1 in.	38 00	39 00	1¼x10 and 12	26 00
1¼ to 2 in.	40 00	42 00	1½ in.	24 00	25 00
2½ and 3 in.	47 00	50 00	2 in	26 50	28 00
4 in.		52 00	Mold st'ps, 1 to 2 in.	33 00	35 00
Fine common, 1 in.	35 00	37 00	Barn, No. 1, 10 and 12 in.	21 00	23 00
1¼ and 1½ in.	37 00	38 00	6 and 8 in.	20 50	22 00
2 in	34 00	35 00	No. 2, 10 and 12 in.	16 50	17 00
3 in.		45 00	No. 3, 10 and 12 in.	14 00	16 00
4 in		45 00	6 and 8 in.	13 50	15 50
Cut'g up, No. 1, 1 in.	26 00	28 00	Common, 1 in.	16 00	18 00
1¼ to 2 in.	32 00	33 00	1¼ and 1½ in.	18 00	20 00
No. 2, 1 in.	16 00	17 00	2 in	19 00	22 00
No. 2, 1¼ to 2 in	22 00	23 00			

NEW YORK CITY.

NEW YORK, N. Y., Sept. 25, 1895.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$28 00	@ 40 00	Building orders	$26 00 @ 37 00
Decking	44 00	50 00		

SPRUCE.

6 to 9 in.	13 00	14 00	10 to 12 in.	15 50	16 00
6 to 12 in.	14 50	15 50	Lath	1 85	2 00
9 to 12 in.	15 50	15 75			

BOSTON, MASS.

BOSTON, Sept. 25, 1895.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$11 50	12 00	¾ inch	$ 9 25	9 75
Coarse No. 5	15 00	16 00	11-16 inch	8 50	9 00
Refuse	13 00	13 20	⅝ inch	8 00	8 50
Outs	9 00		Clapboards, sap ext.	44 00	46 00
Boxboards, 1 inch	10 75	11 00	Sap clear	40 00	43 00
⅞ inch	9 75	10 00	Sap, 2nd clear	32 00	35 00
			No. 1	23 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in.	$50 00	@52 00	Fine com., 3 and 4 in	43 00	45 00
1¼, 1½ and 2 in.	52 00	53 00	No. 2, 1 in. Fine com.	28 00	30 00
3 and 4 in.	58 00	60 00	1¼, 1½ and 2 in.	29 00	31 00
Selects, 1 in.	43 00	45 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in.	45 00	47 00	No. 2	36 00	37 00
3 and 4 in.	55 00	57 00	No. 3	28 00	30 00
Moulding boards, 7 to 11 in. clear	35 00	37 00	Cut ups, 1 to 2 in.	24 00	32 00
60 per cent. clear	32 00	34 00	Coffin boards	19 00	20 00
Fine common, 1 in.	40 00	42 00	Common all widths	22 00	26 00
1¼, 1½ and 2 in.	40 00	41 00	Shipping culls, 1 in.	15 00	15 50
			do 1¼ in.	15 50	16 50

SHINGLES.

Spruce	1 30	1 50	Second Clear	1 75	2 00
Cedar, extra	2 50	2 75	Extra No. 1	1 00	1 25
Clear	2 25	2 50			

HEMLOCK.

Boards, rough	10 00	@11 00	No. 2	7 00	@ 9 00
Planed	11 50	12 00			

LATH.

Spruce			By cargo	1 80	@ 1 90
By car	1 80	@ 2 00			

ALBANY, N.Y.

ALBANY, N. Y., Sept. 25, 1895.

PINE.

Uppers, 3 in. up	$50	$52	Dressing boards, narrow	$19	$21
2½ in.	50	52	West India shipping boards	16	17
1 to 2 in.	45	48	Box boards	12	14
4 inch uppers	50	52	10-in. dressing and better	26	30
Selects, 2½ in. up	40	42	10-in. common	14	15
1 to 2 in.	36	40	12-in. dressing and better	25	32
Fine common, 2½ in. and up	38	40	Common, 1x11	14	16
1 to 2 in.	34	38	No. 1 barn, 1x12		20
No. 1 cut, 1 to 2 inch	25	35	1x10	18	21
No. 2	18	25	1x8	16	18
No. 3	17	20	No. 2 barn, 1x12	17	19
No. 1 molding, 1 to 2 in.	33	36	1x10	17	19
No. 2 molding, 1 to 2 in.	25	28	1x8	17	19
Stained saps		20	Shaky or star clear, 1 to 2 in.	19	21
Bracket plank	30	35	Dressing	16	18
Shelving boards, 12-in. up	28	30	Common	11	15

LATH.

Pine	$2 25		Spruce	$2 00	

SHINGLES.

Sawed Pine, ex. XXXX	$4 25	$4 30	Bound butts, 6x18	$6 00	$6 15
Clear butts	3 25	3 35	Hemlock	2 15	2 30
Smooth, 6x18	5 40	5 50	Spruce	2 20	2 30

OSWEGO, N.Y.

OSWEGO, N. Y., Sept. 25, 1895.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$45	@46 00			
Pickings, " "	36 00	38 0			
No. 1, cutting up, " "	31 00	33 00			
No. 2, cutting up, " "	24 00	25 00			
In strips, 4 to 8 wide, selected for moulding trips, 14 to 16 ft.	30 00	32 00			

SIDING

1 in siding, cutting up ricks and uppers	32 00	@39 00	1¼ in selected	38 00	@43 00
1 in dressing	19 00	21 00	1¼ in dressing	20 00	22 00
1 in No. 1 culls	14 00	15 00	1¼ in No. 1 culls	15 00	17 00
1 in No. 2 culls	13 00	14 00	1¼ in No. 2 culls	14 00	15 00
			1 in. No 3 culls	11 00	12 00

1X12 INCH.

12 and 16 feet, mill run	21 00	24 00			
12 and 16 feet, No. 1 and 2, barn boards	19 00	20 00			
12 and 16 feet, dressing and better	27 00	31 00			
12 and 16 feet, No. 2 culls	15 00	16 00			

1¼X10 INCHES.

Mill run, mill culls out	$22 00	@25 00	No. 1 culls	17 00	18 00
Dressing and better	27 00	35 00	No. 2 culls	14 00	15 00

1X4 INCHES.

Mill run, mill culls out	17 00	21 00	No. 1 culls	14 00	15 00
Dressing and better	24 00	30 00	No. 2 culls	12 00	13 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20 00	25 00	6, 7 or 8, No. 1 culls	16 00	17 00
6, 7 or 8, drsg and better	25 00	30 00	6, 7 or 8, No. 2 culls	14 00	15 00

SHINGLES.

XXX, 18 in pine	3 60	3 75	XXX, 18 in. cedar	3 40	3 65
Clear butts, pine, 18 in.	2 60	2 75	Clear butt, 18 in. cedar	2 40	2 65
XXX, 16 in. pine	2 90	3 10	XX, 18 in. cedar	1 75	2 00
Stock cedars, 5 or 6 in.	4 50	5 00			

LATH.

No. 1, 1¼	1 5		No. 2, 1¼		57
No. 1, 1 in.	1 50				

THE NEWS.

—Montana's fiirst house is still inhabited.

—C. A. Price will erect a planing mill at Aylmer, Ont.

—The Sayward Saw Mill Co., Victoria, B. C., will shortly put in a band mill.

—Arthur MacGregor has started a sash and door factory at Middleton, N. S.

—Miller Bros. & Co., of Glen Miller, Ont., are putting another machine into their pulp mill.

—All the spool bars sawed at Richards' mill, Boiestown. N.B., have been shipped to Scotland.

—T. C. Dawson is offering his 44 horse power saw mill at Renfrew, Ont., for sale. Failing health is the reason.

—T. B. Caldwell, of Lanark, has bought the eight mile Russell limit at Trout Lake and will build a saw mill at Lanark.

—Thos. Pink, Pembroke, has put in machinery to make handles for lumbering tools. Its capacity is 400 handles per day.

—Messrs. Gilmour & Hughson's sawmills at Chelsea have closed down for the season, as the supply of saw logs is exhausted.

—In the Deseronto cedar mill 1,000 railroad ties, 20,000 to 27,000 feet of lumber and 70,000 to 80,000 shingles, are manufactured every day.

—F. P. Buck, liquidator of the Royal Pulp and Paper Co., of East Angus, Que., has declared a first and final dividend of sixty-eight per cent.

—The Gatineau shanties are filling up rapidly. Messrs. Gilmour, Hughson and Edwards have sent large numbers of choppers to the woods.

—The Royal Paper Mills company have commenced work on their new saw mill at Angus. It is said that the new mill will cost over $10,000.

—Messrs. McAuly & Bolter, of Lower Millstream, Kings Co., N. S., who were burned out some time ago, have their new mill almost ready for running.

—Mr. John McAdam, of Woodstock, N.B., has purchased for his new mill a superior engine and circular sawing machine, and will soon be at work again.

—The timber from which the masts of the yachts Valkyrie and Defender were made was cut in Washington territory. It was the best description of Douglas fir.

—Ald. John McGoldrick has purchased Messrs. Cowan and McGinty's mill near Indiantown, N.B. He will remove the machinery and boilers and pull it down.

—Messrs. Goggin, of Penobsquis, N.B., will start their steam mill in a few days. They have several hundred thousand feet to saw. This is the old Freeze mill.

—A quantity of good waney timber in the government boom at the mouth of the Gatineau refutes the statement of some lumbermen that no good timber remains on that river.

—Ernest Hutchinson has purchased from the St. Stephen bank the Todd lands on the Miramichi. There are three tracts, making in all 25,000 acres of good spruce land. The price paid was $1.75 an acre.

—Regarding the prospects of Canadian trade in Australia, Commissioner Larke writes to the Department of Trade and Commerce that the saw-mill machinery of the colony is out of date and must soon be replaced.

—It is expected the new wood pulp mill at Eddy's will be ready in about a month. It will have four grinders and an output capacity of ten tons per day. The delay in completing it was caused by the breaking of some of the machinery on its way from the factory.

—Mr. J. F. Hamilton's new band saw mill, at Strait Shore, N. B., is in operation. The band saw has a speed of 10,000 feet a minute, and the mill will cut 2,000 feet per day for every man employed. At present there are 26 men. The machinery came from Ontario.

—The first shipment of lumber ever made from Fort William, Lake Superior, to Chicago, was recently sent to D. S. Pate & Co It consisted of 654,000 feet, 354,000 of which was from the mills of Graham, Horne & Co., Fort William, and 310,000 from the Ontario & Western Co., Rat Portage.

—The Holland-Emory Company have sold part of the Township of Brown, with the mill at Byng Inlet, to the Byng Inlet Lumber Co., who are now operating the mill. At present they are cutting shingles, of which the mill's capacity is two hundred thousand per day. They intend taking out a stock of logs for lumber during the winter.

—The men working at Munro & Gordon's camp at Pogamasing had a somewhat unusual and dangerous experience during a recent storm. Lightning struck a rock near where they were working, knocking down fifteen of the men and three span of horses. The men escaped without serious injury, but two of the horses were badly stunned.

—James Wynard Steinhoft, David Alexander Gordon, Edward Kelley, all of Wallaceburg, Ont; Joseph Atkins, of Cashmere, and Issac Unsworth, of Florence, Ont., are applying for incorporation as "The Cashmere Manufacturing Co.," to manufacture staves, hoops and lumber, at Cashmere and Wallaceburg, with a capital of $20,000.

—A New York lumbering firm talks of operating limits some 150 miles above Lake Temiscamingue on what is known as the Grand Lake, Victoria region. They are about three hundred square miles in extent, and are farther up the Ottawa than any lumber has yet been cut. The river is not improved above the Quinze, and it would be with great difficulty that logs could be brought down.

—The tug Metorama, while towing a raft of logs containing over 3,000,000 feet belonging to Mr. Hill, of Michigan, from Waubuno Island, in the South Channel, to Playfair's saw mill at Midland, was caught in the gale of Sunday night, 15th Sept., and had to let them go. They were driven ashore at Sandey Island, but the boom did not break and they were recovered without much damage.

—The Middleton, N. S., box factory has shipped this summer 10,000 pairs of barrel heads, of which the largest buyers were F. C. Anderson of Kingston, who took 3,000, and W. E. Palfrey of Lawrencetown, 2,000 pairs. Nearly 1,000 strawberry crates, 40,000 baskets, and stock for 90,000 baskets have also been sold during the past three months. Twenty cars of lumber have been received during that time.

—The mill property at Bathurst, owned by the St. Lawrence Lumber Co., has been sold by R. L. Allport, the representative of the trustee of the English bondholders, to the Sumner Company of Moncton for $29,000, The property consists of a saw mill, 240 square miles of timber lands, stores, etc., and some 6,000 acres of wilderness land. The Bersimis property is yet to be disposed of. It includes some 780 square miles of timber lands, a mill, a number of shops, houses, etc.

—J. W. Munro, contractor, of Pembroke, and D. O'Connor of Sudbury, have purchased the timber limits known as the township of Broder, about four miles south of Sudbury, The latter has also received a contract from Messrs. Booth & Gordon for cutting about six million feet in the township of Neelon. This will be sawn at McCormack's mill, which will be kept busy fully two years. This means an expenditure of nearly $35,000 yearly in Sudbury, Mr. O'Connor has now in his employ thirty-five men in the woods and thirty at the saw mill.

—The St. Anthony Lumber Company, which has recently constructed large steam mills at Whitney on the line of the Ottawa, Arnprior, and Parry Sound, have started work. The mill proper is 207 feet long by 80 feet wide, with a shingle and lath mill attached 48x50 feet, and storing shed 32x270 feet. The capacity is 250,000 feet a day, supplied by three band saws and one gang saw. Motive power for running the mill is supplied by a Corliss engine of 700 horse power. Sawdust belts carry a continuous supply of sawdust to the furnace.

CASUALTIES.

—A lad named McAfee lost three fingers in Stetson's stave mill at Indiantown, N. S.

—A young man named Wm. Thompson was killed in one of the saw mills at Warren, Algoma district, last week.

—Harry Cowan, a clerk in Barker's mill at Randolph, N. S., had one of his hands severly injured in the machinery.

—Wm. Clement, an employee of the saw mill at Palliser, B. C., was killed by a freight train on the C. P. R. a few days ago.

—Frank Verdie, formeman of the Shawnigan Lake Lumber Company's camp, B. C., had both legs badly crushed a few days ago.

—James Gibertson was killed in Parter's saw mill at Perth, N. B., a fortnight ago. While holding a piece of scantling on the planer, it was caught by the belt and thrown against him, injuring him internally. He lived only half an hour.

While a party of some forty lumbermen were on their way from Montreal to Peterboro, to work for J. W. Howry & Sons, of Fenelon Falls, they became somewhat hilarious as the result of too much fire-water, and at Cornwall one of them drove his head through a pane of glass in the car window, cutting his throat so badly that he had to be left behind for medical treatment.

PERSONAL.

Mr. J. Burstall, of Quebec, has returned from England by the Numidian.

Mr. James McDonald, of Halifax, has been appointed timber and tie inspector for the Coast Railway Co.

Mr. John Wilson, president of the Brunette Saw Mills Co., New Westminster, B. C., is on a visit to Ottawa and eastern points.

J. A. McRae, lumber merchant, Niagara Falls, Ont., is in Winnipeg. He is interested in the Ontario and Western Lumber company, and will remain some time in the west.

Mr. Peter McKay, deputy reeve of Tuckersmith, who has purchased a tract of land in Algoma, is about to go to that district to build a saw mill. His brother will accompany him.

Mr. Margach, crown timber agent at Rat Portage, accompanied by General Wilkinson, Mr. Geo. Drewry, and Mr. W. G. Cameron have been on a successful fishing tour to Bass Lake. The lakes in that neighborhood are being stocked with bass in accordance with arrangements made by the Ontario and Dominion Governments.

FORESTRY IN NORWAY.

THE forest area of Norway is 19,288,626 acres, of which 2,314,635 acres are crown lands, 587,659 belonging to municipal institutions, leaving under private ownership 16,395,322 acres. The per cent. of the area of Norway covered by forest figures at 24.53. This is only equaled in Europe by Sweden, Russia, Austria and Germany. Norway, with under 10 acres per head in forest area, supplies her own wants and has a net export of $4.10 per head.

The forest wealth of Norway has for a long time been steadily declining. Since 1866 the Government has bought about 100,000 acres of woodland in different sections of the country, but the aggregate forest land of Norway has diminished in an equal ratio by the destruction of private woods. The value of public and communal forests is estimated at $4,000,000, and they occupy only 12½ per cent, of the aggregate forest ground of the country. In Sweden the public forest amount to 16 per cent., in Bavaria 51 per cent., in Baden 70 per cent., in Prussia 68 per cent., and in France 35½ per cent., the total forest land.

A royal commission was appointed as long ago as 1874 to examine the condition of private forests and the general wood supply of the country, and their report was quite alarming. It was estimated that the five southern provinces of Norway, which together embrace about 17,000,000 acres, consumed in 1875 401,000,000 cubic feet of wood, while the reproduction did not exceed 293,000,000 cubic feet, which gave a years deficit of 108,000,000 cubic feet. Forty years earlier forest statistics recorded a fair surplus of production over consumption, and in 1855 there was nearly a balance. The commission stated that the yearly loss, already so large, must increase every year, while the government has no longer any means to arrest the destruction of the forests.

The extensive purchase of private forest by the Government was recommended, although the commission did not expect great results from the adoption of this measure alone. The spread of knowledge of rational forestry can have but a limited influence, although the Government has now established a few forest schools in different parts of the coentry. The only means of protection now left will be a law restricting the disposal of forest property by the private owners, and forbidding the destruction of young forest trees. Such a law already exists in France, Italy, Germany and Switzerland, and to a certain extent in Sweden. Its adoption in Norway was, in fact, proposed in 1882 by the government, but since then no further steps have been taken in the matter, public sentiment being much opposed to the projected restrictions.

The legislature finally took the matter in hand in 1889, and there are now many who urge immediate adoption of measures for preserving at least a part of the forests which still form an important factor of the national wealth and the principal resource of a large tract of the country. The forests have lately suffered the loss of many young trees of small dimensions, cut down either for exportation or for pulp manufacture at the domestic mills. The so-called cellulose wood, prepared from small trees and cut very short, to escape the export duty on wood, is at present in good demand in foreign markets, and is stimulating its destruction in Norway. Great Britain takes about two-thirds of the exports of Norwegian forest products. Australia also takes a large product, while the Cape of Good Hope and Port Natal have already doubled their consumption of Norwegian lumber, and at remunerative prices.

The pulp-wood business is developing into large dimensions in Norway. The export of wood pulp rose from 8,540 tons in 1875 to 26,055 tons in 1880, and 90,781 tons in 1895. The quantity of the exported timber was smaller in 1885 than in any of the previous five years, and was less by 49,000 registered tons than the average exports for the years 1881-5. The export of sawed and planed lumber have during the last years generally been somewhat over 480,000 registered tons, after having reached 502,000 tons in 1882, the largest quantity exported since 1873 and 1874, when it rose to 570,000 and 550,000 registered tons respectively. The exports of hewn timber have steadily declined, and amounted in 1885 to not much more than one-half of the average exports of the year 1875-80, and to one-third of the average exports of 1871-75. Also the shipping and mining timber and pit props were smaller than in the years immediately preceding.

BOILER FEEDWATERS, THEIR TREATMENT.*

By W. D. JAMESON.

WATER is a wonderful agent produced and given us by nature, and has its advantages and drawbacks ; it is the greatest solvent of all natural or artificial liquids known to chemistry ; it becomes impregnated with all different elements, in one form or other, in which it comes in contact, and absorbs free carbonic acid gas from the air and ammonia from the air and earth. Carbonic acid gas thus formed becomes the life of the water and enables it to take up the otherwise insoluble carbonates of lime, magnesia, etc., holding them in solution as bicarbonate of lime, magnesia, etc.; the colder the water and the heavier the pressure the more gas it contains ; consequently the larger the body of water or the deeper the well, the more heavily impregnated it is with the salts of lime, magnesia, etc.

All natural waters are imbued with the salts of the following mineral bases : lime, magnesia, sodium, potassium, iron, silica and aluminum, combined with carbonate, hydrochloric and sulphuric acids, and sometimes medicinal waters with phosphoric acid, or all of them to a more or less extent, according to the nature of the soil or the conditions in which the water percolates the soil.

The calcium, commonly termed lime, is taken up in the forms of sulphate and bicarbonate ; the magnesia as bicarbonate, sulphate, and chloride ; the sodium and potassium as chloride, sulphate and carbonate ; the iron as bicarbonate. Iron as well as copper is found in solution as a sulphate. The aluminum exists in the water as a sulphate or in suspension as an oxide ; the silica as silicic acid. When we find a water containing sulphate of iron or copper in solution, we generally find free sulphuric acid also.

The salts of lime and magnesia, iron, silica, oxide, etc., are scale forming ingredients ; the sulphate of lime forms a very hard compact incrustation, adhering very tenaciously to the hot metal, is very hard to break up, decompose or dissolve, and, like all sulphates, it is a very staple salt ; it is conveyed into the boiler by the water as a sulphate, and as such enters the scale formation, and is not even soluble in its own acid, and it is impractical to dissolve it with hydrochloric acid except in laboratory work.

The only substances which can be successfully used in the boiler to break up and convert sulphate of lime into a form in which it can be readily washed out, are sugars properly blended, which, when used under the high heat, and the existing conditions of the steam boiler, convert this sulphate of lime into a complex mixture of saccharates and carbonate of lime, and this, in the presence of the tannin matters, is practically converted into tannates of lime.

Carbonates of lime and magnesia enter into the scale formation as such, forming a very compact incrustation, due to the great chemical affinity they have for hot metal, which is also the cause of the adhesive properties of sulphate of lime (gypsum). They can be readily and successively converted into a complex mixture of the tannates of lime and magnesia without any contamination to the steam or injurious effects to the steam receptacle or its connections.

Silica enters the scale formation as such, and also as silicate of magnesia. Sodium salts enter into the scale formation only in small quantities. Being very soluble they remain in solution until the water in the boiler becomes supersaturated, and unable to hold a greater quantity ; these salts then cake on the hottest parts of the boiler, falling out of solution ; this is very dangerous, having been the cause of the burning of a great many boilers in localities where the feed water is highly impregnated with soda salts. They cause internal corrosion, wasting away of the iron, eating through the joints and connections, and are the cause indirectly of one class of corrosion of which I will speak later under another head.

Chlorides of lime and magnesia, found in some feed waters, are very corrosive agents of iron. Being very unstable salts, they readily decompose with the high heat into oxides of lime and magnesia, entering the scale formation as such. The free chloride combines with the hydrogen of the water as a hydrochloric acid, and has a direct corrosive action on the iron. The action of sulphate magnesia is very similar to that of the chloride under the influence of high heat. The sulphates of iron and copper are direct corrosive agents to the iron and boiler connections, and will not enter the scale formation.

It is almost impossible to neutralize sulphates of iron, copper or magnesia in a practical manner. If you do it with soda, and convert the sulphuric acid into sulphate of soda, you get an excess of soda salts, which sets up galvanic action. If you use lime, converting the sulphuric acid into sulphate of lime, you get such large quantities of gypsum that in a short time your boilers will be so full of a hard incrustation that it will be impossible to run them. The only thing which has been half way successful in the handling of soluble sulphates and free sulphuric acid, is a mixture of sugars and starchy matters of a complex organic nature, which have offset the action of the acid by breaking up the acid radical, taking the sulphur and incorporating it with the aid of some of its oxygen into its own organic compositions.

Speaking of sodium and potassium salts, I would ask if it does not look unreasonable to endeavor to treat water for the prevention of the scaling deposits by the use of sodium and potassium salts, yet these salts are, in 99 cases out of a 100, the principal ingredient of the so-called boiler compounds and water purifiers, and it is these salts which cause most of the internal corrosion of steam boilers by their galvanic action.

Internal corrosion is the eating and wasting away of the threads, plates and joints, causing leakage and also causing the boilers and their connections to assume unsafe conditions. Where the corrosion is due to chlorine, free hydrochloric or hydrofluoric acids in the water, we find the pumps and feed pipes eaten through, the submerged parts of the boiler being free from such action on account of these acids readily passing off with the steam, and we get a similar action again in the steam-exposed surfaces of the boiler and the steam piping.

Free sulphuric acid has a very similar action, attacking the feed pipes a great deal more rapidly than the boiler itself ; its corrosive action in the boiler is more uniform and not so much of a pitting and grooving nature ; its action in the steam piping having almost entirely a grooving appearance. Where the deleterious action is due to the presence of an acid, it is called a direct corrosive action, and is generally found prominent in the feed pipes (colder pipes) and in the steam exposed surfaces. Where the corrosion takes place mostly in the submerged parts of the boiler, it is generally an indirect action, due to an excess of salts or too pure a water, coming under the head of galvanic action, termed by electricians electrolysis.

The boiler, as it is generating steam, is also generating a certain amount of galvanic current. The boiler is a galvanic battery in itself, the valves and their brass connections, composed of copper, babbitt, and other alloys, are negative, the iron being positive, forming the negative and positive poles, and under the high heat and other conditions existing in the steam boiler we have a galvanic battery ; not only is copper negative to iron's positive, but the very molecules of the iron in the plates and tubes are negative and positive to each other ; but electrolysis does not take place in the plate because the impurities, or we might say, foreign matter, such as silicon, oxygen and carbon compounds, are not and do not act as conductors between these negative and positive poles ; the water in the natural condition, that is, its chemical affinities and solvent properties, being satisfied with lime and other natural salts, will not act as a conductor between these poles, consequently, having no conductor, the battery is not connected by water, but when using distilled water, rain water, or water with an excess of sodium salts, we then have a perfect conductor, the water assuming the position of a battery and of a battery solution, connecting our negative and positive poles, and inciting and generating a galvanic current. We then have a true galvanic battery existing, due to the general make-up and influence in the steam boiler. The purer the water, or the greater the excess of sodium salts, the stronger our galvanic current, the more pronounced our electrolysis.

You well understand that water contains a very corrosive radical in the nature of a hydrate ; the hydrate radical is HO. Water is composed of two atoms of hydrogen and one of oxygen, which is a very strong chemical combination, not readily decomposed except with a soluble metallic base or red hot metal, but in this case, under the influence of the galvanic current, the positive metal, which is iron, exercises a chemical affinity over the water, chemically combining with its hydrate, forming ferric hydrate, taking up the oxygen and part of the hydrogen of the water, freeing part of the hydrogen, which goes off with the steam. This ferric hydrate gradually converts into corresponding oxides, due to the high heat and boiling of the solution, gradually converting into the black magnetic oxide of iron, so named owing to the galvanic action in its manufacture ; its physical properties are that of a black gritty powder found at the bottom of the boiler when washed out, when electrolysis is going on. If you will take a boiler that is pitting from this cause, you generally find zigzag pits and grooves coated over with a baked film, and by tapping these with a hammer you find a reddish brown soft powder underneath, which is the more freshly formed ferric hydrate ; that of a lighter shade is the partly converted oxides, and the few handsful of black gritty powder from the bottom of the boiler, which you can examine after rinsing the other oxides from your hand, you will find to be the black magnetic oxide of iron.

Speaking of electrolysis, which we, from our standpoint, term galvanic action, we believe it truly exists as such, and to prove it consider the large ocean-going vessels and think of the trouble they have from this cause and how and why they treat it. They use tons and tons of zinc to offset this very action, due partially to using too pure a water on account of the hot well system, and further by what salt water they are compelled to use. We all know zinc to be one of the most positive metals known in galvanic battery work ; it is more positive than iron. The zinc put into the boiler assumes the position of the positive pole, consequently it is destroyed in place of the iron by the battery solution in the steam boiler. Its reaction and conversion into its oxide are similar to that of the iron, it being destroyed under the same influences.

Of all the deleterious actions which take place in steam boilers this is the easiest to handle, for you simply need to satisfy that water with some vegetable starch and saccharine matter, and in that way break up your conductor between the negative and positive poles, whether they be brass connections (negative) and the boiler plate and flues (positive) or the molecules of the iron of the boiler plate. It is impossible to set up a galvanic action without the water assuming the position of the battery and acting as the conductor. This same saccharine inert matter in conjunction with tannin extracts will cause these pits and grooves in the iron plate (where the case hardening protective surface of the plate and tube is broken and the raw steel or iron exposed) to heal over, assuming that same case hardening appearance as before. Do not understand me to say that you can fill up the little holes, as that cannot be done, the iron being gone, but the surface of these little zigzag holes and pits will heal over, serving as a protection against the water or the atmospheric oxidation.

Scaling ingredients are converted from crystallizable scale-forming carbonates and sulphates, having a great affinity for hot metal, into non-crystallizable tannates and saccharates of lime and magnesia, being a complex mixture of these with some carbonate, the sodium salts being readily handled in the same manner. This complex mixture of the saccharates, carbonates and partially converted tannates is of an inert nature, having the physical properties of a soft oozy mud, of the same specific gravity as the water, and no affinity for hot metals, neither has it the clay-like properties, but it will readily wash out with the water when cleaning the boiler.

In conclusion I might say a few words relative to the deleterious action of oil in steam boilers. Many of you to-day are running large condensing plants with your hot-well systems, and you are getting oil, with the condensation, into the boilers, possibly 5 to 15 drops per gallon. These oil separators are a good thing, and

* Read at the convention of the Northwestern Electrical Association, Chicago, July 18, 1895.

do, possibly, 50 or 60 per cent. of the work. You often hear of the tubes in a water-tube boiler buckling up and having to be taken out; you often hear of the bagging of the fire-sheet in tubular boilers. Why is this? The specific gravity of the oil is lighter than that of the water; the oil does not settle in its natural state. We explain it as follows: The oil coming into the boiler floats on the water; there is just a sufficient quantity of fresh water coming in to convey salts of lime, magnesia, etc., which are thrown out of solution, chemically combining with the animal oil as insoluble oleates, and mechanically combining with the mineral oils as a heavy mass, both these chemical and mechanical combinations being of a greater specific gravity than the water in the form of little globules, sinking to the bottom, the great chemical affinity and adhesive properties of this mixture causing them to adhere to the hot metal, and they, being a perfect non-conductor, retarding the transmission of the heat units to the water, concentrating heat in that part of the plate, causing the iron to melt, and the pressure in the boiler forces it down.

Sodium salts, so commonly found in water, or where it is used to counteract this action, saponifies the oil, causing the boilers to foam and carry over into the engines, and should not be used. This defect can be successfully handled with tannin extracts, the tannates forming complex organic compositions with the oils of an inert, light, powdery nature, having no chemical affinity or physical adhesive properties and readily washing out with the water at the opening of the boiler. To prove this go to the tannery and watch the tanner take the hides out of his vat after he is through with the tanning process, and when he lets the liquor run out of the vat you will find two or three scoop shovels full of an inert powder, which readily dries out and is termed pure tannin by the tanning experts. They claim that this is insoluble, and are in want of a solvent so that they can successfully use it for its tanning properties. We do not believe this to be the case, as the tannin in this mixture is, chemically speaking, part of the mixture, and the tannin is satisfied by the fatty matters contained in the hide. We aim to get this same reaction with the oil by pumping into the boiler a properly blended mixture of slippery elm, starches, sugars and tannin extracts.

We have found that we can successfully cope with most of the deleterious actions taking place in steam boilers with vegetable matters, and vegetable matters only, sometimes using from 5 to 10 per cent. of carbonate of soda to partially cut the starches and aid in the action of the sugars, but, correctly speaking, we are vegetarians on this subject, and do not believe that perfect results can be obtained from any other methods known to science.

LOGGING IN MAINE.

THE drive of 1895 contains 35,000,000 of logs, which is an unusually small cut. It generally averages from 45,000,000, to 50,000,000. Undoubtedly the small cut this year is owing to the few operators, and the few operators are owing to the doctoring of the tariff. The driving crew was much smaller than usual this year, only ninety men being employed. Just before the drive arrives the wives, mothers and familes of many of the drivers are on hand to draw some of the wages of the men, as oftentimes it is spent all too quickly unless they do obtain some of it before the men arrive. It will take more than $20,000 to pay the help this year. Add to this the bills for provisions, utensils, etc., and the expense is well up to $60,000. The East Branch drive is just behind the West Branch, and has 100 men employed, who will bring 17,000,000 of logs.

LARGE CARGO OF LUMBER.

The British steamer Strathgyle cleared from Scranton, Miss., recently with 3,203,000 superficial feet of lumber in the shape of deals for Rotterdam. Barring the Great Eastern's cargo of deals out of Montreal a few years ago, the Strathgyle's is the largest cargo of lumber or timber ever carried out of any port of the United States. She was cleared by Hunter, Benn & Co., of Mobile, Ala., timber shippers.

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A TREE FELLING DISPUTE.

AN action brought by the Earl of Aylesford, against one Turner, in the English courts recently, to recover damages for injury done to farm buildings by the felling of a tree, possesses some points of interest. There was no dispute as to the facts, but some points of law arose. It appears that Lord Aylesford was the owner of a field at Meriden, Coventry, and the Coventry Clothiers' Company were the owners of an adjoining field, the latter being on a higher level than Lord Aylesford's field. A tree in the hedge belonging to the Company was purchased by the defendant, and he employed one Smith to fell it. It was essentially a case where great care was necessary to prevent it falling on plaintiff's land, but that was just what did happen. The tree, in falling, struck some farm buildings belonging to Lord Aylesford, and damage was done to the extent of £26. The first point for the judge's consideration was that of negligence, and the second was whether the defendant was liable for the acts of the man who cut the tree. On the latter point the defendant's contention was that Smith was an independent contractor, and that defendant was not therefore liable for his acts.

After hearing the evidence, which went to show that due precautions had been taken, and that the rope which held the tree had been broken, judgment was given for the defendant, chiefly on the ground that the man who felled the tree was an independent contractor, though the judge thought it doubtful if there was negligence. It is likely the case will be taken to a higher court.

The Hydraulic Mining Co., of North Bend, B.C., which is controlled almost entirely by Ottawa capital, have just successfully carried a cable weighing 3,500 lbs. across to their mine. They are now building a saw mill.

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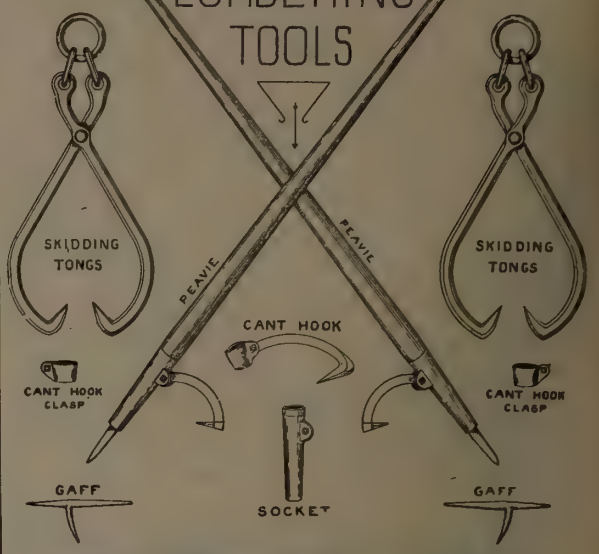

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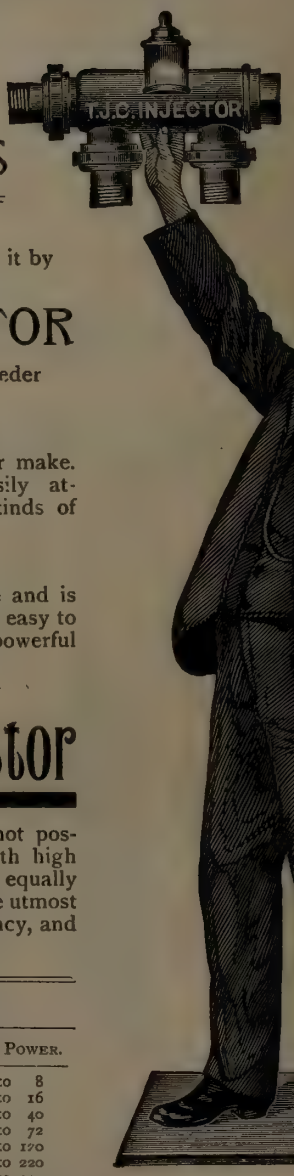

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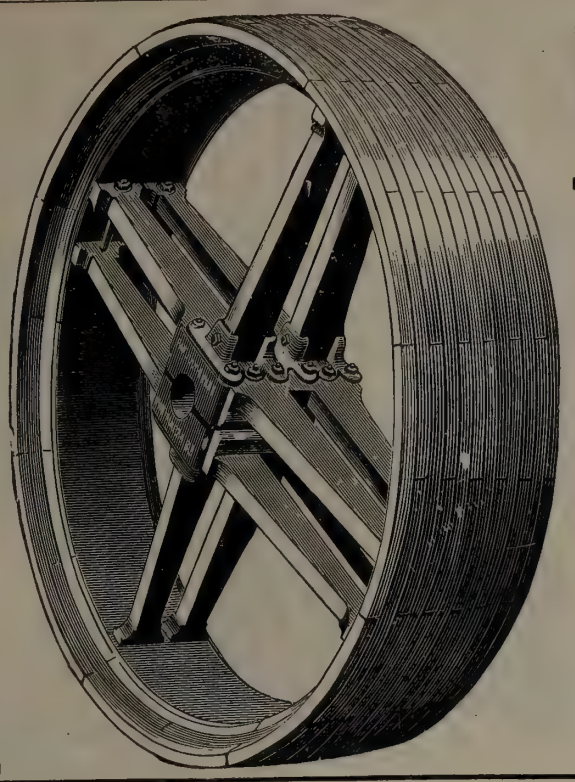
WASHINGTON LUMBER EXPORTS.

THE state of Washington lumbermen have been finding good markets for their fir timber in China, Japan, Sandwich Islands, Australia and South Africa. Last year the foreign shipments from Puget Sound aggregated over 80,000,000 feet. One mill on the sound cut 86,000,000 feet last year, and one mill at Tacoma can cut 175,000 feet a day of ten hours, or about 45,000,000 feet a year. The Washington lumbermen are anxious for the completion of the Nicaragua Canal, because that will give them water transportation to the Atlantic seaboard and to Europe for their long fir timber. The supply of this fir timber seems almost inexhaustible, but it is the last great stand of timber in America, and when the whole country begins to draw against it—in fact, when the whole world turns to Washington for its construction timber, its car building material, and its finishing lumber, it may disappear as rapidly as have the pine forests of Michigan and Wisconsin.



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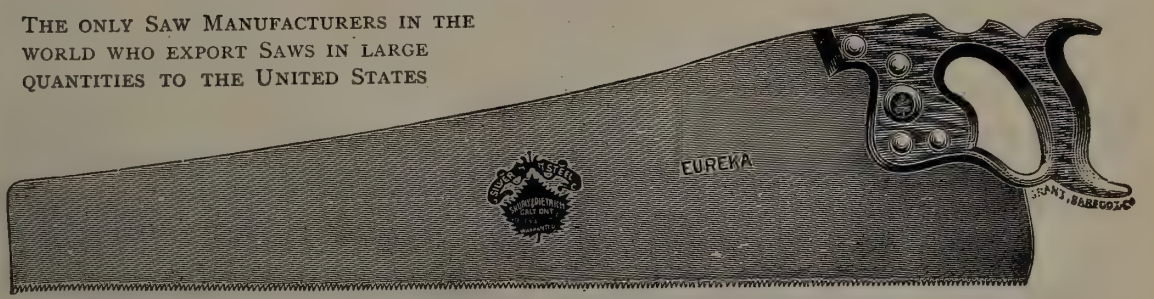

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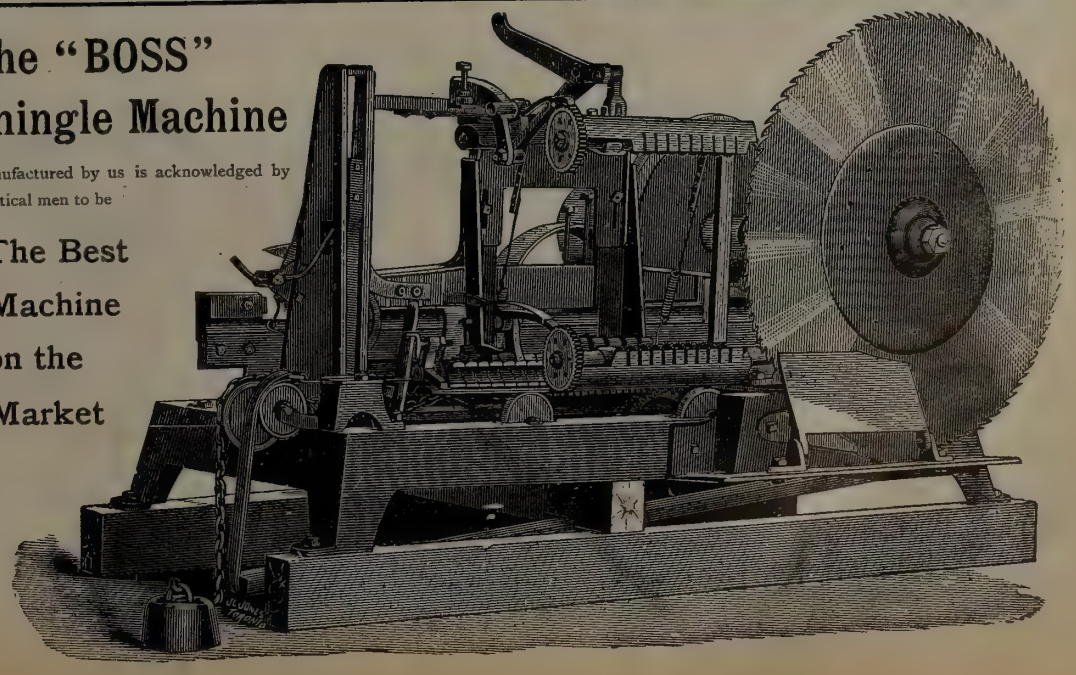

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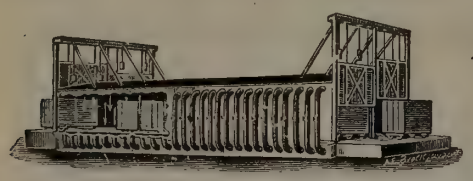

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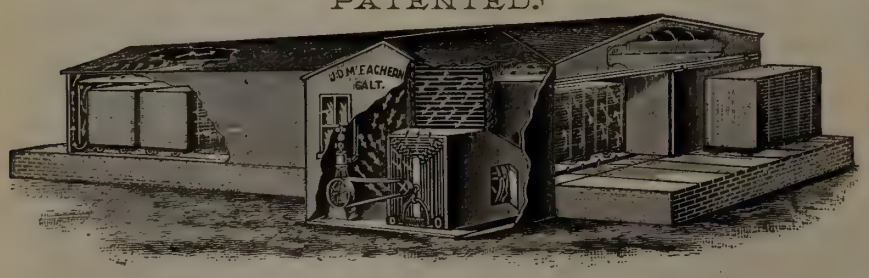

COST of erecting, running and maintaining the lowest and results the highest of any dry kiln and drying system in the market. Green Elm, Ash, Whitewood, &c., for furniture dried in six days; only exhaust steam 10 hours per day used.

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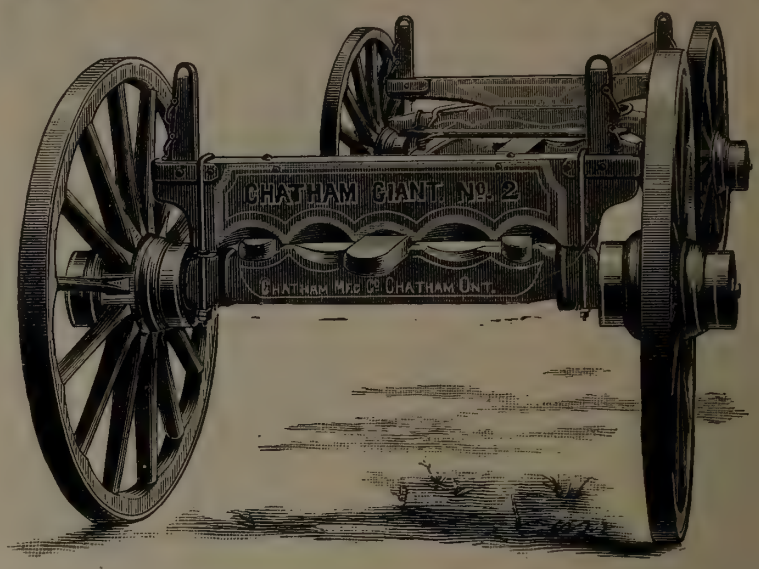
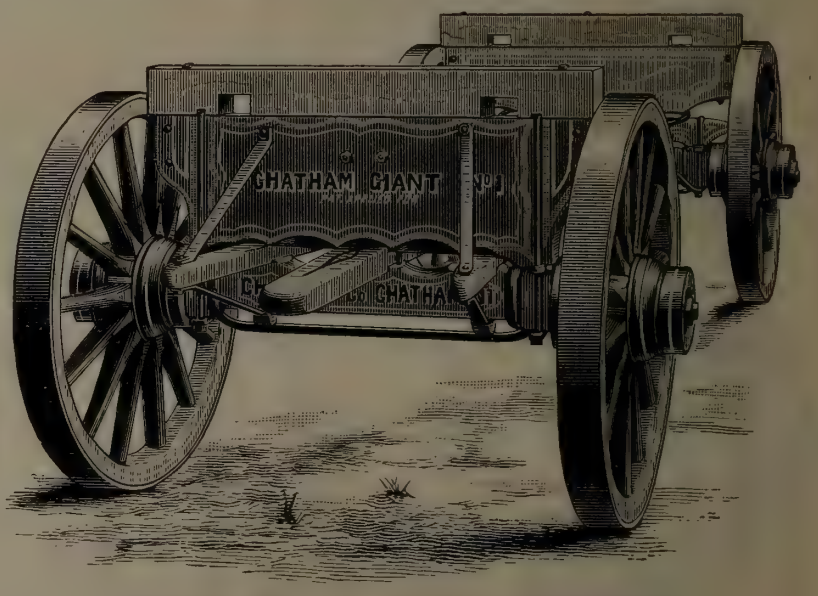
THE CHATHAM GIANT LOG TRUCK



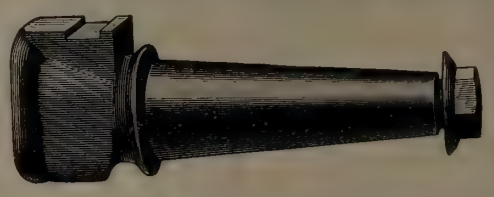
IT must be self-evident that our GIANT ARM LOG TRUCKS, of which the above is a faithful illustration, is the best log truck made; but if conclusive evidence of this is wanted we refer to every mill man and lumberman in the county of Essex, Ont., where millions upon millions of Elm logs are gotten out every year on them, and where these trucks sell readily, while those of other makes remain unsold at $5 to $10 less.



THE CHATHAM GIANT LOG AND LUMBER TRUCK

As seen above it is a Lumber Truck, but it is quickly converted into a Log Truck by bunks which are grooved at the ends to receive the stakes and slip down between them, and are perforated for side or lug poles. We build these trucks in all sizes from 2½ to 4 inch Malleable Giant Arms. Farmers all over are extensively adopting the lighter sizes as general purpose wagons.

In reference to above trucks we would call the attention of the reader to the accompanying illustration of VANALLEN'S PATENT GIANT ARM with which they are equipped.



It will be seen that the hind bolster and sand-board are formed to rest upon the flat top of this arm, and being securely clipped to the axles forms a complete and solid truss and render the axles unbreakable and inflexible.

Our Malleable Giant Arm farm and teaming Wagons have no equals on this continent, of which the judges on vehicles at the World's Fair, Chicago, gave us an unqualified certificate in the shape of a GOLD MEDAL AND DIPLOMA.

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Furnished with Steel or Cast Skeins, 3¾, 4, or 4¼ arms. Any width tire. Are well built of thoroughly seasoned timber, heavily ironed and well finished. Built of any capacity required. Are STRONG, DURABLE, and LIGHT running. A trial order will be most convincing. Satisfaction guaranteed. Write us for further information. Address all orders or inquiries to

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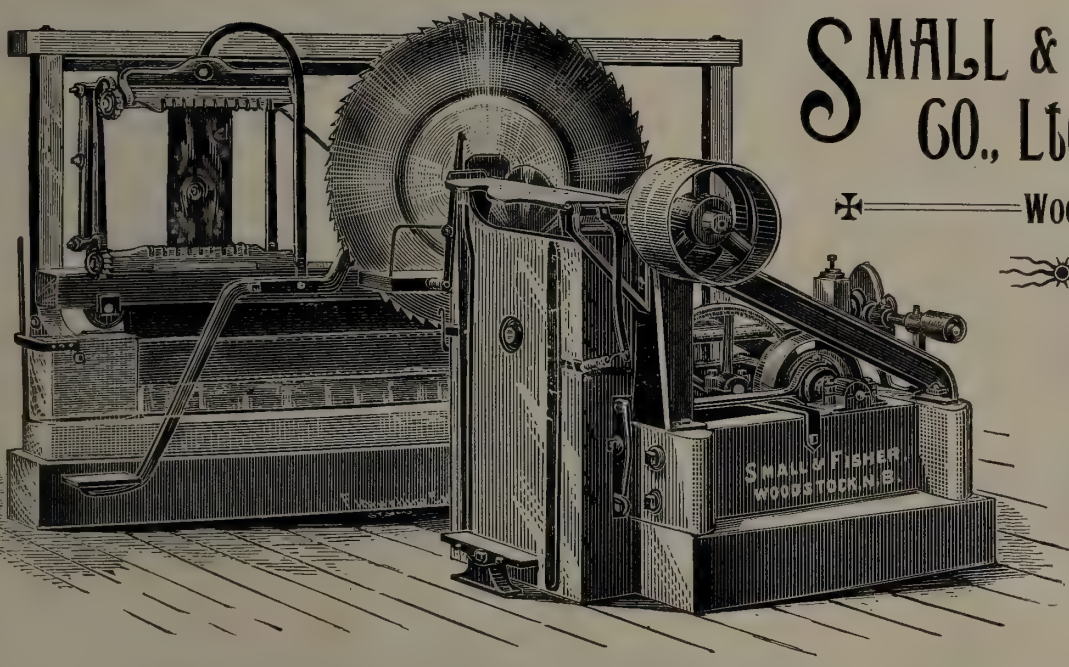

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To ST. PAUL, DULUTH and Pacific Coast Points.

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DOUBLE
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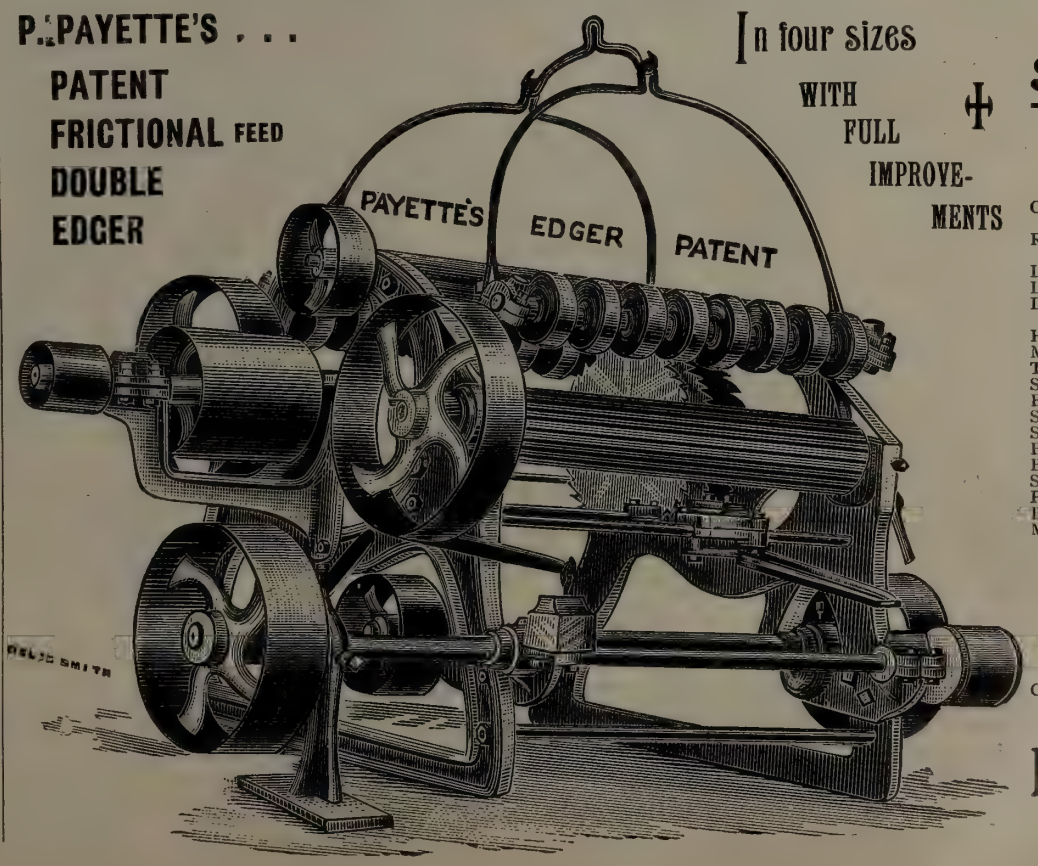

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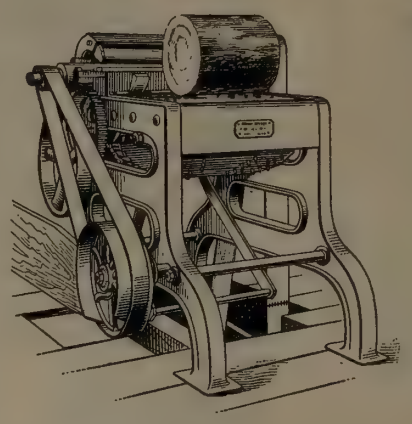

Why you should use this Rosser.....

It will do double the work of any other.
It is the only machine made that will peel Cedar Shingle Blocks.
It will peel dirty blocks without taking the edge off the knives as they cut from the clean bark or block out.
It is a self-feeder, and very easy to operate.
It requires less power than a face wheel.
All iron and steel, very simple and durable.
It will ross knotty and uneven timber without waste.
It occupies about the same space as an ordinary planer.
You can have a chance to try a machine before buying it.

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∴ WILL make more Shingles per day than any self-acting machine with vertical saw in existence, and more Shingles from the same quantity of timber.

THE FRAME———•

... Is of Iron throughout, very heavy and rigid, strongly bolted and braced.

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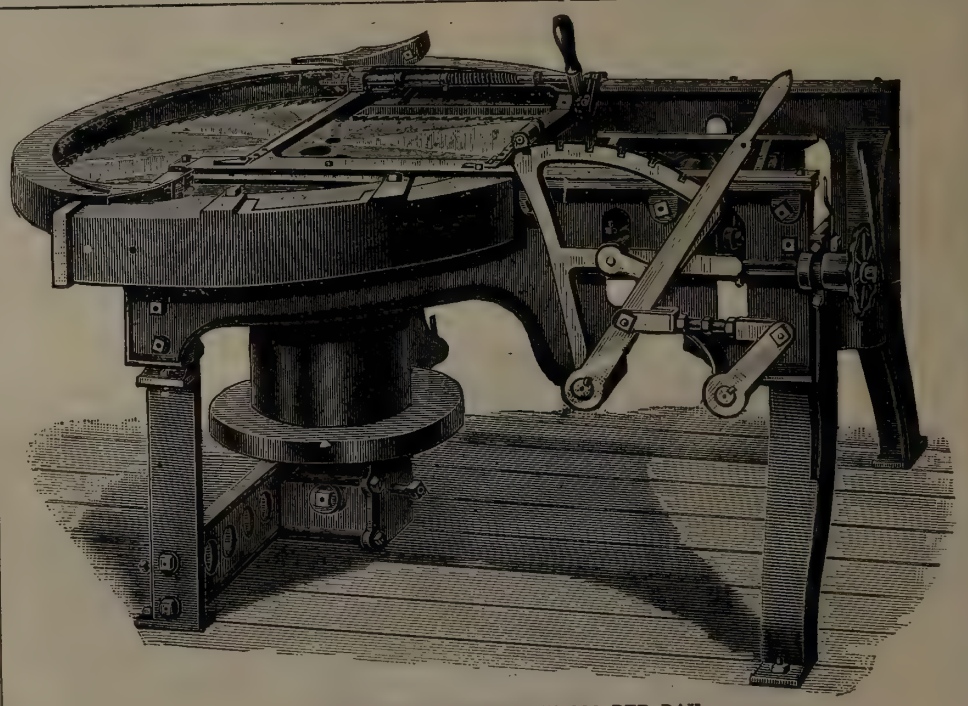
... Is very light and strong, made of forged Cast Steel Plate, running on steel ways or tracks. Will take in a block 18 inches wide and 19 inches long, adjustable for 16-inch or 18-inch shingles.



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Your Saw Mill is equal, or nearly equal, to any we have seen of much heavier make, and far in advance of any light rig in the market. The capacity per day is fully up to your guarantee, 40 M per day. We have tested with eight men.

The Shingle Mill cannot be beaten for any kind of timber. Ours being in a manner a custom mill, we have good, bad and indifferent timber, but for all it does the work satisfactorily.

You may use this in any way you please, or refer to us at any time.

Yours truly,

(Sgd.) W. J. & H. W. FOWLDS.

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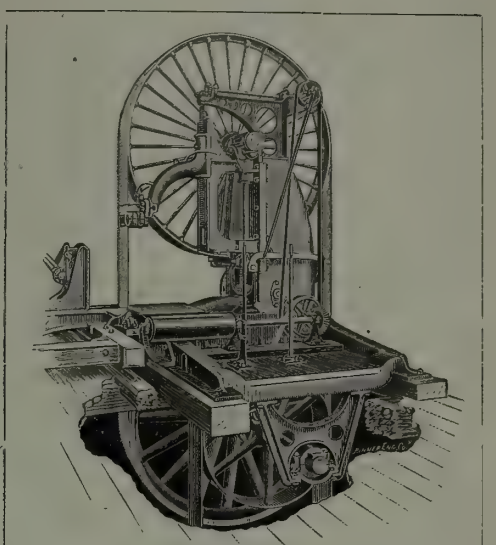

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We have for many years been the representatives in Canada of the

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Our stock is ample and well assorted, insuring prompt shipment of all sizes and specials . . . .
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GIANT CHAIN,
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Also Block, 550, Steel, and other cheap chains for heavy refuse carriers,
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SAW-MILLS
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....Soho Machine Works, TORONTO....

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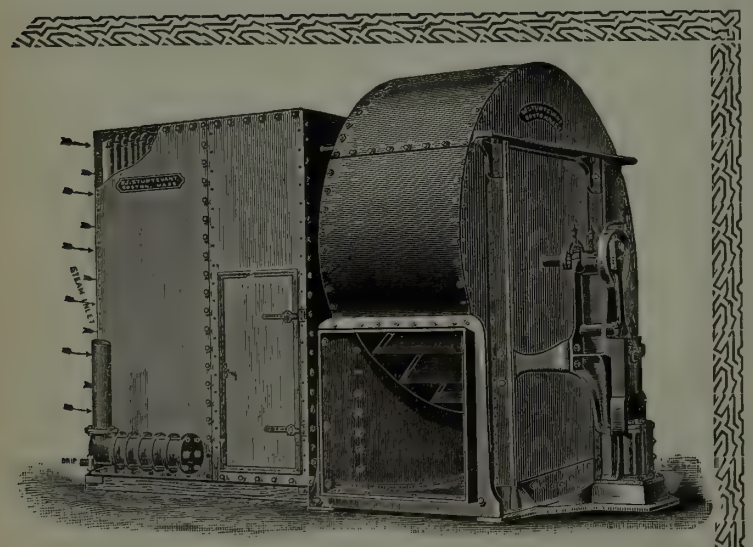

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VOLUME XVI. NUMBER 11. | TORONTO, ONT., NOVEMBER, 1895 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

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I am, Sir, truly yours, R. C. CARPENTER, (Professor of Experimental Engineering, Sibley College, Cornell University, Mem. Soc. Mec. Engineers, &c.)

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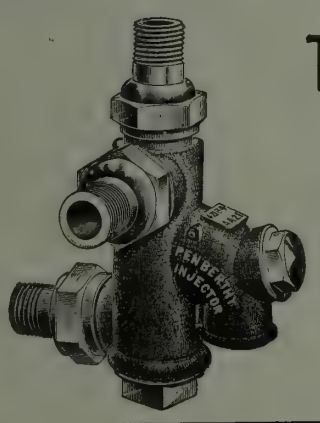

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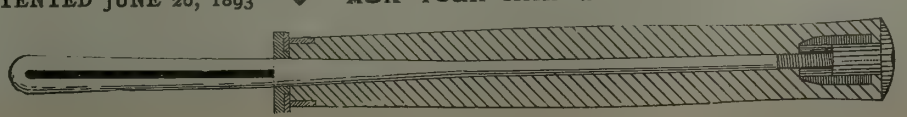
THE "BURNS" CROSS-CUT SAW HANDLE

The Strongest, Most Durable and Easily Adjusted Handle ever invented.

PATENTED JUNE 26, 1893 ◆ ASK YOUR HARDWARE MERCHANT FOR IT



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THE NEW PRESCOTT

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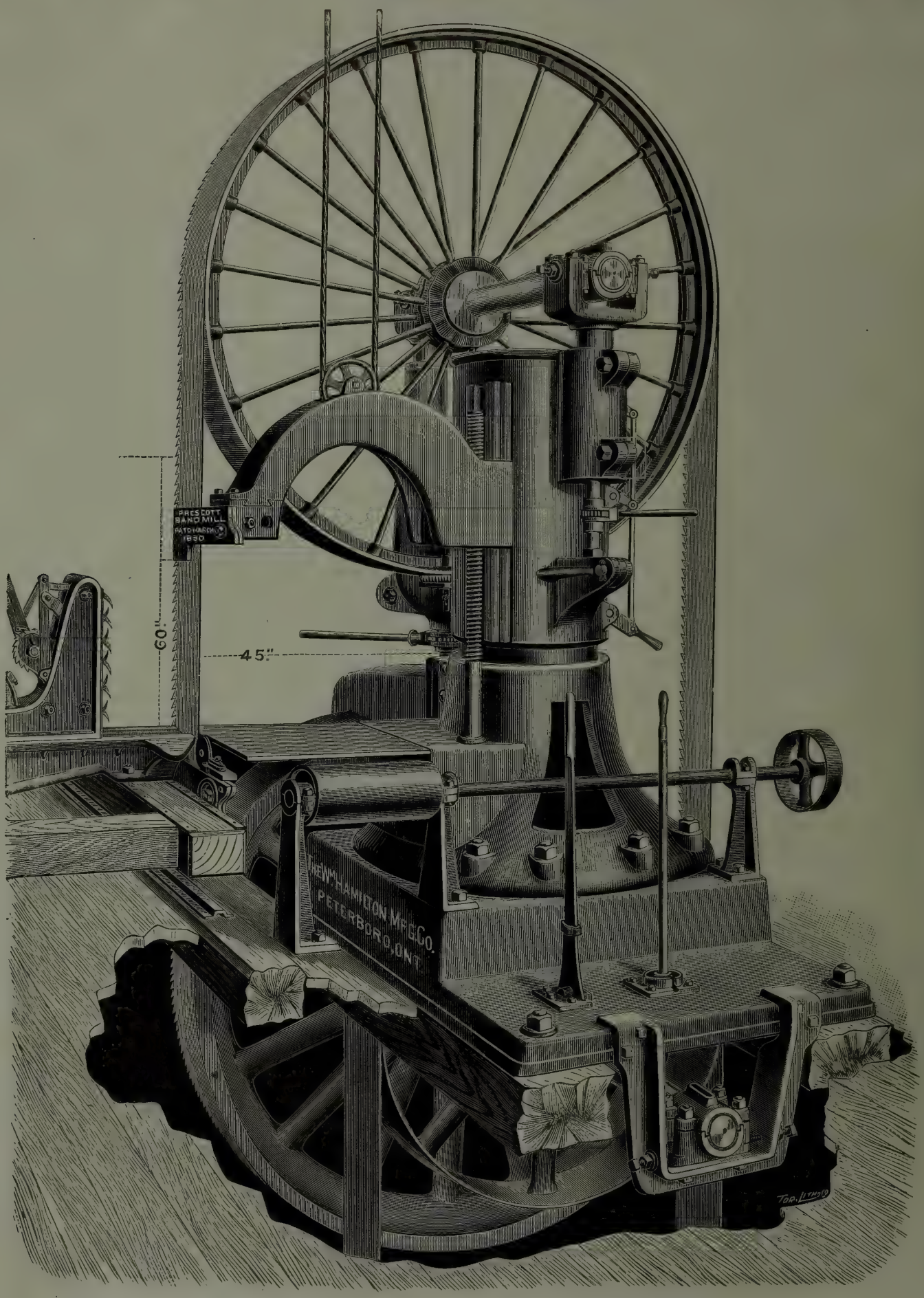

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THE CANADA LUMBERMAN

VOLUME XVI. NUMBER 11. | TORONTO, ONT., NOVEMBER, 1895 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

THE LATE PETER THOMSON.

MR. PETER THOMSON, of whom we reproduce an excellent likeness in this issue, died at headquarters in Algonquin Park, on the 5th of September, at the age of 61 years. At the time of his death he occupied the position of superintendent of the park, having been appointed chief ranger in July, 1893, shortly after the passage of the act by the Ontario legislature setting apart the reservation as a national park, and promoted to the office of superintendent in May of the following year.

Mr. Thomson was born near Kingston. He served his apprenticeship to the carpenter trade, afterwards working in the United States, whence he returned to Canada and spent some time in Hamilton. From there he removed to the village of Ainleyville, now Brussels, in the county of Huron, where he spent the greater part of his life, working at his trade and taking building contracts in the village and neighborhood. About nine years ago he came to Toronto, where he continued to reside till appointed superintendent of the park. He was engaged in building operations in that city, his largest contract being the Arlington hotel. For two years before going to the park he was employed more or less by the Ontario government, in superintending the erection of bridges in connection with the colonization roads branch of the Crown Lands Department, a work for which he was well fitted and in which he gave great satisfaction to the department. After he was transferred to Algonquin Park he took a deep interest in that reserve, and had accomplished much in the way of improvement and in the general carrying out of the purposes which the government had in view in setting it apart.

Mr. Thomson lost both parents somewhat suddenly when young, and was thrown pretty much on his own resources to make his way in the world. He was well liked by all, and though in the heat of election contests, in which he always took an active part, he could hit hard blows for his party, after the battle was over he was on good terms with everybody.

The disease to which Mr. Thomson succumbed was paralysis. He belonged to the Canadian Order of Foresters and the Ancient Order of United Workmen, under whose auspices his funeral was conducted at his old home in Brussels. His wife died about ten years ago, and he leaves a family of grown-up daughters. By his death the government has lost a faithful and well tried servant.

DEEP WATERWAYS AND THE LUMBER TRADE.

AT the recent Deep Waterways Convention at Cleveland two papers were read bearing on the relation of a deep waterway between the great lakes and the sea and the lumber trade. One was by Mr. R. R. Dobell, of Quebec, the well known timberman; the other by Mr. A. L. Crocker, President of the Minneapolis Board of Trade. The following are the papers, which will be found of much interest:

EFFECT OF DEEP WATER BETWEEN THE GREAT LAKES AND THE SEA UPON THE EXPORT LUMBER AND TIMBER TRADE, BY RICHARD R. DOBELL, EXPORTER, QUEBEC.

Perhaps there is no other article of western production that will derive so little direct benefit from the deepening of our waterways as lumber and square timber brought from Michigan and other points west of Lake Superior and Wisconsin. The reason for this I need not enlarge upon, when it is known that the bulk of the square timber which is made on the shores of the great lakes, when brought down to a shipping point, is only carried as far as Garden Island by barge, there rafted up and floated down the river, passing through the rapids without the least damage, and so delivered in the booms at Quebec.

Unfortunately this trade is gradually being restricted, for the simple reason that the oak forests of Michigan, Ohio and Indiana are pretty nearly exhausted, so that it is difficult even now to get the average and size of logs necessary for the English market.

The large pineries of Michigan and other western points have also been pretty well cut through, and the enhanced cost now of standing timber makes the price for this pine too high for what can be obtained in England; the consequence is that the square timber exporting business is becoming less each year, and will soon be a thing of the past.

The lumber and deal trade is in much the same position. Fifteen years ago, very large quantities of deals were made in Michigan and sent forward to the English

THE LATE PETER THOMSON.

markets, and these no doubt, would have benefitted considerably if they could have been sent through without breaking bulk.

One of the greatest drawbacks in handling western lumber is that the large barges which carry the lumber to Kingston have there to discharge into smaller barges, which is more or less injurious to the lumber, and very often necessitates leaving portions of a barge-load for some other craft to carry down to Montreal. Here arises the necessity for a continuous deep channel from the lakes to salt water. A considerable saving would be effected in the cost if there were unbroken deep navigation out of the lakes, as lumber can be floated from any port in the vicinity of Michigan to Kingston at $3.50 per M. feet, while the charge for the short distance from Kingston to Montreal, in small barges, is $1.75 per M. feet.

If the large barge could go through direct, the bulk of this $1.75 would be saved to the shipper of the lumber, and to the consumer ultimately.

With this, as well as in square timber, there is a falling off in the export trade, and it is now of such importance as would make it alone a feature to influence the carrying out of this work of providing deeper channels. For some years, no doubt, a certain quantity of western manufactured lumber will be sent to Europe, and it would probably stimulate this trade a little, and cheapen the cost, could it be sent through without breaking bulk at Kingston; but the whole volume at present is not sufficient to make it much of an argument in favor of the expensive work required.

DISCUSSION BY MR. DOBELL.

Mr. Dobell was asked to discuss the points of his paper. He said:

I do not think it necessary to detain you many minutes, because the paper which I prepared at the request of our very indefatigable secretary, is hardly of importance sufficient to occupy your time to-day. The bulk of our lumber trade is carried on in the manufacture of square timbers of oak from Michigan, Ohio, Indiana, and as far south as Arkansas, brought by railway to Toledo, taken in schooners to Garden Island, and rafted down to Quebec, where it is put into ships and sent to Europe. It is therefore quite necessary for our interest to have deeper waterways. I am not sure but we can trace Cleveland as being one of the off-springs of Quebec. Years ago Quebec had a large ship-building trade. For the last ten years we have not built one ship in Quebec. All the shipwrights and carpenters who were educated in Quebec were forced to come to these upper lakes and settle in Buffalo, Toledo, Bay City, Cleveland, Superior and Detroit. We therefore think that to some extent these cities are indebted to Quebec as the nursing mother of their industries. When I went to Quebec, nearly 40 years ago, we used to load from 1,200 to 1,500 sailing ships annually. When I left Quebec, less than a week ago, not one sailing ship had been in the harbor for five weeks. That trade has completely passed away from us, owing very largely to the depletion of the forests and the change of trade, against which Quebec has been powerless to combat. As far back as 15 years I claimed that Quebec was suffering as our far west is suffering to-day. When our canals were made in the earlier history of this country, they were thought to be quite sufficient for any future trade. At that time navigation from Quebec to Montreal could not be accomplished by any vessel of more than 400 to 500 tons. Now a steamer of from 8,000 to 9,000 tons passes from Quebec to Montreal. I believe that this very work which we are initiating to-day—the deepening of our lakes—will bring Quebec again in touch with your city of Cleveland and the far west, and will again enable Quebec to take her place as a shipping port of the great industries, not only for this country, but the whole of Europe.

Chairman McGinnis: A L. Crocker, President of the Board of Trade of Minneapolis, will follow on the same topic:

MR. CROCKER'S PAPER.

In preparing this paper, the attempt was first made to gather statistics of the world's lumber business, with prices and freight rates, then to make a comparison of the same with the resources, prices and freight rates of the lumber supply tributary to the great lakes as a transportation factor, with a view to developing what effect a more perfect navigation and lower rates would have in bringing the lumber of the great lakes into the markets of the world, and what part such lumber would play in those markets.

The meagre statistics obtainable precluded this plan. And, too, the fact that European markets cannot be compared in magnitude with our home demands and are largely supplied from north Europe, along with the fact that soft mahogany of the African west coast, existing in vast quantity and cheaply marketed, is now entering largely in consumption for many uses, and at prices that the high priced stumpage of the United States cannot compete with.

Limiting our views then, a glance will suffice to note

in passing, the export and import reports of the lumber business of the United States as given by the last census. We find in round figures as follows :

	Lumber.	Logs and Timber.
Exports	$9,355,000	$2,636,608
		Other Lumber.
Imports	$6,137,000	$1,420,000

The Pacific coast ports shipped	$ 770,000
Atlantic ports south of New York city	5,412,000
Atlantic ports north of New York city	316,000
New York city	2,354,000

The item of shipments from North Atlantic ports is so small that it may be disregarded in the comparison. South Atlantic and Pacific ports evidently do not draw their supplies from the great lakes, and we are therefore left with New York as the export point for great lakes lumbermen. The estimate of 25,000,000 feet is given for New York.

Although somewhat foreign to the subject, it may be interesting to notice who our foreign customers are :

Portugal and Spain take	$ 122,000
West Indies	2,009,000
South America	1,738,000
Canada	526,000
Central America	406,000
Pacific Ocean countries	439,000
Africa	317,000

We import two-thirds as much as we export ; and Nova Scotia, New Brunswick, Quebec and Ontario furnish it all, and New York and New England take practically all of it.

Coming directly and finally to the subject under discussion, the lumber trade on the great lakes, I find no words so fitting with which to state the facts and make plain the existing situation as those furnished me through the columns of the Northwestern Lumberman.

The white pine industry of the Northwest has been one of the more important agencies in the settlement and material development of the great interior of this country. In its original state, the Mississippi valley spread between the great lakes and the Rocky mountains, a vast, treeless empire, rich in agricultural capacity, but needing lumber to render settlement and improvement possible. To the northeastward, stretching from Lake Huron on the east to the Red River of the North, in the far northwest, lay the great white pine belt, covered with countless billions of as fine timber as ever grew on earth. In the midst of this wealth of forest area spread the great lakes, ready to float on their waters the product of the mills to different tributive markets. Into these lakes flowed the streams which were to convey the logs to the mills. Nature seemed to have laid out all the grand plan and provided the contiguity of resources so that settlement and development of the prairie region could be accomplished with startling rapidity.

Without doubt tho phenomenal growth of this country in population and wealth has mostly resulted from the relation of the pine supply of the northwest with the opulent lands of the Mississippi and Missouri river valleys. Out of the western extension of the pine belt runs the mighty Mississippi, which for many years has borne the logs of the northern forests to the mills along the stream to St. Louis. Thus, almost simultaneously from Lake Huron to the upper Mississippi waters, the white pine industry sprang into importance as a development and a civilizer.

The Michigan and Huron product spread out into Ohio, Indiana, and lower Michigan and the east, and some overflowed into Michigan markets. The products of the Michigan and Wisconsin forests were conveyed by easy passage to Chicago, the greatest lumber market of the world.

Analyzing these great lake sources of supply, and grouping them according to market and transportation influences, we might have the Lake Huron district, the Lake Michigan district, the central Wisconsin and Mississippi river district taken together, and finally the Lake Superior district. The attraction for the Lake Huron and Michigan district, comprising western Michigan and eastern Wisconsin, was divided between the eastern demand and the great corn states to the south. The product of the district, composed of Central Wisconsin and Mississippi river pine lands, was drawn to the prairie states to the west and southwest. Finally we have the Lake Superior district, composed of the Duluth-Superior, Ashland, Ontonagon, Marquette and Sault Ste. Marie points, estimated to possess in standing pine 15,000,000,000 feet, with a production this year of 700,000,000 feet, of which 70 per cent., it is estimated, goes to Tonawanda, and 25 per cent. to Chicago and Michigan points.

I am only here to make a presentation of the facts as I find them, not what I might prefer as bearing on the necessity for a deep water route to the Atlantic coast. I find the facts to be, then, as follows : The district I have designated as the Lake Huron district is practically exhausted, and what remains is in few hands. Some 300,000,000 of Canadian logs are floated across Lake Huron to supply the saw mills of this district. The Lake Michigan district is in a lesser but increasing degree of exhaustion, and is drained largely to the south, to Chicago and the markets in the corn states. The product of the central Wisconsin and Mississippi river district does not seek the great lakes, but is and will be absorbed by the prairie states west and southwest. There remains then the Lake Superior district, with an estimated 15,000,000,000 feet of standing pine, which at the present rate of consumption would last something over 20 years. I am aware that timber estimates are dangerous, and it is possible that 20 years from now there may be another equal term of years given as the life of the standing forests.

The point I make, however, is that the enormous and growing home demand will absorb the supply. The total of the great lakes product for 1892 was 8,903,000,000 ; for 1894, 7,763,000,000. The experience of those in Wisconsin and Michigan who have attempted the export business is, that all that is required for export is the best quality, and which disposed of leaves the remaining stock unsaleable. Wisconsin and Minnesota are the present and the future white pine supplyers of the country, and much of the standing timber of those states is not of a quality for export.

A further consideration of the possibilities shows that the great timber resources of the west coast are straining every nerve to reach markets ; that they are not shipping by water round the Horn to the eastern states ; that they are shipping high-grade stuff by rail in large and increasing quantity to the east.

I am not prepared to endorse the claim made to me recently by the general freight agent of one of our largest transcontinental railroads, viz : that they would shingle the whole country with west coast shingles ; but I offer some of the items bearing on this part of the subject that may be interesting. Of the three great timber states of the west coast, viz.: Washington, Oregon and California, we may disregard the last two, as their product does not now come east largely. My Washington correspondent offers some figures and statements worthy of note. The total product of the Washington state mills is 1,200,000,000 feet, 1,800,000,000 shingles. The rail shipments to the eastern states from Washington in 1894 were 4,279 cars lumber and 12,295 cars shingles. The rail shipments covered thirty-four states. An estimate is all I can get of the Superior-Duluth business in this line, and the estimate is made that 2,500 cars go by lake and rail to eastern points. This shipping route is suffering from the difficulties incidental to new lines, and the complaints are loud at breakage in transit, poor facilities and many annoyances.

These things, however, are improving, and the statement is made that any improvement east in water transportation will be hailed by west coast shippers, as they claim already they are extensive shippers to Ohio, Indiana, Illinois, Iowa, Minnesota, Pennsylvania, New Jersey, New York and New England. Even now we are shipping, they say, doors to Portland, Maine ; spars to Barre, Vermont ; masts to Boston, and shingles to Buffalo, Philadelphia, Baltimore and other points.

Anything lessening freight rates will certainly greatly enhance shipments.

PUBLICATIONS.

What is generally conceded in Philadelphia to be one of the most desirable building sites in the city has just been purchased by The Ladies' Home Journal. On May 1st, next, the houses thereon will be torn down to make room for a building costing $250,000, to be solely owned and exclusively occupied by the Journal. The Ladies' Home Journal is especially engaging in its illustrations and bright in every line, exactly adapted to the Thansgiving season's diversion of all members of the household. By the Curtis Publishing Company, Philadelphia ; one dollar per year ; ten cents per copy.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN].

THE drought which has prevailed for so long has been a disaster to this province. Many mills have had to shut down ; some because they have logs and no water, some because they have water and no logs, and some because they have neither water nor logs. There are millions of feet of logs in the St. John river, to say nothing of the smaller streams, which cannot be brought down this season. There has been a little rain, but not enough to do much good. In fact, it would take a week's rain to raise the streams to anything like their normal condition. Many of the mills now shut down will not be able to resume work this season.

At the sale of timber berths at Fredericton the early part of the month, four berths were disposed of at the upset price. There was no competition.

Shipments of spruce to Boston and other eastern points have almost ceased. Stocks are pretty well thinned out, and, besides, it is difficult to get vessels.

A somewhat ambitious project is on foot, looking to the utilization of the Grand Falls on the St. John river, about 70 miles above Woodstock. They are beautiful ; now it is proposed to make them useful. A company is being organized at Fredericton to develop the water power, using it for the operation of pulp and other mills, and for the generation of electric power to be conveyed to a distance. Among the members of the company is Senator Proctor, of Vermont, formerly Secretary of War for the United States. Associated with him are a number of local capitalists. The water power at the falls is almost unlimited in extent, and if brought into use in the way proposed will prove of great economic value.

ST. JOHN, N. B., Oct. 24, 1895.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE sensation of the time here is the failure of A. Mosher & Son, followed by that of Alvin Maltby, the latter having been caused by the former. The Mosher collapse is the greatest ever known in the Saginaw Valley. The firm has done business here for years, and had a rating of $1,000,000, yet it suddenly came down, with unsecured liabilities of hundreds of thousands of dollars, its assets nearly all covered by chattel mortgages, and barely enough to pay the protected creditors. The Michigan banks are said to hold some $600,000 of their paper. The chattel mortgages foot up to $289,000, the total liabilities to close on a million. The firm has always been regarded as of high standing, personally as well as financially. Mr. Mosher, sen., lived at Troy, N.Y., the business here being looked after by his son, Alfred Mosher, jr. Unsecured creditors are attaching everything they can find. An attempt will probably be made to set aside the two largest chattel mortgages. The failure was largely caused by having too many interests in different places. The firm has an interest in lumbering in the state of Washington.

The Maltby failure followed that of Mosher & Son, as the former was carrying about $150,000 of the latter's paper. No statement of liabilities and assets has yet been made. The failure also caused the suspension of Mosher & McDonald, of Seattle, which in turn involved the Seattle Cedar Lumber Co., so that the effect has been far-reaching.

Log-towing from Canada has practically ceased for the season.

The lumber dealers in Detroit, some 80 in number, have formed an association and advanced prices in some lines.

Draught horses for the lumber camps are in good demand. The steam logger has not altogether superseded them.

Lumber shipments by water show up small for September, but sales have been good, a considerable amount going forward by rail.

An idea of the extent of the woodenware business in this state may be formed from the fact that one firm in Bay City loaded 83 cars with their wares last month.

The Michigan exhibit at the Atlanta forestry exposition is in the form of a pavilion, 13½ × 15 feet, and 9 feet high, which will be used as Michigan headquarters and office. It is constructed of a variety of woods and will contain a number of articles of interest to the trade, including the 44 dummy books of Michigan woods which were at the World's Fair.

For some years the Saginaw Valley has been losing a portion of its trade, dealers from the east having passed us to make their purchases of pine at Lake Superior ports. It is true they got an inferior grade of lumber, but then they secured it at cut-rate prices. Now the trade is coming back to its natural channel, for the high freight rates from Lake Superior have frightened the eastern men. Buyers, however, complain that our prices are too high, but they ought to take quality into account.

Rumors are rife that the Flint & Pere Marquette Railway is going to build a line from Harrison to Mackinaw or some point on the west coast of Michigan. The object is said to be to connect with the Duluth & South Shore R. R., so as to run through trains from Duluth to Toledo and thence east. The report probably arose from the building of a line six miles long from Harrison to the Mackinaw River, to move a large amount of cedar for the Cleveland Lumber Co., but the line may subsequently be extended as indicated.

SAGINAW, Mich., Oct. 24, 1895.

I WOULD not object to hold a few thousand acres of pine timber lands, if the statement I saw the other day as to the way it increases in value is correct. A lumber company purchased, in 1880, a tract in Upper Michigan for $19,000, which is now said to be worth $150,000. That is better than holding real estate in Toronto.

* * * *

I have heard wonderful stories of the durability of timber under water, but this breaks the record. I read in a Vienna paper that a pile supporting a bridge built across the Danube by the Emperor Trajan, seventeen centuries ago, was taken up and found to be perfectly sound. Nor is it a bad take-off on the yellow pine dealers, who claim great durability for their wood, when a contemporary remarks that they will probably claim that the pile was of that variety of wood.

* * * *

Some of the furniture dealers complain that the craze for bicycles has injured their trade, though just how they connect the two I do not quite see. The furniture men will simply have to take to selling bicycles, and some of them are doing so, and making them too. The craze, however, if it can be called such, does good in some directions. The introduction of the wood rim has caused an increased demand for the better class of elm, and also hickory, which is good for the hardwood men.

* * * *

THE West Coast lumbermen of the United States, who have formed a combine against British Columbia, which promises to assume still greater proportions, justify their action by the assertion that they cannot compete in their own market against British Columbia lumber. They say that the B. C. lumberman has not to buy his timber, but merely leases it from the government and pays for the logs as he takes them out; that his stumpage is only 25 cents as against $1, and that his labor is cheaper. That may all be so, but the complainants have shut out cheaper labor by excluding the Chinaman.

* * * *

PHILADELPHIA has established as a municipal enterprise a commercial museum, which should be a most useful institution. It will contain collections of natural products from all the countries of the world which have entered the United States markets or may be available for them, and samples of manufactured products from foreign countries, which may serve as aids to their own manufacturers. There will also be a bureau of information and an experimental department. Canadian lumbermen should see to it that samples of their timber are placed in the museum. It may be the means of securing many good customers.

* * * *

I saw a curious report the other day which had been sent in to the Crown Lands Department. It is the diary of Ignace Dufond, who is engaged as a fire ranger by Mr. Wm. Mackay, of Ottawa, and whose district lies along the Amable Dufond river, which flows into Lake Nipissing. Dufond is paid partially by Mr. Mackay and partially by the Government, and one of his duties is to send to the department an account of his ranging during the season. It is written in the Ojibway language and contains many terse Indian expressions. He speaks of May as the flower month, June as the strawberry month, etc. It is clearly and neatly written.

* * * *

It appears as if the United States was going to have a grievance against Canada as a set-off to the lowering of the water in our harbours and streams by the Chicago drainage canal. A great power dam is being built at the outlet of the Lake of the Woods, which, it is asserted, will raise the water in the lake four feet. This, if it should turn out to be the case, will flood some low lands in United States territory at the south end of the lake, and kill considerable timber—70,000 acres would, they say, be destroyed. Government agents are on their way to investigate. I do not believe the damage would amount to anything like the figure stated, but our neighbors to the south are never modest when it comes to putting in a claim against England. They know she is rich.

THE NEWS.

—Mr. T. B. Caldwell is about to erect a saw mill at Lanark, Ont.

—Mr. Arthur McGregor has started a sash and door factory at Middleton, N. S.

—The Laurentide Pulp Co., Grand Mare, Que., proposes building another pulp mill.

—The recent bush fires in the province of Quebec have done more damage than at first reported.

—A new dock is to be built at West Superior, Wis., which will require 1,750,000 feet of west coast fir timber.

—The hardwood flooring manufacturers of the Northwest have formed an association for mutual protection.

—The unsecured creditors of E. & B. Holmes, of Buffalo, will be fortunate if they get 25 cents on the dollar.

—Advices from Chili, South America, report rapid improvement in business, and increased demand for lumber.

—The Czar of Russia is a lumberman. He has an interest in extensive fir, spruce and pine limits in the Caucasus.

—The drought has seriously affected business on the St. Croix river, N. B. The mills have been almost idle for eight weeks.

—The losses by fire in the lumber trade in the United States so far this year have not been so great as for a number of previous years.

—A Toronto firm has received an order for 2,400 wash boards, the largest single order ever received by any firm making these goods.

—The new pulp mill of the Masterman Sulphite Co., Millcove, near Chatham, N. B., will be ready to turn out pulp by the first of the year.

—The receipts of lumber, shingles and staves at New Orleans for the year ending 31st July were valued at $3,748,899, as against $5,542,848 the previous year.

—Canadian made bicycles are being sold in the leading Australian cities. With a growing demand all over the world, what wonder that good elm is hard to get.

—The Bryan Manufacturing Company have secured the contract for all the boxes and packing cases required by the Collingwood Meat Co., for the next two years.

—The Australian mines have been in the habit of using sawn timber for mining props. An effort is being made to induce them to use Douglas fir from British Columbia.

—The prospect with regard to lumber operations in Algoma is very good. The large crop in Manitoba has created a demand for lumber and great activity is anticipated during the winter.

—Mr. Vance, lumberman, of Bruce County, has been in Parry Sound district looking for a site whereon to erect a saw mill for cutting hardwood and cedar, and is also trying to purchase limits.

—The safe in the store of the Dudley Lumber Mills Co., at Scottstown, P. Q., on the C. P. R., was blown open on the night of the 17th of October, and $2,600, placed there to pay the men, stolen.

—Messrs. Parker Bros., of Hepworth, are pulling down their shingle mill and will build a new one twenty-two by thirty-four feet, on the same site, with a capacity of eleven thousand shingles per day.

—Mr. Schilde, a pulp mill expert, has been in Richibucto, N. B., on a prospecting tour. He says it possesses better facilities for a pulp mill than any place he has seen, and a company to build one is talked of.

—A factory for the making of oars exclusively, with a $30,000 plant, has been started at Baton Rouge, Louisiana. The material used is principally ash and oak, and a market is found among the navies of Europe and elsewhere.

—Those interested in the wood pulp and paper trades say the supplies of spruce timber in the United Stated are not by any means unlimited, and that in the near future all wood pulp required by American paper mills must come from Canada.

—A boy named McIlwain brought an action, at the Berlin Assizes, against Mr. Oberholtzer, a saw mill owner, for damages for the loss of three fingers in defendant's mill. The jury found for the plaintiff, holding that there had been negligence on the part of the defendant.

—The movement of Pacific coast shingles through Duluth and Superior this season is very heavy. Shipments of over 48,000,000 from these two ports on line boats to Buffalo mark the growth of the Washington trade with the east as something wonderful.

—Hon. John Haggart, Minister of Railways and Canals, has been interviewed by the solicitor of Mossom Boyd & Co., of Bobcaygeon, who complain that, owing to the construction of the Trent Valley Canal, the water in Little Bob Lake is being lowered, to the injury of their milling operations.

—The Africa, recently lost on the Georgian Bay, with all hands, and her consort, the Severn, belonged to the estate of the late Alex. R. Christie. They, with another consort, the Marquis, formed the fleet of the Michael's Bay Lumber Co., of which Mr. Christie was president. When the company wound up Mr. Christie took the boats, and since his death the estate has been running them. The Marquis was wrecked on Lake Michigan about two years ago; now both the others are gone. They were engaged largely in lumber freighting.

—The collector of customs at Point Vincent, N. Y., recently inquired if ordinary yellow cedar timber squared by sawing, which is not commercially known or used as a cabinet wood, is dutiable under the provisions of the Wilson law, and was told that the department has already held that red cedar boards not being specially provided for in that act, should be classified as articles manufactured in part and dutiable at the rate of 20 per cent. ad valorem, and that this decision is applicable to yellow cedar and the same rate of duty should be collected thereon.

CASUALTIES.

—Peter Lauzon, of Ottawa, was killed in the woods by a falling tree.

—George Hopkins lost a finger in a jointer in the Rathbun Co.'s mill at Brockville.

—P. Hiffnor, a shantyman, said to come from Toronto, was accidentally killed at North Bay.

—D. J. McDiarmid, proprietor of the hub and spoke factory at Aylmer, Ont., was instantly killed by the bursting of a wood pulley in the stave works. The pulley struck him on the head.

PERSONAL.

Mr. T. Cushing, of Tacoma, has gone to the Canary Islands in the interest of Andrew Cushing & Co., of St. John, N. B.

Rayside, the well-known football player on Queen's University team, has retired from football to engage in the lumber business.

Mr. M. M. Boyd, the Bobcaygeon lumberman, is on a visit to the Pacific coast, looking over the lumber interests of Washington and Oregon.

Dr. D. F. Hurdman was married at Ottawa a few days ago to Miss Helen McNutt, daughter of Mr. C. H. McNutt, late of the crown timber office.

Mr. Charles K. Grigg, of Owen Sound, has been appointed one of the rangers of Algonquin park, to take the place of Mr. Timothy O'Leary, who has been appointed to the chief rangership.

Lord Rosbery, ex-Premier of England, is said to be about to visit America to look after his investments, among which is the Southern States Land and Timber Company, which made an assignment several months ago.

F. W. Buchanan, who died recently in Winnipeg, was a son of one of the earliest lumbermen on the Ottawa, and who met his death suddenly when superintending the running of some of his cribs down the slides at the Chaudiere, near to where the Bronson mills now stand.

Mr. E. M. Fowler, the principal shareholder in the St. Anthony Lumber Co., whose mills at Whitney, Ont., have been recently set in operation, is a Chicago millionare, whose wealth in millions is said to reach two figures. He recently visited Ottawa and Whitney to inspect the business of the company.

Mr. Arch. H. Campbell, youngest son of Mr. A. H. Campbell, the well known lumberman of Toronto, was married on the 8th of October, to Jessie Lefroy, only daughter of Senator MacInnes, of Hamilton. The groom is manager of the saw mills on the Musquash River. The LUMBERMAN extends congratulations and good wishes.

WM. HAMILTON & SONS, PETERBORO.

THIS firm's buildings cover an area of 3½ acres, and their machinery is of the most modern design. They employ 150 men and build everything in the machinery line.

The machine shop is in the form of a T, each leg being 300′ × 40′. The boiler shop forms another leg, it is 150′ × 30′. To this building are annexed the blacksmith shop 40′ × 40′, and the boiler and engine room. Across the street is the foundry containing perhaps the finest moulding shop in the country, 280 × 80′ in size.

In the machine shop is the largest planer in Canada, its dimensions being 18′ bed, 18′ long, 8′ square. The boring mill will take a 16′ pulley by 6′ face. The firm have turned out the gears, bridgetrees and shafting for the Soo pulp mill.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

MONTHLY AND WEEKLY EDITIONS

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ADVERTISING RATES FURNISHED ON APPLICATION

THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the tr[illegible]. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

THE DUTY ON BRITISH COLUMBIA CEDAR.

SOME time ago attention was called to a dispute which had arisen between a British Columbia shipping firm and the United States customs officials as to the classification of red cedar from that province. The latter held that dressed cedar siding was subject to duty, but the shipping firm appealed, with the result that the Circuit Court decided that the goods should be admitted free. The following letter, sent to the Collector of Customs, at Plattsburg, N. Y., will explain the matter:

(COPY.)

TREASURY DEPARTMENT,
Office of the Secretary,
WASHINGTON, D. C., Sept. 26, 1895.

COLLECTOR OF CUSTOMS,
Plattsburgh, N. Y.

SIR,—The Department is in receipt of a letter from the Attorney-General, dated the 21st ultimo, stating that in the case re F. W. Myers & Co., being an appeal from the decision of the Board of General Appraisers, (G. A. 2971), involving the dutiable classification of certain "red cedar," was decided adversely to the Government by the U. S. Circuit Court for the Northern District of New York, on July 3rd last.

The merchandise in this case consisted of certain dressed red cedar lumber, and was classified by you under the provisions of paragraph 181 of the act of August 28, 1894, which provides as follows: "House or cabinet furniture, of wood, wholly or partly finished, manufactures of wood, or of which wood is the component material of chief value, not specially provided for in this act, twenty-five per cent. ad valorem."

The importers protested, claiming that the mechandise was entitled to free entry under the provisions of paragraph 676 of the free list, which provides for "sawed boards, plank, deals and other lumber, rough or dressed, except boards, plank, deals and other lumber of cedar, lignum vitae, lancewood, ebony, box, granadilla, mahogany, rosewood, satinwood, and all other cabinet woods."

In passing upon the protest the Board of General Appraisers held that, inasmuch as the merchandise was "lumber of cedar," it fell within the exception mentioned in paragraph 676, and was not entitled to free entry.

On the trial of the case it was shown that the lumber was cedar lumber of the character generally used for building purposes, and that it was not suitable for cabinet uses, whereupon the court ruled that the exceptions referred to in said paragraph 676 related entirely to lumber generally known and used as cabinet woods, and that the decision of the Board of General Appraisers was erroneous.

In regard thereto, you are informed that it is the opinion of the Department that the decision of the court is correct, and that no appeal would have been taken had this Department received due notice of the said decision within thirty days of its delivery. You are authorized accordingly to take the usual course for refunding the duties exacted in excess and to apply these instructions to any similar cases that may be pending where all requirements of law as to protest and institution of suit have been fully complied with.

Respectfully yours,
(Signed) C. S. HAMLIN,
Acting Secretary.

It is worth noting that although the decision of the Circuit Court was given on the 3rd of July, the Treasury (i.e., Customs) Department was not notified of it till the 21st of September, so that collectors were not instructed till nearly three months after it was given, and in the meantime, doubtless, went on levying the duty. Of course those who paid will be entitled to a refund, but it is needless to point out that much inconvenience and annoyance must have been caused, to say nothing of the loss of trade. It does seem unfriendly on the part of the government of the United States to impose such needless restrictions on trade. Certainly when their own courts decide against them there should not be so much delay in giving effect to such decisions.

EDITORIAL NOTES.

THE United States government is not in the habit of extending facilities of trade with Canada, on the contrary, every hindrance is placed in our way, as witness the lobster can duty and the dressed lumber decision of the board of appraisers. However one courtesy has recently been extended, the treasury department having decided that invoices for timber or other goods, imported from places where there is no United States consul, may be certified by a reputable merchant, or by the consul of any friendly power. We suppose we should be thankful for small favors.

THAT it is an ill wind that blows nobody good is again demonstrated in the case of the present unpleasantness in Cuba, and lumbermen in certain lines of goods have to bless the political disturbances there. They have cut off the supply of mahogany, thus enabling holders to dispose of surplus stocks which had accumulated in New York and Boston during the business depression of 1893 and 1894. Present prices show an advance of from 5 to 8 per cent. over those of last year. While Mexican and Central American wood may take the place of Cuban mahogany to some extent, African never can, as it is softer and inferior in some other respects. So the row in Cuba is putting money into the pockets of dealers in this kind of wood.

A REASONABLE tariff of charges results in a larger revenue than when rates are fixed too high. The post office and street railway are proof of this. Recognizing this principle, a West Coast lumber journal remarks that if the transcontinental railways would reduce their lumber freight rates ten cents per hundred pounds, they would soon pass out of the hands of the receivers and become prosperous. Perhaps both freight and passenger rates on transcontinental roads are too high. The railway companies should be the best judges as to what is a paying rate. The lower they make it the more business they should do, within certain limits. Still it well known that the companies put on all the traffic will stand. We agree with our contemporary that a lowering of rates would result in a vastly increased traffic, and would pay.

PROF. Runnebaum, of Dublin, was sent some time ago by the German government to examine the timber resources of the Pacific Coast. He expresses his amazement at the waste that is going on, and says that if it is not stopped the present generation may live to see lumber shipped from Germany to Puget Sound. While in Europe governments are seeking to make trees grow, in America they are destroying them—not only those suitable for timber, but also the saplings, which are the rightful heritage of future generations. Prof. Runnebaum's remark that the life of the forests is the life of the people is not a mere flourish of rhetoric. Not only as a direct source of wealth, but on sanitary and other economic grounds they should be preserved. The German professor is appalled at our wastefulness on this continent, and little wonder.

THE boom in South Africa, while it will undoubtedly result in disaster to somebody, is bringing prosperity to the West Coast lumbermen of America. Shipments of Douglas fir have jumped away up all at once. Tacoma, one of the principal ports on Puget Sound, nearly doubled its shipments by water in September over the previous month. There seems to be a large demand for mining props, and as these timbers are required of great length, Douglas fir is peculiarly well adapted for the purpose. Timber is also required for building, for Johannesburg, and other South African towns, are, like other mining towns, growing at an amazing rate. But the boom cannot last. It is a surprise that it has not already burst. There is no reason why our West Coast lumbermen should not make hay while the sun shines, but they would do well to be careful, for it is no advantage to sell lumber if they don't get paid for it, and when the collapse comes someone is sure to be badly left.

MR. J. B. Tyrrell, of the Canadian Geological Survey, has been doing very important exploratory work for some years, in the far North and North-West, in connection with that branch of the public service. While giving special attention to the geological features of the country, he incidentally gathers a great deal of information respecting its soil, timber, etc. He has just returned from a season's work east of Lake Winnipeg, where he found a good tract of country, with deep, rich soil, not unlike that of the Red River Valley. This extends for about one hundred miles back from the lake The whole country, however, has been burned over by great fires, which prevailed there from seven to ten years ago and destroyed all the timber. The charred trunks of the burned trees are a prominent feature of the landscape. What a pity such destruction should have been wrought. The timber would have been within easy reach of the Manitoba market, where lumber is and will be in great demand as the country fills up with settlers. And worst of all, these destructive fires were largely the result of carelessness.

CANADA has, it seems, vast areas of forest wealth yet unexplored. Dr. Bell, of the Geological Survey, who has just returned from his summer's work in the far north, reports having discovered a large river, not laid down in the maps, which flows into James Bay. He informs us that its banks are very heavily wooded with pine, spruce, tamarac, balsam and white birch. The forest extends along the whole length of the river, several hundred miles. The axe of the lumberman has never been heard in these solitudes; nor has fire, which works such havoc in the forest, wrought any destruction. The river is larger than the Ottawa, and has numerous falls and rapids, furnishing splendid water power. The Crown Lands Department at Quebec say, however, that they knew of the river and the territory adjoining, which was explored last year by Mr. Henry O'Sullivan, acting superintendant of surveys, though his report has not yet been published. The river is known, Mr. O'Sullivan says, as the Nottaway, and it has two great branches—the Waswanapi and the McKiscan. There is an immense tract of splendid agricultural land in the region, and considerable spruce, tamarack, and Banksian pine. Hon. Mr. Flynn, Commissioner of Crown Lands, has taken possession of the territory on behalf of the Province of Quebec.

Messrs. Bertram & Co., of Toronto, are building a steam logger which is destined to supersede horses to a large extent in the woods.

THE EVOLUTION OF THE SAW MILL.*

By H. S. Seage, Special Agent Traders Ins. Co., Lansing, Mich.

Mr. President and Gentlemen of the Fire Underwriters' Association of the North West:

For the past five or six years, from the Underwriter's standpoint, the saw mill has been regarded by many as a source of evil. It might be a thing of strength and beauty, but it could bring no joy or profits to the treasury of the insurance company. So we find that as early as 1892, immediately following the report of the Saw Mill Committee of the Michigan State Association, many companies sent to the local agent at Ukase, placing saw and shingle mills on the prohibitory list; such a cry was raised against the saw mill that the writer was induced to inquire somewhat into its history and learn if possible from whence it came.

The first mention I have been able to find of the saw mill, and by this is meant a saw used for cutting plank or boards, operated by power, is with the ancient Egyptians, who operated a ponderous blade of bronze with serrated edge. The log was placed on end and secured to posts driven in the ground; to the ends of the bronze blade were attached ropes, and the heavy blade was drawn back and forth, and by attrition, wore its way into and finally through the log; but this gave way in time to improved methods and as the practical benefits of the saw mill became demonstrated, rewards were offered for its improvement, and it reached such a degree of perfection that the Greeks deified the inventor of the saw and called him "Perdix."

A manuscript of the Thirteenth century describes a saw mill operated by oxen treading a horizontal wheel; in 1322, a saw mill operated by water power was constructed at Augsburg, Germany, but was opposed by the hand sawyers, who feared that the machine would ruin their occupation, and consequently a mob burned it and then carried off the iron parts and each piece was buried or disposed of secretly, so that the thing should die and never be heard of again; but this did not stop the saw mill, and it slowly spread, notwithstanding it met with opposition from parliaments and people.

In the Fourteenth century England, by parliamentary enactment, made it a criminal offence against the King to erect a saw mill, because "The trees which might goe to make ye masts for ye King's ships would be destroyed," and in consequence, for over an hundred years the Dutch furnished England with all its lumber. The Dutch operated saw mills by wind power as early as 1410; the vast timber districts of Norway and Sweden invited the introduction of the saw mill as early as 1530. By this time the saw mill had become such an important factor that the Bishop of Ely, then British Ambassador to Rome, thought it his duty to give a minute description of a saw mill operating at Lyons in 1555; but such was the opposition in England to its introduction, that no one could get permission from the Crown to build a mill; but in 1663 a Dutchman secretly built a combined saw and grist mill—the first saw mill in England, near London—but it was never operated, as an infuriated mob of ship carpenters destroyed it and sought to kill the poor Dutchman, but he escaped. But so urgent was the demand for building lumber in England that one Houghton set before the public in speech and press, the advantages offered by the use of power saw mills. But it was not until 1767 that, at the request of the Society of Arts, a special decree was issued by the King, giving permission for James Stanchfield to build a mill at Limehouse. But the King refused to give it his protection, so great wss the prejudice of the people, and it was destroyed by a mob, two years later.

So England continued to buy its lumber of the Norseman and the Dutch.

The colonies, in the New World, feeling the need of sawed lumber, sent to Holland for the machinery for a saw mill, the contract price for which was about $180, exclusive of the charges "of ye ship which should transport it." This arrived and was set up at the falls of the Piscataquay, in 1620, and this is said to be the first saw mill in the new world. Shortly after, the Dutch West India Compnny constructed three saw mills in New York, to be operated by wind; one of these was located on Nut, now Governor's Island, and was leased for five hundred boards yearly, one-half to be paid in pine and one-half in oak. The colony of Massachusetts Bay, feeling the need of lumber, made application to "The Court of Assistants" in London for the construction of a saw mill, and in a letter to Governor Endicott dated 1628, he is directed "to give approbation and furtherance to Francis Webb in setting up his saw mill, to be sent over in the goode ship Lyons Whelpe."

Although hindered by restrictive and exclusive conditions of laws, the saw mill slowly extended over New England, and we find it entering the wilds of Maine and New Hampshire in 1634; into Vermont it went in 1636 and into Rhode Island in 1639. The state of the Wooden Nutmeg did not feel its presence until 1654, and New Jersey not before 1682. William Penn and Caleb Pusey brought over from London a saw mill ready framed, and it was set up on Chester Creek, and in a letter to the "Free Society of Traders" they declare that "the saw mill has been of great use and comfort in the colony in the cutting of planks and staves for the better construction of meeting houses and other buildings." This was in 1683 and is the first recorded saw mill in Pennsylvania.

Previous to 1645 all the saw mills in use in the colonies had been brought over from Holland or England, but in that year the Court of Massachusetts adopted a system of laws called the "Body of Liberties," which provided that "there should be no monopolies, but for new inventions a patent should be granted for a short time only." One of the first to apply for exclusive privilege under this first New England code was Joseph Jenckes, of Lynn, and on the 6th of May, 1646, the Court resolved that "In answer to the petition of Joseph Jenckes for liberty to make experience of his abilityes and inventions for ye making of new invented saw mills to goe with water, for ye more speedy dispatch of worke than formerly, this petition is granted for fowerteen years, without disturbance by others, so that his study and cost may not be in vayne or lost."

You will see by this brief outline that the saw mill had hard work for existence; it was opposed by the hand sawyers, who thought it would take away their occupation and deprive them of labor; kings and parliaments enacted or declared laws against it, but so necessary and useful a thing to the people had it become, that it overcame all prejudice and law and took up its march with the pioneers who turned their faces toward the untrodden wilds of the west, and it was destined to cut its way through the vast forests and transform these into fields of grain and gardens of flowers.

General Lewis Cass in 1814 (then Territorial Governor of Michigan), with three others, built a small saw mill on a creek tributary to the Muskegon river, but this was short-lived, being destroyed by the Indians the year following. The first mill in Wisconsin was erected by consent of the Sioux Indians near Prairie du Chien, in 1819, but in one of the raids of the Winnebagoes this was burned a year or two later.

But Michigan, Wisconsin and the Great Northwest was to be populated, and the saw mill was to be an important factor in the work of building its towns and cities, and its growth and improvement has been general and sure, and from the bronze saw of the ancient Egyptians, the evolution and growth has been constant, until to-day we see the great creations, the result of modern science and skill; from the slow process of attrition we now see the saw cutting its way merrily through the log at the rate of three hundred feet per minute.

No element in the development of the Northwest has had greater influence than the saw mill. It has constructed nearly all its railroads and it has built its towns and cities. It populated the east and west shores of Michigan and opened up its northern limits. It built the great cities of the Saginaw Valley, of Muskegon, and laid the foundations of the second city in the State, Grand Rapids.

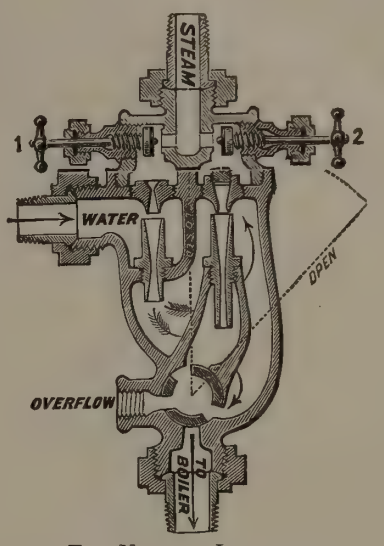
It built the cities of Oshkosh, Fond du Lac, and opened up the vast territory of Green Bay; it took up its line of march down the Father of Waters and laid the foundations of Moline, Rock Island and Davenport; in its march it has carried a boom of success and in its wake it has left its blackened trail; it has created more millionares and in turn has been the cause of more poverty and suffering than any other industry; it has built more cities and towns, it has peopled more counties as it advanced, and in its decline has left these to decay or blackened ruins.

Within the jurisdiction of this Association we are now feeling the influence of this declining industry, not only in the loss of premiums, but in losses by fire as well. This industry has always faced us with a moral hazard, even in its palmy days, but now in its decline, to many it bristles with sparks and is lurid with flame.

* Paper read before the Fire Underwriters' Association of the North West, at Chicago, October, 1895.

THE "NIAGARA" INJECTOR.

BELOW is a sectional cut of the "Niagara Injector," an injector which is rapidly becoming popular among steam users. This boiler feeder is manufactured in St. John, N. B., by W. H. Stirling. The machine has only been on the market one year and is now in actual use in most of the cities and towns throughout Canada.



The Niagara Injector.

The machine is complete in itself requiring no valves as will be seen by cut.

It can be throttled by means of valve No. 1 on suction side, so as to supply from full capacity down to required quantity, thus reducing the quantity of steam used, and delivering the water 90° hotter. The manufacturer states that this feature will save the price of the injector many times over in fuel alone, and that this fact has been demonstrated beyond doubt by the "Niagara" Injector being connected where other machines have been taken off.

Mr. Stirling has shipped these injectors to nearly every western city in Canada as far west as British Columbia.

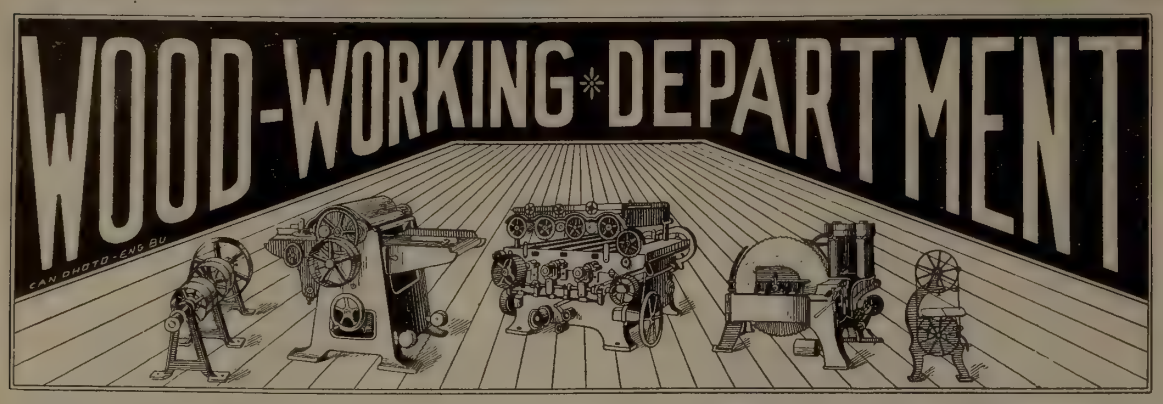
The "Niagara" Injector is sold in Montreal by Samuel Fisher, 57 Sulpice street, and other dealers.

THAT PULLEY ACCIDENT AT AYLMER.

ON Saturday last The World published an account of a fatal accident at Aylmer, Ont., whereby Mr. J. D. McDiarmid of that place was instantly killed by the bursting of a poorly-constructed "wood split pulley." The Dodge Wood Split Pulley Co., of Toronto, while very much regretting the accident, are glad to say that the pulley in question was not one of their manufacture, and take this opportunity of advising the users of pulleys of the importance of seeing to it that they get a well-made, reliable article when purchasing. Every "Dodge" pulley manufactured is guaranteed strong enough for the heaviest double leather belt any width. To avoid accidents or mishaps ask for the "Dodge" patent and avoid inferior imitations.—Toronto World.

NO TIME TO READ.

THE following epistle from Messrs. Smith & Henderson, of Blenheim, Ont., has been given a conspicuous place in THE LUMBERMAN'S curiosity shop:—"Sir,—find inclosod Thirty Three cents in payt of Lumberman to Date pleas cancell our name of you list as the paper is no use to us we do not remember of Subscribing for it if you continue sending your paper we will not pay for it as we have no time to be bothered with such trash they have Just been thrown aside and left for the waste basket so do not bore us with it any longer."



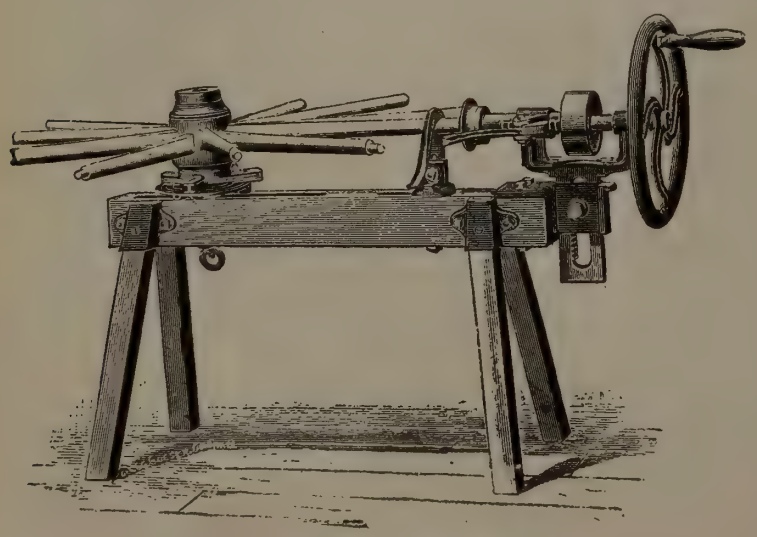
AN AUSTRALIAN AUGER.

MR. WILLIAM CALDWELL—an Australian inventor—has brought out a new auger. The device, says a contemporary, is extremely simple, and consists in carrying at a sharp pitch the cutting surface of the tool spirally around the centre cone of steel which is left, and part of the body of the auger crossing each other at the top in two cutting surfaces. The cone answers to the central core of the auger and has a sharp, radial cutting edge. The chisel-shaped fork at the top keeps the pitch of the radial worm, and bites into the wood with the greatest ease and freedom. It has a wide or open pitch. The worm of the new auger performs another office which is new in wood boring tools. Everyone has seen with what ease a bent sapling is cut when the knife is drawn across the strained fibres; how much more easily a twig can be cut when bent than when the knife is used on the wood in its usual position.

The worm of Mr. Caldwell's invention performs substantially this same office in boring wood. Being wider than the one in use on the ordinary auger, it penetrates with a wedge like effect the fibres of the wood, and raises them at a certain strain or tension against the cutting surface of the auger. It will easily be seen how much more readily the wood is bored by this means than when the fibres of the wood remain in their natural position. Substantially Mr. Caldwell has succeeded, by this simple, yet extraordinarily effective device, in doing for augers what the gimlet pointed screw has done as compared with the old style of flat pointed wood screws. In boring with a ⅝ auger of ordinary make, 29 turns are required to perforate the block; with even less force used, the new auger of Mr. Caldwell requires but 9 turns. Other trials have resulted in 39 turns of the ordinary auger with the old fashioned worm pitch, as against 13 by the new system.

SPOKE TENON MACHINE.

WE give an illustration in this issue of a spoke tenon machine, which is noted for the accuracy of its work. The head or main casting slides in an iron bearing bolted to the frame, with the slot accurately flamed.



SPOKE TENON MACHINE.

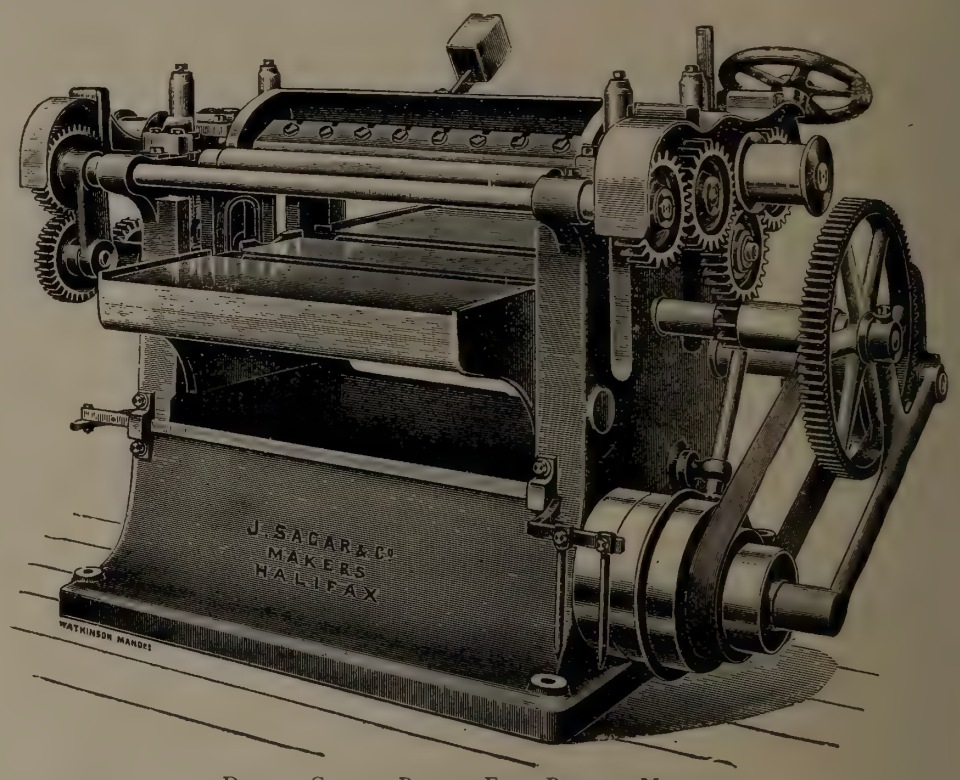
Filloc boring attachments come with the machine. It is arranged to be operated by hand or power. The makers are the Silver Manufacturing Co., of Salem, Ohio.

THE Belfast shipbuilders are on strike and over 3,000 men are out of employment.

DOUBLE GEARED ROLLER FEED PLANING MACHINE.

THIS machine, which is made by J. Sagar & Co., of Halifax, England, is for thicknessing panels and boards, and for general planing purposes. It is made for heavy continuous work, and all parts have been designed with this in view. A serious defect in the larger machines of this class consists in their not having sufficient feeding power to propel the timber through the machine. As made hitherto, the feeding arrangement has consisted of two top rollers,—one in advance of the cutters and one behind—these rollers being driven by gearing. There are usually two rollers of smaller diameter in the table, which simply act as anti-friction rollers to prevent the timber pressing too hard on the surface of the table, but have no effect in the sense of feeding power. Consequently, if the timber is wet or uneven in thickness, the rollers will not take it through, and it stops. If it stops only an instant the surface is spoiled, as the grooved roller digs a hollow the full width of the board—the cutters do the same—and the smooth delivery roller "dents" a slight hollow across, and the board must go through the machine again. In the new series of planing machines Messrs. Sagar are now making, and of which an excellent idea is given by the accompanying illustration, the bottom rolls are the same diameter as the top ones, and both top and bottom rollers are driven by gearing, so that double feeding power is given, and makes it nearly impossible for the stuff to stop in its passage through. Another improvement is that in the larger sizes are placed a driving pulley on each end of the cutter-block spindle, so that in doing the heaviest work the tortional strain is reduced to a minimum, and the cutters revolve at a uniform speed, consequently the finest class of planing can be done with a quick feed.

The spindle and cutter block of this machine are one steel forging, and the bearings are phosphor bronze, one end being 6 in. long, and the other end 8 in. long. The cutter head has a marked improvement in the style of the "lip," which is planed of such a shape that the knife always binds on the edge, and prevents tearing in cross-grained or knotty timber. The cutter block is also of such a shape that the cutters give a shearing cut, although quite straight in themselves and easy to grind. All four feed rolls are made of steel, and the gearing for driving them is extra strong and driven by cone pulleys, having three changes, so that the speed can be arranged to suit various classes of work, slow or quick feed, as required The table works in long planed slides, with an adjustable strip for taking up any wear or shake which may occur, and is raised and lowered by means of a hand-wheel placed in a convenient position, while a figured gauge and pointer is provided for instantly setting the table to produce any required thickness of board. It is made in four sizes, viz: from 20 to 30 in. × 7½, the size of pulleys on the countershaft varying from 10×4½ in. to 12×6 in., according to size.



DOUBLE GEARED ROLLER FEED PLANING MACHINE.

AMONG THE BASKET MAKERS.

IN the stony valleys among the hills of Connecticut, where the bowlders lie too thickly for the plowman ever to disturb the soil, one will occasionally run across a little hamlet, where the basket makers spend their quiet but useful lives. In these little communities the craft of basket making has passed from father to son for many generations, and, doubtless, will for many more, for, in spite of modern invention, the good white-oak basket promises to be as much in demand in the twentieth century as now. Sheet iron or aluminum, paper or tropical fiber, may do some part in solving the basket problem of the future, but alongside of these modern makeshifts will be found the tough products of the almost irreclaimable stony forests of the mountain regions.

Quaint people, easy going, shrewd and philosophical, may be found in these little basket boroughs, and queer names cling to the localities themselves, as one will find in driving through the country. Now he has to journey through a "Devil's Den," and now he picks a toilsome way between "Hard Scrabble" and "Dantown," or plunges down to "Woodchuck Hollow" to emerge a few miles further on the top of "Shaving Ridge."

Sometimes there will be a large, rude shop, surrounded by one-storey gray cottages of the basket makers. In the shop they will carry on work in common, saving expense for fuel in winter. Other families will have a shop by themselves. Outside the door one will see frequently

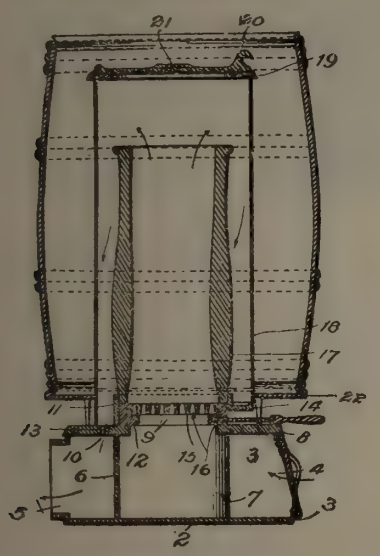
a pair of oxen hitched to a heavy wood sled with a load of basket timber, logs cut about nine feet in length. On the walls inside one sees an assortment of drawing knives, some of them polished, worn and ground down to a narrow strip of steel, ready to break after many years of use. There are wooden bench vises, where the men sit to shave off the splints, and overhead one will see rows of bent white hickory handles, looking like rows of horseshoes in a blacksmith's shop.

No little skill is required to split up the wood so as to waste scarcely any, to shave out the tough, upright strips and to bend them in proper shape, to split out the "filling" and deftly weave it in. White oak, black oak, pin oak, hickory, white walnut, pignut, white ash and black ash all enter into basket making, more or less, but white oak is the standard wood.

The basket makers who prepare their own material look with contempt on the baskets made in factories, where the splints are cut out by machinery. The machine necessarily often cuts across the grain of the wood, causing a weak place in the basket. The factory baskets are much cheaper, of course. One can buy a bushel basket of this kind for 35 cents, when a hand-made basket, strengthened and bound with hoop iron, may cost $2; yet one of the latter may outwear ten of the former; the one may weigh five pounds, the other ten to twelve. Sometimes an order will come for a big wool basket, to hold twelve to twenty-five bushels, or a dealer may want a few hundred of the conical bushel baskets used by the market gardeners of Long Island and New Jersey.

It is an exciting day in the basket village when one of the big rick waggons is loaded up with baskets to go to the steamboat landing or railroad station. There may be consignments in it from half a dozen families to half a dozen dealers. And there follows an interesting suspense as the wagon rolls out of sight till the check comes back from the New York merchant through the mail. Meanwhile the big wagon makes its way down to the shipping point, discharges its load, and the driver sets about to lay in supplies of dry goods and groceries for the return trip.

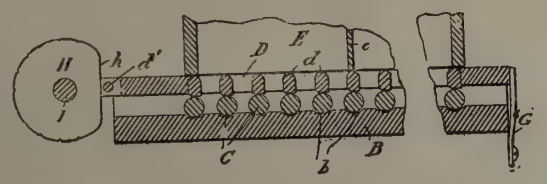
NEW CANADIAN PATENTS.



Barrel Heater.

Patentee: Charles G. Menzel and Julius C. Emmitt, both of Minneapolis, Minnesota, U.S.A., 12th August, 1865; 6 years.

Claim.—1st. The combination, in a barrel heater, of a base, the shell 18 supported thereby, the ring 12, the fire-pot 17 supported by said ring, the grate 15 arranged within said ring beneath said fire-pot, means for shaking said grate, the flues or openings 13, and the wall of said fire-pot being thicker near the base than at the top thereof, for the purpose set forth. 2nd. In a barrel heater, the combination, of a base, containing the independant ashpit, the smoke outlet 5, the shell 18 arranged above said base, the ring 11, and flues or openings 13, the fire-pot 17, the grate 15 beneath the same, the casting 19 for closing the top of said shell, and said casting being provided with the openings 21, for the purpose set forth. 3rd. In a barrel heater, the combination, of the base containing the independent ash-pit, the smoke outlet casting 5, the ring 11 arranged over a central opening in the top of said base, the parts 10 supporting said ring, the ring 12 having an inwardly turned flange and arranged within said ring 11, the grate 15, the fire-pot supported by said ring 12, the flues or openings 13, the shell 18, and a cover for closing the top of the same, substantially as described. 4th. The combination, in a barrel heater, of the base, the fixed ring 11 surrounding an opening provided in the top of said base, the shell 18, the movable ring 12, the grate 20, means for shaking the same, the openings 13, between said ring 11 and said shell, the fire-pot 17, and a barrel rest 22 provided outside of said shell, substantially as described. 5th. The combination, in a barrel heater, of a polygonal base, comprising the bottom 2, and the side walls 3, provided with the front and rear openings, the smoke outlet casting 5, the casting 8, the shell 18, the ring 12, the fire-pot 17 supported by said ring, the grate 20, arranged within said ring 12 beneath said fire-pot, the flues or openings 13, and the barrel rest 22 supported by said base substantially as described.



Match Racking Machine.

Patentee: Edmund George Shepherd, Edwin Septimus Leetham and Charles Derbishire Chitty, all of Ottawa, Ontario, assignees of John Daniel Mantion, Hull, Quebec, all of Canada, 27th August, 1895; 6 years.

Claim.—1st. In a match racking machine, the combination of a stationary plate, an upwardly projecting ring or flange secured to each longitudinal edge of said plate provided with a series of notches at the level of the upper surface of said plate, rollers journalled in said rims between and clearing said notches and extending across said plate, a frame secured slidingly in said rims by runners adapted to move in wider grooves in said rims so as to allow vertical play and provided with slats parallel to said rollers and adapted to rest at the top of the same and in a little lower position in the spaces between them, a spring pressing said frame longitudinally in one direction, a vibrating cam disc with flat space against which said frame is pressed by said spring and carried upon a shaft receiving suitable motion and a hopper held above said frame, substantially as set forth. 2nd. In a match splint racking machine, the combination of a stationary plate B provided with a series of shallow segmental grooves extending transversely across the same, an upwardly projecting rim or flange at each longitudinal edge of said plate provided with a series of notches each adapted to pass a match splint between each groove in the plate and level with upper surface thereof, a small roller journalled in said rims between each pair of said notches and clearing the same and for which the grooves in the plate form a suitable race, and a series of slats parallel to said rollers and forming a grid above them and held slidingly and with vertical plate on and between said rollers, substantially as set forth. 3rd. In a match racking machine, the combination of a stationary plate B, rims B', at the longitudinal edges, a series of notches b', in said rims at the level of the surface of said plate, and a series of rollers C journalled in said rims between and clearing said notches, substantially as set forth. 4th. In a match racking machine, the combination of a stationary hopper, a transversely grated bottom held slidingly under the same in guides allowing vertical play, a spring pushing said grid longitudinally in one direction and a vibrating cam disc with flat space against which the other end of said grid is pushed by the spring, substantially as set forth.

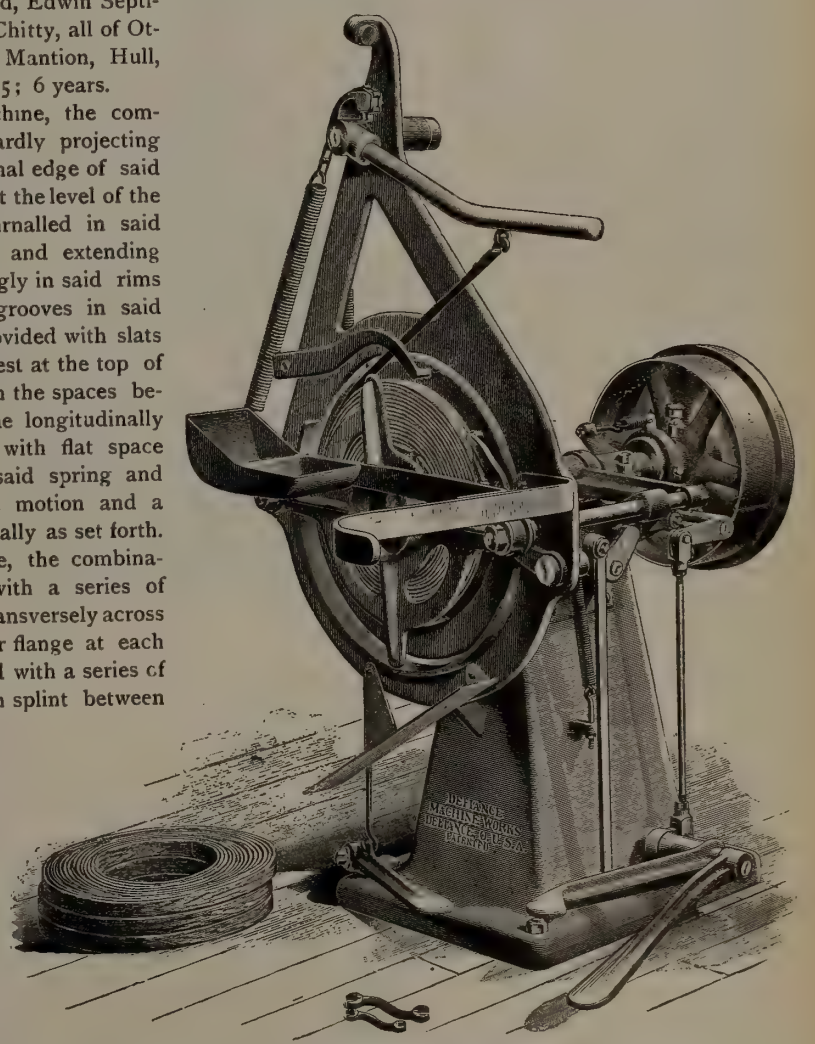
Patents for match making machines have been granted to (1) Levi H. Montross, Camden, New Jersey, and Adolph Segal, Philadelphia, dated 26 Aug., 1865; and (2) Henry A. La Chicotte and Walter S. La Chicotte, of Brooklyn, N. Y., dated 27 Aug., 1895.

ELECTRIC HOOP-COILING MACHINE.

THE engraving represents a new hoop-coiling machine, made by the Defiance Machine Co., at Defiance, Ohio, designed for accurately coiling slack barrel and keg hoops of various sizes and lengths at a rate of from 15,000 to 18,000 per day. It is constructed on a heavy iron frame cast in one piece, with a broad floor base to overcome vibration and jar to the working parts. All link and lever joints are provided with lugs which are turned true and fitted into reamed holes and held in position by washers, entirely relieving the cap screws from strain.

The quick-opening gate facilitates the removal of defective hoops, and gives free access to the coiling drum and parts. By an ingenious pneumatic cushion the carriage is returned after having discharged the finished coil of hoops, without jar or noise, which greatly increases the life of the machine, and enables the operator to perform more and better work; weights and bumpers as a relief have proved unsatisfactory.

The operation of this machine is exceedingly simple. With no complicated parts or adjustments, it can be successfully handled by cheap labor. One end of the first hoop to be coiled is entered into an open jaw in the revolving drum, while the machine is in operation, which firmly holds the end of the hoop to the drum when coiled around it; each succeeding hoop is fed into the machine at the proper time to allow the preceding hoop to form a lap. A steel band is used to prevent fracturing or buckling the hoops and bind the coil firmly together.



Hoop Coiling Machine.

The outer end of the last hoop is held to the coil by a single nail, a supply of which is kept in the convenient nailing box attached to the support rail. When the coil is completed it is instantly discharged from the machine by the weight of the operator's foot upon the pedal.

By a new and novel arrangement the steel band or coiling strap may be removed for examination or repairs, in a moment's time, by simply releasing a set-screw. The friction clutch for driving the machine is at the rear of the machine and is started and stopped by a convenient foot treadle; it is 18 inches in diameter, 4 inches face, and should run 100 rotations per minute; it can be belted to from above, below, or either side.

Subscribe for the Canada Lumberman. $1.00 per year

THE ALLIGATOR STEAM WARPING TUG.

LUMBERING operations have of late years been driven so far back among ranges of small lakes connected by narrow and uncertain outlets, that it has become a serious question with many lumbermen how to get their timber and logs over these lakes during the short season of high water. The old horse capstan has been found to be too slow, besides being awkward and involving much labor and loss of time in moving it from place to place.

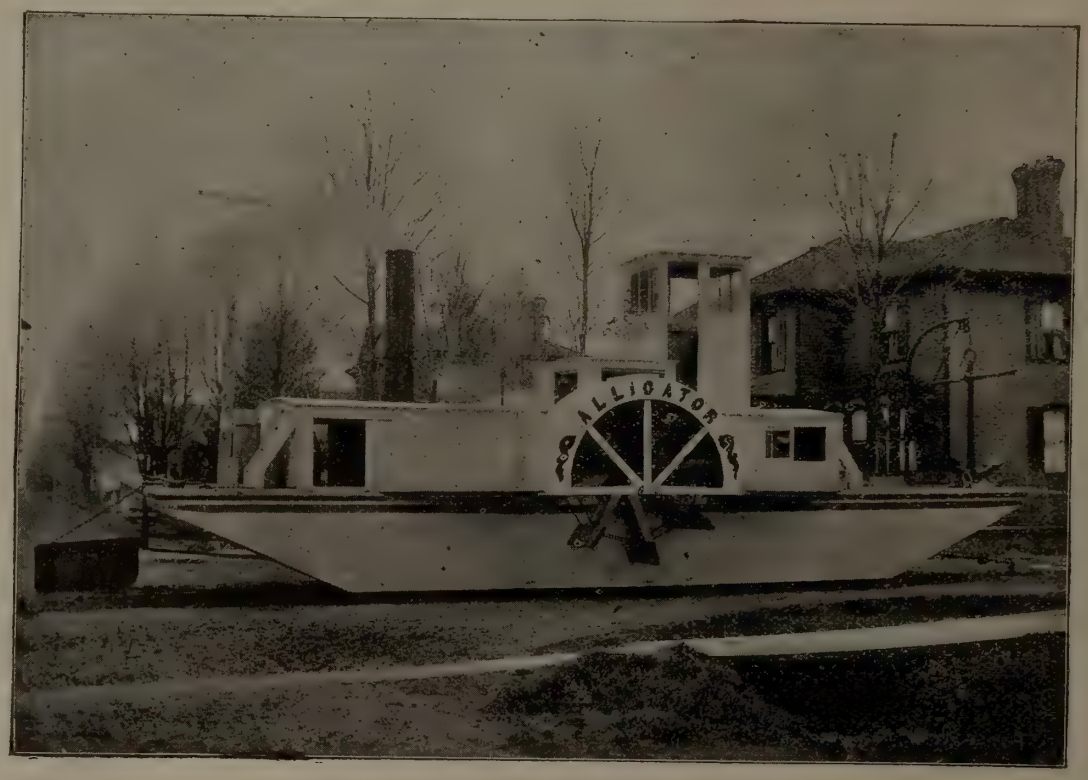
We take much pleasure in printing herewith an illustration and description of an invention, called the Alligator Warping Tug, which is intended to take the place of the Capstan. It has been in successful operation during the past four years on the French River and between Restoule Lake and the Georgian Bay.

It will climb hills and go through swamps and woods, or up small streams from one lake to another. After warping down a boom of logs, it will return with the empty boom, doing the work cheaply and thoroughly, with a great saving in time and number of men.

It is also useful in taking supplies to the lumber camps, or in towing scows bearing horses and provender.

One of these tugs will pay for itself in a single season; such is the testimony of those who are using them.

The steam warping tug, of which an illustration is given on this page, is a steam boat and steam winch combined. The engine can be thrown in gear to drive the paddle-wheels, or to drive cable drum, which holds from half a mile to a mile of ⅝ cast steel wire cable. The hull is built scow shape and is 37 feet long and 10 feet beam, decked all over, with berths for the sleeping accommodation of four men arranged in the bow. The bottom is of 3 inch white oak plank, the sides of pine 6 in. thick, laid in white lead. At intervals of 12 inches, ⅝ inch bolts run through from top to bottom. On the bottom of the boat two runners are placed, 6 feet apart, each runner being 6 x 8 inches, shod with ⅜ x 8 inch steel or iron. Part of the bottom and all up the bow of the boat is also covered with steel boiler plate. A steel drum is placed on the bow, over which the cable runs in paying out, or winding in. There is also a carriage in the bow with two shive pulleys, which is moved backward and forward across the bow by a screw and drive chain, operated by the engineer from the inside. This arrangement winds the cable level on the drum.



THE ALLIGATOR STEAM WARPING TUG.

The boiler is hung on an axle in the centre, a screw being arranged on the front end to enable the fireman to tip the boiler forward or back, in order to keep it level when going up or down hill, in crossing a portage. The boiler is of special design, 22 horse power, and will furnish steam to warp 10 hours with ¾ of a cord of good dry wood of any kind. The engine is 9 x 9 inches, and will make from one to three hundred strokes per minute, propelling the boat from 5 to 6 miles per hour, either backward or forward, as it may be required in warping.

In warping, the boat can be used in either of the following ways: First—the bow can be run up to the boom and the cable made fast to it; then run backward until the cable is all paid out, made fast to a rock, a tree on the bank, or any suitable anchorage, the cable wound up, the raft moving, the boat standing still. Or the boat can be run to the shore, or rock, the anchor dropped with the cable made fast, backed up to the raft, made fast with the stern line, the cable wound in and the boat and raft thus moved together. This last method of warping is the best, particularly where a sack-boom has to be rolled through narrows, as fresh holds can be taken along the boom without disturbing the anchorage until the boat and raft have been hauled up to it; then the anchor can be raised and a fresh hold taken on another snub on shore, as may be most convenient. The boat is sufficiently powerful to move a bag-boom containing 60,000 logs, when there is no wind to interfere, or 30,000 against a head wind.

In crossing portages from one lake or stream to another, it is not necessary to make and grade a level road for the boat to move over. All that is required is to place logs and green skids across under the runners, about 6 or 8 feet apart, to keep the shoeing from grinding on the rocks or earth. Attached to the bow of the boat, near the bottom, is a heavy chain, to which is fastened a single block pulley; another single block is taken to a tree on the side of the road and made fast, then the cable is run out, passed round the block at the tree, brought back to the boat and passed round the block attached to the bow chain, then taken to a tree opposite the first on the roadside. This arrangement causes the boat to travel between these anchorages, and a straight course can be kept without dodging the anchor trees. In this manner the boat can be moved a mile a day with ease.

These boats draw about 28 inches of water to the bottom of the runners. They can be moved up a hill or incline of one foot in three. The helm is hung with a hinge, so that in going over booms or logs, it will lift up, dropping back to its former position of its own accord.

The manufacturers, Messrs. West & Peachy, Simcoe, Ont., are now at work on the largest machine they have ever turned out. It will be of 40 h.p. (double the power of the ordinary machine) and is to be shipped to South America. The following lumber firms among others have this novel machine in use:

Joseph Jackson, Simcoe; Moar Lumber Co., Detroit, Mich.; R. H. Klock & Co., Klock's Mills, Ont.; J. W. Howry & Sons, Saginaw, Mich.; McLachlin Bros., Arnprior, Ont.; Gilmour & Co., Trenton, Ont.; Shepherd & Morse Lumber Co., Upper Ottawa Improvement Co., A. Lomsden, J. R. Booth, Ottawa, Ont.; Buell, Hurdman & Co., Gilmour & Hughson, Hull, Que.: Robert Booth, Hale & Booth, Pembroke, Ont.; Saginaw Lumber Co., Saginaw, Mich.; John Fergurson, Renfrew, Ont.; Ontario & Western Lumber Co., Rat Portage, Ont.; Hardy Lumber Co., Trout Creek, Ont.; Barney & Stevens, Honda and Verna; Transporting Co., South America.

"Although," cried the revolving saw,
"I do not understand
The games these foolish mortals play,
Still I can take a hand."

THE ST. JOHN, N. B., EXHIBITION.

A REPRESENTATIVE of THE LUMBERMAN who visited St. John, N. B., during the recent exhibition held in that city, found much to interest him and visitors generally, at this exhibition. The exhibits were numerous and in great variety, and were arranged in a manner well calculated to attract the attention of visitors. The attendance was very satisfactory. Without mentioning the many exhibits which might not have any special interest for LUMBERMAN readers, a few particulars may be given of those exhibits which relate specially to the lumber and wood-working industries, with which our readers are more particularly connected.

On the ground floor of the main building, the Small & Fisher Co., Ltd., of Woodstock, N. B., had in operation one of their improved shingle machines. These machines attracted much attention, and are said to give excellent satisfaction where they are in use.

Messrs. Cowan & Co., of Galt, Ont., had a large exhibit of wood-working machinery. Mr. Cowan, who was in charge of the exhibit, intimated to THE LUMBERMAN representative, that little, if any, of the machinery comprising the exhibit would be brought back to Ontario, as it had nearly all been sold.

The McFarlane, Thompson, Anderson Co., of Fredericton, N. B., exhibited their Dundas shingle machines, which are well known throughout the Lower Provinces. A representative of THE LUMBERMAN recently visited a mill in these Provinces where thirteen of these machines were in satisfactory operation.

A large space on the floor of the main building was occupied by the St. John branch of the James Robertson Co., Ltd., of Montreal, and contained a fine display of circular, gang and other saws from the company's factory in St. John, together with exhibits of the various lines of goods which the company manufacture. The exhibits were in charge of Mr. J. Robertson, superintendent of the company's business at St. John.

Messrs. Fowler & Rankin, of St. John, N. B., showed a full line of edge tools, and car and carriage springs, of which they are manufacturers. The company, who are successors to Josiah Fowler, had men at work in the building, forging and welding axes. Mr. Rankin stated to the representative of THE LUMBERMAN that the company were pushing for business in all parts of the Dominion.

A very creditable exhibit of saws was made by the Lauton Saw Co., of St. John.

Messrs. Walter Wilson & Son, of St. John, also had a creditable exhibit of saws of their manufacture, including a large band mill saw.

An interesting exhibit of edge tools was made by the St. Stephen Edge Tool Co., of St. Stephen, N. B.

DIVIDING THE WORK.

OWING to the increase of lumbering on the north shore of Lake Huron, the Sault Ste. Marie Crown Timber Agency has been divided. The eastern part of the present agency has been made into a new one and Mr. Edward Garrow appointed as agent, with residence at Webbwood, Ont. The western agency will remain under the charge of Mr. P. C. Campbell, with office at Sault Ste. Marie.

—There is a great scarcity of mill hands in the south.

—Beecroft & Sloan, of Flesherton, Ont., are going to build, late this fall, a new mill on the site of the one lately burned. The mill will be 24x50 ft. with a capacity of a daily output of 10,090 feet, and will be fitted with modern equipments

CANADA LUMBERMAN

WEEKLY EDITION

The Lumberman Monthly Edition, 20 pages } $1.00 PER YEAR { The Lumberman Weekly Edition, every Wednesday

THIS PAPER REACHES REGULARLY THE PRINCIPAL LUMBER MANUFACTURERS AND DEALERS THROUGHOUT CANADA, AND WHOLESALE BUYERS IN THE AMERICAN AND FOREIGN MARKETS.

VOL. I. TORONTO, ONT., OCTOBER 30, 1895 No. 43

CANADA LUMBERMAN

PUBLISHED BY

C. H. MORTIMER

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Branch Office:
NEW YORK LIFE INSURANCE BUILDING,
MONTREAL.

Weekly Lumberman, published every Wednesday. Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

Lumberman, Monthly. A 20-page journal, discussing fully and impartially subjects pertinent to the lumber and wood-working industries. Contains interviews with prominent members of the trade, and character sketches and portraits of leading lumbermen. Its special articles on technical and mechanical subjects are especially valuable to saw mill and planing mill men and manufacturers of lumber products.

☞ Subscription price for the two editions for one year, $1.00.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue

FOR SALE

ONE MILLION CULL PINE 18 SHINGLES for sale. Price to suit the times.

J. W. HOWRY & SONS, Fenelon Falls.

FOR SALE.

48 million feet white pine timber, 12 inches and up.
7 million feet red pine timber, 11 inches and up.
1¾ million feet tamarac timber.
1½ million feet of spruce timber.
100,000 tamarac tie timber.
50,000 cedar tie timber.
65,000 cords spruce pulp wood timber.

comprising 100 square miles on a tributary of the Ottawa river, good water, Province of Quebec, at $110,000. Terms to suit purchaser.

Apply to

Box 257, Sudbury, Ontario.

FIRES.

The lumber and saw mill of Desy & Lacouture, Sorel, Que., has been destroyed by fire.

The steam saw mill of Post & Henderson, a well-known Oswego firm, near Jayville, N.Y., valued at $20,000, and employing 100 men, has been burned. No insurance.

The sawmill of Messrs George Dutch & Sons, Black Point, Restigouche, N. S., was burned a few days ago; no insurance. The firm will rebuild on a more extensive scale.

The planing mill of S. S. Cooper, at Clinton, Ont., was completely destroyed by fire last Friday. A quantity of finished stuff was also burned. The workmen lost their tools. Loss $6,000. Insurance $2,000. Mr. Cooper will rebuild at once. The new building will be brick and will be ready for work about Christmas.

FOR SALE.

Planing Mill

AND

LUMBER

THE ENTIRE PLANT OF E. & B. HOLMES, on Michigan street, this city, consisting of the machinery of complete

Planing Mill and Sash, Blind and Door Factory,

everything up to date and in good running order. A very low figure will be made to a quick purchaser, in order to close out the business immediately. Also in the same connection,

6,000,000 feet of Dry Lumber,

located at Buffalo where shipping and handling facilities are of the best. Also 20 horses and a number of waggons, making a complete outfit for a live lumberman. Will sell mill and lumber together or separate, but best figures will be given to a purchaser of the whole in a lump, as this property **MUST BE SOLD AT ONCE.**

Address or call on

WALTER P. COOKE, Assignee,

107 White Bldg., Buffalo, N. Y.

SUPERVISOR OF CULLERS' OFFICE.

Comparative statement of timber, masts, bowsprits, spars, staves, &c., measured and culled at Quebec up to 22 Oct., 1895:

	1893.	1894.	1895
Waney White Pine.....	2,460,441	2,249,028	2,658,882
White Pine..	1 120,697	838,168	273,771
Red Pine....	303,391	59,053	108,601
Oak.....	1,150,087	1,256,890	1,005,906
Elm..... ...	573,079	439,201	596,137
Ash.....	158,285	183,626	149,077
Basswood....	.....	.....	659
Butternut...	392	276	642
Tamarac....	407	393	554
Birch & Maple	140,909	133,658	240,818
Masts & Bowsprits.....	.....	.....	.....
Spars.....	—pieces	—pieces	—pieces
Std. Staves...	0.5.2.21	.....	.....
W. I. Staves..	15.6,3.20	.....	.....
Brl. Staves...	3.c.1.12	.....	.....

The business of the Sehl-Hastie-Erskine Furniture Co., Ltd., Victoria, B. C., has been placed under the management of W. E McCormick by the mortgagees, the Bank of British Columbia.

CURRENT TRADE CONDITIONS.

ONTARIO.

THE condition of the market continues quiet and there is not the movement that shippers have been looking forward to for some time. From eastern Ontario we learn that there is a fair demand for thin lumber and there have been considerable sales of deck plank at good prices, but dimension timber is very slow in moving and few inquiries. Prices for building material, such as joists, etc., show a tendency to decline, and more activity in building is wanted to bring them up. In the west there is not much doing. Pine is inactive, but for hardwood there is a little better demand. Still stocks are moving slowly and prices are unsatisfactory. The shingle market is particularly dull.

QUEBEC AND NEW BRUNSWICK.

Lumbermen in the New England States who visit Boston are disposed to restrict their operations the coming winter, which, if carried out, will be all the better for the eastern province spruce men. A curtailment of the supply should bring up prices, and a stiffening must also result from the fact that such large quantities of logs have been hung up in the streams by the low water. Those who have stocks on hand should be able to sell to so much better advantage. Advices from Boston tell us that the spruce market is looking up. Dealers say they can get better prices than during the days of the association. Spruce clapboards are in good request, and those who hold them want $2 more than formerly. Scantling is also looking up. The good weather is giving a stimulus to building at Boston and other eastern cities, which all means a better demand for the spruce we possess. Unfortunately the low water on the St. John, and St. Croix, especially the latter, has seriously interfered with the output. But operations promise to be fairly active the coming winter and pulp wood will be in good demand.

BRITISH COLUMBIA.

The prospect in British Columbia for the coming season is good. Cash sales of goods in the retail trade have increased 20 per cent. in the past three months, showing that money is plentiful. Mining is being vigorously prosecuted and capitalists are securing timber lands and arranging to build mills to manufacture the lumber. One of the most important sales recorded is that of 140,000 acres, with a water front of 65 miles, on Takush Harbor, Smith's Sound, to a London syndicate, the consideration being some £90,000. This sale has been under negotiation for over two years. There is some 400,000,000 feet of lumber on it, three-fourths of which is the celebrated yellow cypress. By this deal six Vancouver citizens divide $135,000 among them, besides retaining an interest in the limits. At last reports six vessels were loading lumber at B. C. ports for foreign. Few charters are reported and freight rates are on the decline. From B. C. or Puget Sound they are now as follows: Valparaiso for orders, 37s 6d; Sydney, 32s 6d; Melbourne, 40s; Port Pirie, 38s 9d; United Kingdom, calling at Cork for orders, 67s 6d to 70s; nominal, Shanghai, 45s; Tientsin 55s; South Africa, 62s 6d.

UNITED STATES.

Australia was once the best customer the Pacific coast had for its lumber, but the depression of the past few years checked business. It looks as if it was coming back. That country must import her lumber and she has nowhere to look but to Scandinavia and the Pacific coast. The latter is the more favorable point. Late shipmenss from San Francisco indicate that it is regarded as such. The export trade of the west coast is increasing rapidly. In the Mississippi Valley business is improving. The white pine trade promises to foot up well for October, better in fact than for any previous month this year. Grain has been selling freely and the farmers are buying lumber with the money so obtained. About Minneapolis, dealers are not pushing business, as they look forward to good demand and better prices in the spring. At the head of the lakes things are quiet. Buyers are few. High freight rates prevent shipments. In the northern pineries operations are well under way for getting out the winter's supply of logs. Yellow pine men in the west are busy. Prices are firm. At Chicago the volume of trade is good but prices are unsatisfactory. Stocks are getting down. The demand for cars to carry grain, and stormy weather on the lakes, has interfered with shipments. In Michigan, trade is fair but not large. There is likely to be a reduction in the amount of logs taken out the coming winter. A number of heavy failures in the Saginaw Valley has had a depressing effect on business. In the south there is little change to report from last week. At Buffalo a good fall trade is going on but it is thought there will not be much more stock required. High grade lumber sells well, but there is too much of the poorer qualities and it is not in demand. At Al-

bany and east, business is steady and prospects encouraging. One of the unfavorable symptons of the fall trade is the slowness with which lumber is being received. Buying for present wants seems to be the rule. Any substantial increase in prices is not looked for for months. There is a fair demand for spruce in the east. Hemlock is in great demand at Buflalo, but prices have not advanced as was expected. Hardwood is in fair demand everywhere. Oak holds the lead. The demand is continuous and prices strong. On the whole, trade for the week has been good throughout the United States, movements of lumber considerable in volume, but prices are not up to a satisfactory point. The prospect for November is that there will be a fair demand until cold weather stops consumption.

FOREIGN.

The condition of the lumber trade in Great Britain is looking up. The wholesale market is quiet, owing largely to the difficulty of getting tonnage and the high rates demanded by ship brokers, but this check has quieted the fears of importers lest over consignments might bring down prices. Recent public sales have shown a firmness that speaks well for the future. At the various trade centres a brisk demand for local consumption is reported. Stocks in battens and floorings in London are getting low, also in weatherboards, which should advance in price. Inch boards are in demand. A recent sale included some heavy lines in deals, pine and spruce. Some 12/13 ft. 3x11 1st pine from Botwoodville, made £21 5s, 2nds £15 and 3rds £9 to £9 10s.; 1st undersized brought £15 10s.; 1st, £11 5s. to £11 10s.; and 3rds, £8 5s. A lot of 12/13 ft. 3x11 1st pine from Quebec, failed to obtain an equal price to the Botwoodville goods, although the undersized wood did better. A Metis cargo ex Lydia did very well, the 3x11 1st pine fetching £20 10s. and the second quality £15 10s., a large line of 3x11 4th pine ex Montezuma falling at £7 15s. with the exception of two lots which made £7 10s. The 3x9 2nd spruce, ex Granton from Quebec, was well competed for at £7 and £7 10s. A good many vessels are arriving with Baltic wood. There is no change to report in hardwood. The market is firm and steady. Two arrivals of mixed goods from Quebec by steamship are reported at Liverpool, most of which was sold to arrive and will go into consumers' hands direct. There are numerous inquiries at that point for nearly all kinds of wood, though few sales are reported. Spruce deals have been selling at an advance of at least 5 shillings per standard. At Hull, Manchester, Cardiff, Sunderland, Glasgow and other ports business is well maintained. At the latter the ship-building strike does not seem to have seriously affected the demand. Some good sales of cedar are reported. The Australian wood brokers are pushing the sale of jarrah and karri wood for paving purposes. Complaint is made of the inferiority of the Swedish pit props this season. Is there not here an opportunity for Canada? Lumbering in Australia shows signs of much greater activity than for some years.

Brigt Edward D., of Weymouth, is chartered to load lumber at Bridgewater for the West Indies.

STOCKS AND PRICES.

Large stocks of lumber will be carried over in the Ottawa Valley.

Mr. J. F. Richardson is starting a portable steam saw mill at Woodstock, N. B.

Macdonald & Coes have finished their new saw mill at McDonald's corner, N. B.

Mr. John McAdam has his mill on the Fredericton branch, N. B., nearly completed.

One firm operating near Rat Portage will put 500 men and 50 teams in the woods this winter.

The Anderson Co. has erected a large three story saw mill beside their factory at Woodstock.

Mr. John W. Higginson is about to build another mill of large capacity at Hawkesbury, Ont.

Mr. R. A. Estev, of St. John, N. B., has increased the capacity of his mill by puting in a new engine.

The water is so low at Ottawa that the Chaudiere mills have had to resort to the use of steam in some cases.

The Balmer planing mill at Norman, Ont., is running, Dick & Banning's machinery having been moved to it.

The Pembroke firm of Hale & Booth have made a good sale of all the square timber they will cut during the coming winter.

Dressed lumber is in demand at Sault Ste. Marie for local consumption, and J. W. Dunn's planing mill cannot supply it fast enough.

There is great activity in lumbering in the Rat Portage district. The Ontario and Western company has arranged to take out fifteen million feet.

There are 30,000,000 feet of lumber piled in M. M. Boyd & Co.'s yards at Little Bob, Ont. Not a board will be shipped until prices improve.

There is little movement of the season's sawing from Georgian Bay mills. It is said some of the mill men will take out little stock this coming season.

It is the intention of Messrs. Macpherson & Schell, of Alexandria, to erect almost immediately, upon the McArthur mill site at Monklands, a huge saw mill.

The new Purvis mill at Carleton, N. S., will be the same size as the old one, 40x70, but while the old one had a single gang and a circular, the new one will have a single gang only.

Of three large saw mills burned at or near St. John, N. B., within a year, one has been replaced, another is being rebuilt, and the foundation of the third is being laid. This does not look as if there was no money in lumbering.

Only 40,000,000 feet were cut on the St. Croix river, N. B., last winter, and the Courier says not more than one-third of that quantity will be taken out this season. This is because of the number of logs held over on account of the low water.

The Canada Lumbering Co. has closed up its saw mill at Mississippi, Ont., for good, and will cut any remaining logs left on their limits at their Carleton Place mill. The limits are almost exhausted, and when they are, in a year or two, the Carleton Place mill will also be closed.

The new Hamilton mill on the Strait Shore, N. B., had to stop sawing for a few days on account of some difficulty with the furnaces. It has resumed and is turning out 40,000 feet per day. It will continue to work late in the season and next year its capacity will be increased.

The timber limits in the Big Bend, near Revelstroke, B. C., are to be worked. S. B. Hill, of Duluth, and J. M. Barr, of Ann Arbor, went up to see them recently. The owners bought them at a low figure some years ago and have been paying wild land taxes on them ever since without getting anything out of them. They now propose putting the timber on the market.

The Snowball mill at Tracadie, N. B., has stopped operations for the season, partly because there is a large stock on hand and partly because the lumber cannot readily be shipped, there being a bar at the entrance of the harbor which prevents vessels drawing more than three or four feet from entering. Over 3,000,000 feet of lumber is now in the yard, also a large quantity of lath. There is a large number of logs left over.

NEW BRUNSWICK SPRUCE DEALS.

The editor of Timber in a recent reply to a correspondent, who inquired as to the percentage of sizes and qualities upon which the basis price of New Brunswick spruce deals is usually formed, and the reductions and additions for the various sizes, so as to ascertain the actual relative value, gives the following information, which may be of value to some of our readers:

New Brunswick spruce deals are shipped in the standard mixed qualities of 1sts, 2nds and 3rds to average 2nd quality, the basis price being for 7in. and up. The widths usually range from 7 to 15in., the bulk of the dimensions shipped being 7, 9 and 11x3. From the principal ports, such as St. John, Miramichi, Halifax, &c., the proportions generally run about 60 per cent. of 9x3 and up, including 15 to 20 per cent. of 11x3. The 8ft. and under ends are sold at two-thirds the contract price for the cargo. The 6in. and under deals, commonly known as scantling, together with any boards of 4th quality, or inferior deals, are charged at a reduction of 20s to 30s per std. as may be agreed upon. The difference in value at the various ports ranges from 2s 6d to 10s per std., according to the make and average length of the deals. The average length of the best New Brunswick shippers is 14 to 15ft., but many of the Lower Port mills, for instance, Pugwash, Bay Verte, Shediac, &c., only yield an average of 12 to 13ft. Speaking generally, most shippers have a uniform code of reduction in prices for their goods, together with a regular percentage of sizes and a fairly accurate standard of quality for certain specific mills. Of late years, however, the employment of large steamers at several of the older ports, especially at St. John, N. B., has compelled shippers to mix the stocks of several mills in one cargo, and thus to some extent destroy the previous uniformity of their particular stock.

DIRECT TRADE WITH THE WEST INDIES.

Mr. Peter Whalen, a member of the Ottawa Board of Trade, expresses himself strongly in favor of cultivating direct trade with the West Indies. He says it is surprising the amount of lumber, timber and agricultural implements made in Canada, which are sent to the West Indies, particularly Jamaica, through New York. There is no reason why Canada should not ship direct from her own ports. The people there would rather deal with us, and are constantly making overtures to us. The Ottawa valley has just the class of timber they want. By sending it to them direct the profit which goes to the New York shippers would be saved, and the business would be kept in our own hands, with greater profits to ourselves.

BUSINESS DIFFICULTIES AND CHANGES.

Delisle & Co., lumber dealers, Montreal, have dissolved.

The Port Elgin Furniture & Manufacturing company is in liquidation. The liabilities are $6,000; assets, $5,000.

The North Pacific Lumber Co., Ltd., of Barnet, Fraser river, has increased its anthorized capital from $100,000 to $500,000.

The saw and grist mills belonging to the estate of the late A. Wood, Smith's Falls, are offered for sale by the executors.

MacCracken, Boyle & Co., lumbermen, of Ottawa, who have timber limits up the Gatineau beyond Desert have assigned. The liabilities will exceed $60,000.

R. Wood, of Snow Road, Ont., has sold his steam saw mill to James Cameron, of Fallbrook, and is putting up a new mill at the Mississippi river, to be run by water power.

Maxwell & Son, lumber dealers, St. John, N. B., whose failure was recently noted, are arranging a settlement at 30 cents on the dollar, namely, 20 cents cash, and 10 cents on time, on liabilities of about $10,000.

Letters patent have been issued incorporating Frederick W. Borden, physician; Harold L. Borden, student; Charles V. Anthony, lumberman; Jacob L. Potter, clerk, and William R. Potter, merchant, all of Canning, N. B., Kings Co., under the name of The F. W. Borden Company, (limited), to carry on a general lumber and trading business. The capital stock is to be $50,000, in 5,000 shares of $10 each.

SHIPPING MATTERS.

Sch. Ernest F. Lee is loading laths at Shulee for Vineyard Haven for orders.

The Millbridge sch. Joe is loading lumber for the Sound at Fredericton, N. B.

Bark Buteshire, on her way to St. John, N.B., will load lumber for Buenos Ayres.

Three hundred cords of peeled poplar pulp wood left Quebec, in as many canal boats, for Mechanicsville, N. Y., on 28th Oct., shipped by A. K. Hansen & Co.

SS Derwent Holme, 1326 tons, now in England, has been fixed to load deals at St. John, N. B., for W. C. England, at 48s. 9d. This is an advance of 11s. 3d. over the rate paid the last steamer which loaded there.

The following shipments from Quebec are reported: Per bark Rothiemay, Buenos Ayres, 132,489 pcs spruce rails, 22,893 do do scantling, 200 packs spruce broom handles, by Price Bros & Co., laden at Tadousac. Per bark Dunvegan, for Belfast, 26,551 pcs. spruce deals, 2,409 do do ends, by Price Bros & Co., laden at Tadousac. Per ss Scotsman, for Liverpool, 4762 bdles spoolwood, by Carbray, Routh & Co. Per ss Assaye, for London, 32,622 packing boxes in shooks, by The A. Gravel Lumber Co.

LUMBER FREIGHT RATES.

LUMBER freight rates for pine on the Grand Trunk Railway have been made a fixture, as below. Of any intended change due notice will be given lumbermen.

General instructions in shipping by Grand Trunk are embodied in these words in the tariff schedule: On lumber in carloads, minimum weight, 30,000 lbs. per car, unless the marked capacity of the car be less, in which case the marked capacity (but not less than 24,000 lbs.) will be charged, and must not be exceeded. Should it be impracticable to load certain descriptions of light lumber up to 30,000 lbs. to the car, then the actual weight only will be charged for, but not less than 24,000 lbs. The rates on lumber in the tariff will not be higher from an intermediate point on the straight run than from the first named point beyond, to the same destination. For instance, the rates from Tara or Hepworth to Guelph, Brampton, Weston or Toronto, would not be higher than the specific rates named from Wiarton to the same points. The rates from Cargill and Southampton to points east of Listowel and south and west of Stratford will be the same as from Kincardine, but in no case are higher rates to be charged than as per mileage table published on page 9 of tariff.

Rates from leading lumber points on pine and other softwood lumber, shingles, etc., are as follows: From Glencairn, Creemore, Aurora, Barrie and other points in group B to Toronto, 6½c.; Collingwood, Penetang, Coldwater, Waubaushene, Sturgeon Bay, Victoria Harbor, Midland, Fenelon Falls, Longford, Gravenhurst and other points in group C, to Toronto, 6½c.; Brace, bridge to Toronto 7c.; Utterson, Huntsville, Navor Emsdale, Katrine to Toronto, 7½c.; Burk's Falls, Berriedale and Sundridge, to Toronto, 8c.; South River, Powassen and Callender to Toronto, 9c.; Nipissing Junction and North Bay, 10c. Rate from Goderich, Kincardine and Wiarton to Toronto, 6½c. These rates are per 100 lbs. Rates from Toronto east to Belleville are 7½c. per 100 lbs.; to Deseronto, 9c.; to Brockville and Prescott, 10c.; to Montreal and Ottawa, 11c. The rates on hardwoods average about from 1c. to 2c. per 100 lbs. higher than on softwoods. For rates on railway ties, mahogany, rosewood, walnut, cherry, and other valuable woods, application must be made to the district freight agent.

On the Canadian Pacific the rates on pine and soft woods may be illustrated as follows: Cache Bay, North Bay, Sturgeon Falls and Warren, to Toronto, 10c; Algoma, Cook's Mills, Massey, Spanish River and Whitefish to Toronto, 13c.; Ottawa to Toronto, 10c From Ottawa, Hull, Aylmer and Duchesne Mills to station on the Lake Erie and Detroit River, Erie and Huron, Toronto, Hamilton and Buffalo, and Michigan Central Railways, the rate is 14½c. per 100 lbs. Regulations apply as to minimum size of carload of 30,000 lbs., and an advanced rate is charged for hardwoods.

Lumber freight rates on the Canada Atlantic Railway are as follows: Ottawa to Toronto, 10 cents per 100 lbs; Ottawa to Oswego, $1.90 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Montreal, $1.00 per M ft., (3,000 lbs. and under per M ft.); Arnprior to Montreal, $1.50 per M ft., (3,000 lbs and under per M ft.); Ottawa to Quebec, $2.00 per M ft.; Arnprior to Quebec, $2.50 per M ft.; Ottawa to Buffalo, 12 cents per 100 lbs.; Ottawa to Port Huron and Detroit, 14 cents per 100 lbs. Ottawa to New York, five carloads or over $3.00 per M ft.; Arnprior to New York, $3.50 per M ft.; Ottawa to Boston, Portland and common points, local 15 cents; exports 13c. per 100 lbs.; Arnprior to Boston, Portland and common points, local 17 cents; export 15 cents per 100 lbs.; Ottawa to Burlington, 6 cents per 100 lbs.; Ottawa to Albany, 10 cents per 100 lbs.; Arnprior to Albany, 12 cents per 100 lbs.; Ottawa to St. John, N. B. and common points, 20 cents per 100 lbs.; Ottawa to Halifax, N. S. and common points, 22½ cents per 100 lbs Minimum carload weight for shipment of lumber, lath, shingles, etc., is 30,000 lbs., and rates quoted above are in cents per 100 lbs., except when quoted per M ft. the minimum carload charged is 10 M ft., lumber not exceeding 300 lbs. to the M feet. Ottawa rates apply on shipments from Rockland and Hawkesbury.

MODIFICATION OF HARDWOOD RATES.

THE Grand Trunk Railway and Canadian Pacific have made the rates on hardwoods from certain points to Toronto and Hamilton as follows. The regulations are over the signature of Mr. John Earls, W.D.F.A., of the G. T. R., and given in reply to a letter from Toronto hardwood men:

"After careful consideration we have come to the conclusion that, on and after Jan. 1st, 1895, a modification will be made in the present arrangements for hardwood lumber, to the effect that the rate will be 7½c. per 100 lbs. from our Northern and Northwestern branches to Toronto and Hamilton. This rate, however, will not apply from main line points and the straight run between Toronto, Sarnia and Windsor; also that so far as rates on common lumber to points like Guelph, Galt, London, Woodstock, Ingersoll, etc., from all lumber shipping stations the rate will be the same on hardwood as on pine." On the old principle, we suppose, that half the loaf is better than none, hardwood men have something, possibly, to be thankful for, though there is no good reason why the rates generally on hardwood should not be as low as on pine. It is understood that the C. P. R. rate will be made uniform at 7½c. from same points.

FOR SALE.

DRY HEMLOCK, ROCK AND SOFT ELM slabs for sale at 75 cents per cord on cars. No edgings.

J. E. MURPHY, Hepworth Station, Ont.

MILLS

Having Brown Ash 12, 14 and 16 ft. firsts and seconds, inch Bass firsts and seconds 12 feet, or any other Hardwood Lumber, can sell same for cash by addressing

H. D. WIGGIN,
No 89 State St., BOSTON, MASS.
Inspection at mill.

CANADIAN EXPORTERS AND WHOLESALERS

GILMOUR & COMPANY
MANUFACTURERS OF
WHITE PINE LUMBER
Write for Prices. : : : : *TRENTON, Ontario, Canada.*

WHOLESALE LUMBER
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Jas. G. CANE & Co.
HARDWOOD a Specialty
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TORONTO OFFICE:
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LUMBER • LATH • SHINGLES
Contractors for Railway Supplies
BILL TIMBER a Specialty . . .
MIDLAND, ONT.

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Wholesale Dealers in Lumber, Lath and Shingles
TORONTO: 204-205 Board of Trade Building. -:- BUFFALO: Dock foot of Hertel Avenue.

Geo. Cormack
Wholesale Dealer in all kinds of
LUMBER, LATH AND SHINGLES
Bills cut to order.
Lumber shipped to all parts by rail or vessel.
Excellent quality of 18 inch Pine Shingles for sale.
WHITBY, ONTARIO

Huntsville Lumber Co., Ltd.
—: HUNTSVILLE, ONT. :—
MANUFACTURERS OF LUMBER LATH AND SHINGLES
WE are open to cut White Pine and Hemlock Bill Stuff. Have for Sale a Quantity of Dry Mill Stocks and Sidings, also 16 in. Pine Shingles and 4 ft. Lath 1½ in. wide.
CORRESPONDENCE SOLICITED

The Georgian Bay Lumber Co.
MANUFACTURERS OF
LUMBER : AND : LATH
Mills at Waubaushene and Port Severn • WAUBAUSHENE, ONT.

THE PEMBROKE LUMBER CO. LTD.
MANUFACTURERS AND WHOLESALE DEALERS IN
DIMENSION TIMBER OF ALL SIZES AND KINDS, JOISTS, CAR DECKING, CAR SILLS, SHIP DECKING, AND ALL KINDS OF ROUGH AND DRESSED LUMBER.
Write us for Quotations on all Bills
PEMBROKE, ONT.

Ottawa Lumber Co. Ottawa Canada
WHOLESALE LUMBER, LATH, SHINGLES, ETC.
Write for Stock List

KILN-DRIED BIRCH FLOORING SHIPLAP and CEILING $20.00 SAMPLES BY MAIL KNIGHT BROS. Burk's Falls, Ont.

FOREIGN EXPORTERS AND IMPORTERS

WE want to buy FOR CASH the following kinds of Lumber : : : : :
1¼, 1½, 2, 2½, 3, 4in. White Ash
3 in. Soft Elm; 2 in. Soft Elm
Write us promptly, stating what you have to offer in each kind and quantity of each thickness, also dryness, etc., with lowest prices.
Empire Lumber Co. - Buffalo, N. Y.

• Ottawa & New York Lumber Line •
- - - BONDED LINE BETWEEN - - -
CANADIAN POINTS, NEW YORK CITY AND ALL POINTS REACHED BY WATER FROM ALBANY
CANADA ATLANTIC RAILWAY. DELAWARE & HUDSON CANAL CO. WILLIAMS' LINE. } J. H. Williams Agent { 15 Lumber District, ALBANY, N.Y. NEW YORK OFFICE, 93 Wall Street. Telephone 531 Broad.

ALWAYS IN THE MARKET FOR HIGH GRADE LUMBER.
L. G. MULLER
MAPLE FLOORING, N. C PINE, CYPRESS REDWOOD.
Lumber and Logs for Export
NO. 1 BROADWAY - NEW YORK.
POPLAR, PINE, and HARDWOOD LUMBER

YOUNG & KEELER COMPANY
WHOLESALE DEALERS AND MANUFACTURERS
Elm, Basswood, Birch and Maple
Canadian mill men invited to offer stocks. -:- 54 South Street, NEW YORK.

ONE DOLLAR
Will pay your subscription to the weekly and monthly CANADA LUMBERMAN for
ONE YEAR

SCATCHERD & SON 1053 Seneca Street, BUFFALO, N.Y...
—: WANT :—
ROCK ELM
COMMUNICATE AT ONCE. 7, 8, 14 and 16 feet, firsts and seconds

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Alligator Tugs, West & Peachey, Simcoe, Ont.
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Dominion Leather Board Co., Montreal.
Dodge Wood Split Pulley Co., Toronto, Ont.
Electrical Apparatus, Royal Electric Co., Montreal.
Flint & Pere Marquette Railroad,
Illinois Central Railroad Co., Chicago, Ill.
Lumber Truck Wheels, Montreal Car Wheel Co.
Lumbering Tools, Thos. Pink, Pembroke, Ont.
Magnolia Metal Co., New York.
Machine Knives, Peter Hay, Galt, Ont.
Rails, John Gartshore, Toronto.
Silver Solder, P. W. Ellis & Co., Toronto.

Business Wisdom: There are lots of merchants who get into a rut and stay there. Success lies in grasping new ideas and adopting them in business.

The Price Lists that here follow will be revised each week up to the hour of going to press, and in connection with these we would draw attention to the week's trade review under the heading of "Current Trade Conditions" on the first page, immediately followed with matter marked "Stocks and Prices," which presents the lumber situation of the week, together with a record of the week's sales and transactions.

PRICES CURRENT.

TORONTO, ONT.

TORONTO, Oct. 30, 1895.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		2 30
XX shingles 16 inch		1 40
Lath, No. 1		1 75
Lath No. 2		1 40

HARDWOODS—PER M. FEET CAR LOTS.

Quality, 1s and 2s unless otherwise specified.

Ash, white,	1 to 2 in.	$26 00	$28 00	Cherry	1	1½	50 00	60 00
" "	2½ to 4..	30 00	32 00	"	2	4..	60 00	65 00
Ash, black,	1sts and 2nds, 1 to 1½ in	21 00	23 00	Elm, soft	1 to 1½		$14 00	$15 00
sh, black,	1sts and 2nds, 2 to 4 in	23 00	25 00	" "	2	3..	15 00	16 00
Ash, M. R.,	2	1½	18 00	20 00	" rock	1	1¼	16 00	18 00
" "	1	4..	20 00	24 00	" "	1½	3..	20 00	22 00
Birch,	2	1½	22 00	24 00	Hickory	1½	2..	28 00	30 00
"		4..	24 00	26 00	Maple	1	1½	16 00	18 00
" sqrs.	4x4	8x8	24 00	26 00	"	2	4..	18 00	20 00
Basswood	1	1¼	16 00	18 00	Oak, red, p'n	1	1½	28 00	30 00
"	1½	2..	19 00	20 00	" "	2	4..	30 00	32 00
" m. r.	1	1¼	14 00	16 00	" white	1	1½	28 00	30 00
Butternut	1	1½	23 00	25 00	" "	2	4..	30 00	35 00
"	2	3..	25 00	28 00	" quart'd	1	2..	48 00	52 00
Chestnut	1		24 00	2 600	Walnut	1	3..	85 00	100 00
					Whitewood	1	2..	32 00	36 00

OTTAWA, ONT.

OTTAWA, Oct. 30, 1895.

Pine, good sidings, per M feet, b.m	$30 00	35 00
Pine, good strips, " " "	26 00	30 00
Pine, good shorts, " " "	18 00	25 00
Pine, No. 1 dressing sidings, per M feet, b.m	18 00	22 00
Pine, " " strips, " " "	15 00	18 00
Pine, " " shorts, " " "	13 00	14 00
Pine, 10 s.c. and better stock, " " "	14 50	16 00
Pine, 8 s.c. " " " " "	12 00	13 50
Pine, " sidings " " "	13 00	15 00
Pine, " strips " " "	10 00	12 00
Pine, " shorts " " "	8 50	10 00
Pine, box culls " " "	9 00	11 00
Pine mill culls " " "	00	10 00
Lath per M	1 20	1 50

QUEBEC, QUE.

QUEBEC, Oct. 30, 1895.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	16 @	22
For fair average quality, according to average, etc., measured off.	20	26
For good and good fair average " " " " "	25	30
For superior " " " " "	32	40
In shipping order " " " " "	36	42
Waney board, 18 to 19 inch " " " " "	36	42
Waney board, 19 to 21 inch " " " "	38	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	40	49

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	22	30

BIRCH.

16 inch average, according to average and quality	21	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $40 to $43 for 3rd quality.
Bright spruce, according to mill specification, $40 $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality. F.O.B. batteau.

SAGINAW, MICH.

SAGINAW, Mich., Oct. 30, 1895.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$45 00	Selects, 1in., 8in. and up wide	$38 00
1¼, 1½ and 2 in.	45 00	1¼, 1½ and 2 in.	40 00
2½ and 3 in.	50 00	2½ and 3 in.	45 00
4 in.	55 00	4 in.	50 00

FINE COMMON.

1 in., 8 in. and up wide	33 50	2½ and 3in., 8in. and up wide	40 00
1¼, 1½ and 2 in.	35 00	4 in.	45 00

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	25 00	2½ and 3in., 7in. and up wide	35 00
1¼, 1½ and 2 in.	30 00	4 in.	38 00

STRIPS. A AND B (CLEAR AND SELECTS).

1¼ in., 4, 5 and 7 in. wide	34 00	1 in., 4, 5 and 7 in. wide	32 00
6 in. wide	36 00	6 in. wide.	36 00

FINE COMMON OR C.

1¼ in., 4, 5, 6 in. wide	30 00	1 in., 6 in. wide	30 00
1 in., 4, 5 in. wide.	28 00		

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24 00	1 in., 4, 5, 6 in. wide	23 00

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in	17 00	1 in., 4, 5 and 7 in.	17 00
1 in., 6 in	18 00	1 in., 6 in.	18 00

NO. 2 FENCING OR NO. 4 FLOORING.

1 in., 4, 5 and 7 in.	14 00	1¼ in., 4 to n.	14 00
1 in., 6 in.	14 50	No. 3 fencing, 1 in., 6 in.	13 00

SHELVING.

No. 1, 1 in., 10 in. stocks	25 00	No. 2, 1 in., 7 and 8in. stocks	19 00
1 in, 10 in. and up wide	26 00	1 in., 10 in. stocks	21 00
1 in., 12 in. stocks	29 00	1 in., 12 in. stocks	24 00
1 in., 12 in. and up wide	30 00	1 in., 10 in. and up wide.	22 00
1¼ in. 1½ and 2in., 8in. and up wide	29 00	1 in., 13 in. and up wide	25 00

BARN BOARDS OR STOCKS.

No. 1, 12 in.	20 00	No. 2, 9 in.	14 00
10 in.	17 50	8 and 7 in.	14 00
9 in.	17 50	No. 3, 12 in.	13 00
8 and 7 in.	17 50	10 in.	12 00
No. 2, 12 in.	16 00	9 in.	12 00
10 in.	14 00	8 in.	12 00

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$10 00	1 in., 13 in. and up wide.	$12 00
1 in., 6 in. wide.	11 00	1¼, 1½ and 2 in., 7 in. and	
1 in., 7 in. wide and up.	11 00	up wide.	12 00

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9in. wide	17 00	1 in., 10 in. and up wide.	17 00
1 in., 6 in. wide.	17 00	1¼, 1½ and 2 in., 8in. and up wide.	17 00

COFFIN BOARDS.

No. 1, 1 in., 13in. and up	20 00	No. 1, mill culls	9 00
No. 2	17 00	No. 2, or red horse	7 00

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23 00	No. 2	19 00
No. 1 (nearly clear).	21 50	No. 3	16 00

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16ft.	$ 8 50	Hemlock, 2x4 to 10, 12 to 16 feet	8 00
18 ft.	10 50	2x12.	8 50
20 ft.	11 50	Add $1 to each additional 2ft. in length.	
22 and 24 ft.	12 50		

SHINGLES, 18-IN.

Fancy brands, XXXX	3 20	Standard brands. river made, XXXX	2 85
Clear Butts	2 00	Clear Butts	1 85

WHITE PINE LATH.

No. 1	1 60	No. 2	1 35
		Hemlock	1 25

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA N. Y., Oct. 30, 1895.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in.	$44 00	46 00		No. 3, 1¼ to 2 in.	15 00	17 00
2½ and 3 in.	50 00	53 00		Shelving, No. 1, 13 in and up, 1 in.	30 00@	31 00
4 in.	54 00	56 00		Dressing, 1¼ in.	24 00	25 00
Selects, 1 in.	39 00	40 00		1¼x10 and 12.		26 00
1¼ to 2 in.	39 00	40 00		1½ in.	24 00	25 00
2½ and 3 in.	47 00	50 00		2 in	25 00	26 00
4 in.		52 00		Mold st'ps, 1 to 2 in.	31 00	33 00
Fine common, 1 in.	34 00	35 00		Barn, No. 1, 10 and 12 in.	19 00	21 00
1¼ and 1½ in.	34 00	36 00		6 and 8 in.	18 50	20 00
2 in	34 00	36 00		No. 2, 10 and 12 in.	15 00	16 00
3 in.		45 00		No. 3, 10 and 12 in.	13 00	14 00
4 in		45 00		6 and 8 in.	12 50	13 50
Cut'g up, No. 1, 1 in.	26 00	28 00		Common, 1 in.	15 00	16 00
1¼ to 2 in.	32 00	34 00		1¼ and 1½ in.	17 00	18 00
No. 2, 1 in.	15 00	17 00		2 in	18 00	20 00
No. 2, 1¼ to 2 in	22 00	23 00				

NEW YORK CITY.

NEW YORK, N. Y., Oct. 30, 1895.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$28 00 @	40 00	Building orders	$26 00 @	37 00
Decking	44 00	50 00			

SPRUCE.

6 to 9 in.	13 00	14 00	10 to 12 in.	15 50	16 00
6 to 12 in.	14 50	15 50	Lath	1 85	2 00
9 to 12 in.	15 50	15 75			

BOSTON, MASS.

BOSTON, Oct. 30, 1895.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$11 50	12 00	¾ inch	$ 9 25	9 75
Coarse No. 5	15 00	16 00	11-16 inch	8 50	9 00
Refuse	13 00	13 25	⅝ inch	8 00	8 50
Outs	9 00		Clapboards, sap ext.	46 00	47 00
Boxboards, 1 inch	10 75	11 00	Sap clear	42 00	44 00
⅞ inch	9 75	10 00	Sap, 2nd clear	35 00	30 00
			No. 1	23 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in.	$50 00@	52 00	Fine com., 3 and 4 in	46 00	50 00
1¼, 1½ and 2 in.	52 00	53 00	No. 2, 1 in. Fine com.	28 00	30 00
3 and 4 in.	57 00	62 00	1¼, 1½ and 2 in.	29 00	31 00
Selects, 1 in.	44 00	45 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in.	45 00	47 00	No. 2	36 00	37 00
3 and 4 in.	52 00	55 00	No. 3	28 00	30 00
Moulding boards, 7 to 11 in. clear	37 00	39 00	Cut ups, 1 to 2 in.	24 00	32 00
60 per cent. clear	32 00	34 00	Coffin boards	19 00	21 00
Fine common, 1 in.	40 00	41 00	Common all widths	22 00	26 00
1¼, 1½ and 2 in.	40 00	41 00	Shipping culls, 1 in.	15 00	15 50
			do 1¼ in.	15 50	16 50

SHINGLES.

Spruce	1 30	1 50	Second Clear	1 75	2 00
Cedar, extra	2 50	2 75	Extra No. 1	1 25	1 50
Clear	2 35	2 50			

HEMLOCK.

Boards, rough	10 00@	11 00	No. 2	7 00@	9 50
Planed	11 50	12 00			

LATH.

Spruce			By cargo.	1 80@	1 90
By car	1 80@	2 00			

ALBANY, N.Y.

ALBANY, N. Y., Oct. 30, 1895.

PINE.

Uppers, 3 in. up	$50	$52	Dressing boards, narrow	$19	$21
2½ in.	50	52	West India shipping boards.	15	17
1 to 2 in.	45	48	Box boards	11	14
4 inch uppers	50	52	10-in. dressing and better	26	30
Selects, 2½ in. up	40	42	10-in. common	14	15
1 to 2 in.	36	40	12-in. dressing and better	25	32
Fine common, 2½ in. and up	38	40	Common, 1x11	14	16
1 to 2 in.	34	38	No. 1 barn, 1x12		20
No. 1 cut, 1 to 2 inch	28	35	1x10	18	21
No. 2	22	25	1x8	16	18
No. 3	17	20	No. 2 barn, 1x12	17	19
No. 1 molding, 1 to 2 in.	35	36	1x10	16	17
No. 2 molding, 1 to 2 in.	30	32	1x8	15	16
Stained saps		20	Shaky or star clear, 1 to 2 in.	19	21
Bracket plank	30	35	Dressing	16	18
Shelving boards, 12-in. up	28	30	Common	11	15

LATH.

Pine	$2 25		Spruce	$2 00	

SHINGLES.

Sawed Pine, ex. XXXX	$4 25	$4 30	Bound butts, 6 x 18	$6 00	$6 15
Clear butts	3 25	3 35	Hemlock	2 15	2 30
Smooth, 6 x 18	5 40	5 50	Spruce	2 20	2 30

OSWEGO, N.Y.

OSWEGO, N. Y., Oct. 30, 1895.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$45 00@	46 00			
Pickings, " "	36 00	38 0			
No. 1, cutting up, " "	31 00	33 00			
No. 2, cutting up, " "	24 00	25 00			
In strips, 4 to 8 wide, selected for moulding strips, 14 to 16 ft.	30 00	32 00			

SIDING

1in siding, cutting up 1icks and uppers	32 00@	39 00	1¼ in selected	38 00@	43 00
1in dressing	19 00	21 00	1¼ in dressing	20 00	22 00
1in No. 1 culls	14 00	15 00	1¼ in No. 1 culls	15 00	17 00
1in No. 2 culls	13 00	14 00	1¼ in No. 2 culls	14 00	15 00
			1 in. No 3 culls	11 00	12 00

1X12 INCH.

12 and 16 feet, mill run	21 00	24 00			
12 and 16 feet, No. 1 and 2, barn boards	19 00	20 00			
12 and 16 feet, dressing and better	27 00	31 00			
12 and 16 feet, No. 2 culls	15 00	16 00			

1¼X10 INCHES.

Mill run, mill culls out.	$22 00@	25 00	No. 1 culls	17 00	18 00
Dressing and better	27 00	35 00	No. 2 culls	14 00	15 00

1X4 INCHES.

Mill run, mill culls out	17 00	21 00	No. 1 culls	14 00	15 00
Dressing and better	24 00	30 00	No. 2 culls	12 00	13 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20 00	25 00	6, 7 or 8, No. 1 culls	16 00	17 00
6, 7 or 8, drsg and better	25 00	30 00	6, 7 or 8, No. 2 culls	14 00	15 00

SHINGLES.

XXX, 18 in pine	3 60	3 75	XXX, 18 in. cedar	3 40	3 65
Clear butts, pine, 18 in.	2 60	2 75	Clear butt, 18 in. cedar	2 40	2 65
XXX, 16 in. pine	2 90	3 10	XX, 18 in. cedar	1 75	2 00
Stock cedars, 5 or 6 in.	4 50	5 00			

LATH.

No. 1, 1¼	1 5		No. 2, 1¼		
No. 1, 1 in.	1 50				

THE CANADIAN LUMBER INDUSTRY.

THERE was a time when, to quote the language of a certain class of Englishmen, Canada was known as a "blawsted wooden country." The imputation, though made in cynicism, had much evidence behind it, for in the early history of the country the forests of Canada extended in an almost unbroken stretch from the Atlantic ocean to the head of Lake Superior—a distance of 2,000 miles.

The Dominion of Canada has an area of not less than 3,456,383 sq. miles ; that is, it is 430,783 sq. miles larger than the United States, if Alaska be excepted, and almost as large as the whole continent of Europe, which has 3,756,002 sq. miles. This territory is divided into provinces as follows : Ontario, Quebec, Nova Scotia, New Brunswick, Prince Edward Island, Manitoba and the Northwest Territories, and British Columbia, all of which are rich (in some measure at least) in forest wealth. The total population of Canada, according to the census of 1891, is 4,833,239.

Next to agricultural pursuits, in which 56 per cent. of the population are engaged, lumber is the most important industry of the Dominion. There is an invested capital in the business of nearly $100,000,000, and an annual wage-list of over $30,000,000, with an output valued at almost $110,000,000. Of saw mills and woodworking establishments there are about 6,000, giving employment during the season to not less than 15,000 men.

The value of forest products, calculated from the census returns of 1891, is given by Mr. Geo. Johnson, government statistician, as $80,071,415. For the fiscal year 1890-91 the imports of wood articles amounted to $3,132,516, while for the same period the exports were $27,207,547, leaving for consumption in Canada $55,996,384, or a value of $15.59 per head. The census returns show an aggregate of 2,045,073,072 cu. ft. as the total cut of the year. About 30 per cent. of this is exported, leaving 1,431,551,150 cu. ft. for the annual home consumption. This is equal to 296.2 cu. ft. per head of the population, the estimate of Mr. B. E. Fernow for the United States being 350 cu. ft. per head.

As each of the provinces of Canada has an individuality of its own, geographically and physically, so has each its own individuality as a lumber centre. Canada's reputation as a "wooden country" rests primarily on the fame of its white pine *(pinus strobus)* in the province of Ontario. It is improbable that any one has learned anything of the lumber history of this country without having obtained a knowledge of the immense pine resources of the Ottawa valley and the Georgian Bay districts. Ontario is spoken of as the great white-pine field of the Dominion, just as Michigan, Wisconsin and Minnesota go into history as the great white-pine states of the American Union.

The ownership of Canadian forests is, for the most part, invested in the provincial governments, and in Ontario, in particular, the management thereof constitutes the most important department of government. The department of crown lands, which has the administration of the timber resources of the province, is the great money-making department of Ontario, and political opponents ofttimes inquire where the revenue of Ontario will come from when its forest products are exhausted? This department has been for many years under the control of Hon. A. S. Hardy, commissioner of crown lands, a gentleman whose name is frequently mentioned as the probable successor to the present premier, Sir Oliver Mowat.

The regulations respecting timber limits in Ontario are of importance to every one interested in this industry. Among other things they provide as follows :

That the commissioner of crown lands, before granting any license for new timber berths (not including the lands) in the unsurveyed territory, shall, as far as practicable, cause the section of country where it is intended to allot such berths to be run into townships, and each township, when so surveyed, shall constitute a timber berth, but the commissioner may cause such townships to be subdivided into as many timber berths as he may think proper.

The berths or limits, when so surveyed and set off, and all new berths or limits in surveyed territory, shall be explored and valued, and then offered for sale by public auction at the upset price fixed by such valuation, at such time and place, and on such conditions and by such officer as the commissioner shall direct by public notice for that purpose, and shall be sold to the highest bidder for cash at the time of sale.

All lumber licenses are to expire on the 30th of April next after the date thereof, and all renewals are to be applied for and issued before the 1st of July following the expiration of the last preceding license, in default whereof the right to renewal shall cease and the berth or berths shall be treated as forfeited.

No renewal of any license shall be granted unless or until the ground-rent and all costs of survey and all dues to the crown on timber, saw logs, or other lumber cut under and by virtue of any license other than the last preceding, shall have been first paid.

All timber berths or limits shall be subject to an annual ground rent of $3 a square mile, payable only in advance before the issuing of any original license or renewal.

All timber, saw logs, wood, or other lumber cut under any license that may be hereafter granted shall be subject to the payment of the following crown dues : red and white pine timber, per cu. ft., $0.02 ; red and white pine saw logs and boom timber, per standard of 200 ft. board measure, $0.20.

Operating under these regulations, which are closely enforced by the government, the cut of white pine and Norway pine lumber in Ontario amounts to about 700,000,000 feet a year ; taking the figures for the year ending June, 1893, the cut was 677,525,000 feet.

It is somewhat difficult to estimate the pine timber area of Ontario. A return of the government of Ontario, brought down in 1893, says :

No estimate has been made of the quantity of pine timber standing upon the whole crown domain. There is a great stretch of territory lying north of the 48th parallel of latitude and the northern limit of Ontario and between 85th west longitude and the easterly limit of the disputed territory, in respect of which no estimate has been made at all, containing 89,000 sq. miles or thereabouts, much of which, it is known, is pine bearing, but other portions are not, and as to some other parts there is no information. What has been done is to take certain areas known to be pine bearing and apply a reasonable estimate to them, as follows :

	Sq. Miles.
West of the Ottawa River and north-west of the limits sold in 1872 between 80 and 85 west longitude, and extending north to the 48th parallel of latitude	24,000
Between Ottawa Agency and sale of 1881 in the Nipissing District	410
	24,410

	Feet.
To this area an average of 1,000,000 ft. B. M. to the mile was applied	24,410,000,000
Col. Dennis, late deputy minister of the interior, estimated the timber in the disputed territory at	26,000,000,000
	50,410,000,000
There is now subject to license in Ontario about 20,000 sq. miles, which has been estimated to contain 500,000 ft. to the mile, equalling	10,000,000,000
This gives a total on the territory estimated of ft., exclusive of the territory of which no attempt at an estimate has been made as above stated.	60,410,000,000

VALUE.

The bonus value of 50,410,000,000 ft. at $1.50 a thousand equals	$ 75,615,000
The dues upon this at $1 a thousand	50,410,000
	$ 126,025,000
Add for duty on 10,000,000,000 ft., estimated on licensed lands at $1 a thousand	10,000,000
Making a total of	$136,025,000

White pine limits in Ontario, though scattered through many hands, are largely held by the big lumbermen of the province, and of late years a very considerable part has gone into the possession of United States lumbermen.

Mr. J. R. Booth, of Ottawa, has obtained fame as the largest lumberman in the world. He is an extensive owner of timber limits, and until a little more than a year ago operated what was generally conceded to be the largest saw mill in the world. This was destroyed by fire some twelve months since. Messrs. Gilmour & Co., of Trenton, hold a very prominent position as owners of timber limits, as well as saw millers. At the government sale of limits, two years ago, this firm was a heavy purchaser, paying the largest price for a timber limit ever known in Ontario. Among other large owners may be named : The Bronson & Weston Co., of which Hon. E. H. Bronson, a member of the Ontario government, is principal ; W. C. Edwards & Co., Buell, Hurdman & Co., Robert Thomson & Co., The Georgian Bay Lumber Co., and The Muskoka Mill and Lumber Co.

When, three years ago, the duty on lumber going into the United States was reduced from $2 a thousand to $1 a thousand, a great stimulus was given to the lumber industry, and there followed one of the best years that Canadian lumbermen had enjoyed for a long time. But this reduction in the duty on sawn lumber carried with it the free export of lumber in the logs into the United States, and this immediately built up an immense business in the shipment of logs by raft from the Georgian Bay shores to those of Michigan. These shipments have grown, until in the last year something like 400,000,000 ft. of logs were exported from the Georgian Bay shores to Michigan mills.

When the Wilson tariff became a law, conditions again changed, and the Ontario holdings of United States lumbermen again increased. To-day a large extent of the timber limits of Ontario is in the hands of J. W. Howry & Sons, J. T. Hurst, Albert Pack, A. T. Bliss, General Alger, Saginaw Salt and Lumber Co., and other well-known Michigan lumbermen.

To what extent the change in the lumber tariff will induce American holders of Canadian lumber to build mills in Canada is a moot question. All lumber being free, it is as easy to ship the sawn lumber as that in the log, and this being the case, it is contended that United States lumbermen will find it an advantage to own mills near the limits, cut their logs there, and ship the lumber to their own country. It is known that J. W. Howry & Sons, who will this season rank among the largest operators in Ontario, have erected, or come into possession of, large saw mills in the province. At Midland a large mill is cutting entirely for an American concern, and along the Arnprior, Ottawa and Parry Sound Railway, 140 miles from Ottawa, the St. Anthony Lumber Co., owned by E. C. Whitney, of Minneapolis, and other American lumbermen, has built one of the largest mills on the continent.

There are problems in connection with the Wilson tariff that may change the complexion of affairs. A change in government in the United States might lead to a reversion of free lumber, though the manner in which investments are being made in Canadian limits by United States lumbermen, who ought to understand the situation, does not give much force to this theory. Again, the question has been raised, only within the present season, whether dressed lumber, which is exempt from duty, includes flooring and other lumber that is matched and grooved. The board of general appraisers of the United States has ruled against this rendering, and, if the ruling is sustained, it will be a barrier to the establishment of planing mills in Canada. But, on the whole, there is reason to believe that free lumber has come to stay, and that it will, aside from an exception or two, operate in the interests both of Canadian lumbermen and of their congeners in the United States.

While white pine holds the lead among the woods grown in Ontario, there are other timbers possessing good commercial value. Some years ago Ontario was rich in many of the most useful hardwoods ; there was hardly a county in the province that did not contain a good supply of maple, elm, ash, beech and birch. But to-day these woods, though fairly abundant, are to be found only in small quantities. The extent to which the forests have been depleted of some of the most valuable hardwoods gives to advocates of forest protection a most forcible text. The late clerk of forestry for the province of Ontario, Mr. R. W. Phipps, has pointed out, in way of illustration, that in Kent county oak that sold 15 and 20 years ago at $4.50 per thousand feet, could now be marketed at $25 per thousand, and walnut, which then brought only $14 per thousand feet, would to-day command $100.

Crossing the border line to the older province of Quebec, we are brought face to face with lumber conditions of a different character. The chief lumber riches of Quebec, as also those of New Brunswick, consist of spruce. And whereas Ontario finds its principal and natural market for its forest products in the United States, Quebec's shipments are chiefly to Great Britain. There are several large concerns that look solely to the United Kingdom for their market. The area under license in Quebec, according to the statement of the Hon. J. K. Ward, one of the oldest and most intelligent lumbermen of the province, is 48,000 miles, producing of spruce and pine logs 6,170,000 ft., equalling 683,000,000 ft. B. C. ; of pine, spruce and birch timber, 18,500,000

ft. B. M. ; of railroad ties and other wood, 22,500 pieces, 12,000,000 ft. B. M.; pulp cedar, etc., 10,000 cords ; revenue, $892,000. In New Brunswick the area under license is 6,000 miles, producing, of pine and spruce logs, 87,000,000 ft. B. M. ; of hemlock logs, 7,000,000 ft. B.M.; of cedar, 14,000,000 ft. B. M. ; of tamarac, 1,400,000 ft. B. M. ; of pine and hardwood timber, 176,400 ft. B. M.; of boom sticks, 240,000 ft. B. M.; revenue and bonus, $102,000.

It is only within a few years that the spruce forests of Quebec, New Brunswick and Nova Scotia have come to be appreciated at their real commercial worth, through the rapid development of the pulp-wood industry. It is conceded by some of the shrewdest manufacturers of pulp, not only in Canada, but in the United States, that these provinces have wonderfully rich resources in spruce, and this is in evidence in the fact that within a twelve-month large tracts of spruce land in Quebec, New Brunswick, and Nova Scotia have passed into the hands of syndicates composed largely of United States capitalists. Proof in the same direction is shown in the yearly increase of American importations. Exportation to the United States was inaugurated only four years ago. The figures are : $57,197 in 1890, $170,636 in 1891, $183,312 in 1892, and $454,253 in 1893, with a continued increase in 1894.

The reforestration of pine lands is a matter of many years, but experts testify that the young spruce will reach maturity in from 10 to 15 years. It will thus be seen that the owners of extensive spruce limits have within their possession an almost perpetual source of income. Pulp-making in Canada has within 10 years grown into an industry, having nearly $3,000,000 of invested capital and over $1,000,000 of annual output. The lumber trade in New Brunswick has taken on a new strength this year through the market found in the United States since lumber was placed on the free list.*

While the tall pines of Ontario have won the admiration of everyone who has made a study of the world's forests, yet to British Columbia belong the trees most admired both in the lumber trade and out of it. The giant cedars of California, whose story has been frequently told with pen and pencil find their counterpart in British Columbia. There grow cedars of wonderful size and beauty. The red cedar of British Columbia is one of its most valuable timbers. With the forests of Ontario becoming all too rapidly denuded, it is proper to speak of British Columbia to-day as the timber province of Canada. The forest area of British Columbia is 285,000 sq. miles, or 182,400,000 acres. Its density is as remarkable as its extent. It is on record that on one acre in the Comox district 508,000 ft. were found. This is, of course, exceptional, but the average is 75,000 ft.

Commercially the most valuable of British Columbia woods is Douglas fir, named after a noted botanist of that name. It is found generously distributed along the coast. Because of its immense length, strength, and straightness, for many commercial purposes it has no competitor. Some of these trees grow to a height of 300 ft. and have a base circumference of 50 ft. The average height, however, is 150 ft., clear of limbs, and the average diameter 5 to 6 ft. Professor Macoun thinks that it will prove a valuable paper-making tree.

The red cedar (*Thuya Gigantæ*), of whose beauty I have already spoken, is very little behind Douglas fir in the race for commercial supremacy. For general purposes red cedar is doubtless the most valuable wood on the Pacific coast. Sometimes it reaches a height of 200 ft. and a diameter of 20 ft. The settler, when building his rude hut, finds a good friend in red cedar, while there are few woods that have been found more useful or beautiful for interior finishings in the finest residences.

But the woods of British Columbia are by no means confined to Douglas fir and red cedar. Species of spruce, hemlock, cotton wood, balsam, and even white pine, are to be found on the Pacific coast.

Saw-mill building owes its development in British Columbia largely to the past decade. There are about sixty saw mills in the province at the present time, with a daily capacity of over 3,000,000 ft. The cut of the province last year was 65,000,000 ft. The capital invested in these saw mills has been drawn largely from Ontario, some of the big mills being owned in the main by Ontario lumberman. Ottawa lumbermen, too, have a considerable interest in the saw mills of the Pacific coast. The question is sometimes asked: what is the possible longevity of the timber resources of British Columbia? One estimate, of a semi-official character, says that there are over 100,000,000,000 ft. of good timber in sight, and that, with the present saw mills making an average output, it would take between 150 and 200 years to exhaust the present supply. Another authority, however, estimates that it would last only 60 years.

British Columbia finds its main market for lumber in Great Britain, Australia, South Africa, South America, and other foreign points, with a new and growing market in California since the duty on lumber was lifted. The domestic market consists of its own province, with a good consumption in Manitoba and the Northwest Territories, while the red cedar shingles of British Columbia have made their way in considerable quantities into eastern Canada, and have come into competition in certain sections of the United Stated with the Puget Sound cedar shingle, which is almost the same article. Mr. J. R. Anderson, provincial statistician, is authority for the statement that the yearly extent of lumber leases in British Columbia is 524,573 acres. The control of the timber resources of this province is mainly in the hands of the local government.

The province of Manitoba has little fame as a lumber district. Its great reputation is for grain, especially its hard wheats. There is a considerable saw mill and wood-working industry in this province, the supply of timber being drawn largely from the adjoining Lake of the Woods district, where timber is found in such abundance that United States lumbermen have their eye upon it. A considerable amount of lumber comes into Manitoba from Minnesota.

The growing uses of woods are so many and various that one can easily appreciate the remark of Mr. Atkinson in an article in the *Forum*: "The nations or States in which food, fuel, metal, and timber may be produced at the highest relative rates of wages and at the lowest money-cost per unit of product will thereby be enabled to apply labor-saving machines to other branches of productive industry in the most effective manner." Canada is rich in food products, for it is preeminently an agricultural country ; in metal, it possesess an aggregation of riches that its people know little of ; and fuel, whether wood or coal, is found in the Dominion in the greatest abundance. The figures which I have given leave no doubt of the extent of Canada's timber resources. In all particulars the requirements of Mr. Atkinson are fully met, and it is with a liberal measure of national pride that a citizen of Canada may refer to these matters, though recognizing at the same time that the cosmopolitan spirit of commerce lays open these vast riches to the entire world. Whosoever will may come.—J. S. Robertson, in Engineering Magazine.

* Among the big lumbermen of New Brunswick are Hon. J. B. Snowball, Alex. Gibson, Malcolm Mackay, Geo. McKean, and E. Hutchinson.

TRADE NOTES.

Mr. George F. Rich reports having recently made sales of his machines to Messrs. James Playfair and Chew Bros., of Midland, Beck Manufacturing Co., of Penetanguishene, Howry & Sons, of Fenelon Falls, the Ottawa and St. Anthony Lumber Co., etc.

The attention of readers of the LUMBERMAN is directed to the advertisement of the A. R. Williams Machinery Co., Toronto, appearing in this issue. Saw and planing mill owners consult their interests by noting carefully the extensive list of machines which this company offer for sale fn their advertisement. As his list will be changed from month to month, machinery buyers would do well to keep a constant eye open.

Messrs. Campbell Bros., of St. John, N. B., whose advertisement appears in this number of the LUMBERMAN, have achieved an enviable reputation as manufacturers of axes for the use of lumbermen. They have worked up a good trade in Ontario and Quebec, having recently shipped an order for 350 dozen axes, and their business operations extend as far west as Vancouver, B. C., and into the United States.

The Penberthy Injector Co., of Detroit, Michigan, write us that in visiting the State Fair of Mo., recently held in St. Louis, they found nineteen manufacturers of traction and farm engines with forty engines on the grounds. In looking over these engines they found on thirty-three engines out of the forty the "Penberthy" Injector, the other seven having five different makes. They also state that two manufacturers out of those representing the seven engines agreed to use the "Penberthy" Injector in 1896.

Lumbermen's Supplies

We are making a Specialty of **Lumbermen's Supplies,** and are offering, with other goods, a **good Japan Tea,** fine draw and make, at **12½ cents.** Get a sample of this splendid Tea suitable for the Camp.

H. P. Eckardt & Co.

WHOLESALE GROCERS - TORONTO.

CAMP SUPPLIES

Being extensive operators in the lumber business, as well as Wholesale Grocers, we are exceptionally well qualified to fill orders for Lumbermen's Supplies.

MAIL ORDERS GIVEN PROMPT ATTENTION.

DAVIDSON & HAY

Wholesale Grocers TORONTO

CASUALTIES.

Carl Lundstrom fell on a saw at the Keewatin Lumber Co.'s mill and was so badly injured that he died soon after.

Jas. Anderson was killed in Playfair's saw mill at Midland. No one saw the accident and it is supposed he was caught by a belt.

Herman Pettit, one of the proprietors of Pettit Bros.' stave mill, near Comber, Ont., was badly injured by being dragged into the machinery.

Neil King, while portaging provisions on the line of the O. A. & P. S. Railway, was attacked by a moose and badly hurt. He escaped by climbing a tree and driving off the animal with a revolver.

Paul Courrier was killed by a falling tree at Argue Bros.' camp near Wanbamic, Ont.

RAILS FOR TRAMWAYS

NEW AND SECOND-HAND STEEL AND iron rails for tramways and logging lines, from 12 lbs. per yard and upwards; estimates given for complete outfit.

JOHN J. GARTSHORE,
49 Front St. West, Toronto.

Haines & Company
LUMBER DEALERS

ESTABLISHED 1861. Buffalo, N. Y.
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Within 7 minutes' walk of principal hotels and depots.

Can your Son keep your books ?

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EDW. TROUT, *President.* DAVID HOSKINS, *Secretary.*

WHY BAND SAWS BREAK

SIXTEEN REASONS, AND HOW TO AVOID THEM

Being instructions to filers on the care of large band saw blades used in the manufacture of lumber.

A book filled with valuable information on the care of band saws. Giving the reasons for breaking; analyzing each reason; giving instructions to dispense with the causes as laid down in each reason; and full details on filing and brazing. The proper styles of hammers to use are illustrated and described, and views of blades showing the blows of the different styles of hammers form an important part of the illustrations. Improper and unequal tension are then treated, and the manner of properly setting irregular teeth is described. In connection with the treatise is a history of the invention, manufacture and use of the saw from its origin to the present time. The work in whole makes an accumulation of information such as has never before been published.

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Containing Rules for the Inspection and Measuring of Pine and Hardwood Lumber in the leading markets of Canada and the United States. Embracing also many useful tables and calculations of everyday service to lumbermen.

Prepared by the Editor of the "Canada Lumberman."

Toronto, Canada
C. H. MORTIMER, Publisher
1895

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WITH FORGED SOFT STEEL SOCKET (as shown in cut).

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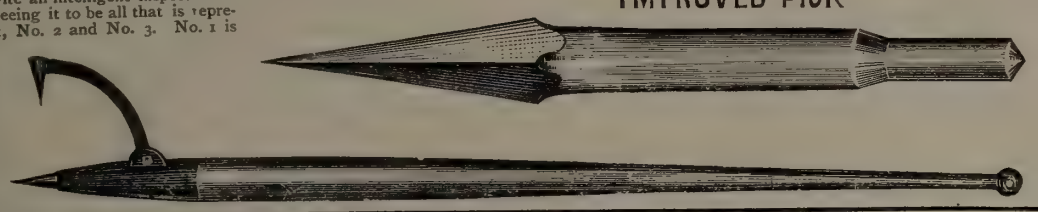

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EASTERN TOWNSHIP NOTES.

[Special Correspondence CANADA LUMBERMAN.]

EDMUND Talbot, St. Cecilia, 7 miles from Lake Megantic, on the branch of the Quebec Central R. R., has a fine steam saw, shingle and planing mill. He has been somewhat handicapped until the opening of the railroad, but now is in a a position to ship direct from this mill.

F. H. Boutin & Bros., Lake Megantic, Quebec, have just built a new steam circular mill, with shingle machine and planer. The Jenckes Machine Co., of Sherbrooke, supplied the machinery. They intend doing a large local trade, for which there has been an opening in the rapidly growing town of Lake Megantic and surrounding country. The Messrs. Boutin are young men, but have the necessary experience to make the business into which they have gone a success.

Frank Dudley, Lake Megantic, Que., has a very finely equipped mill—two band saws with re-saw, with the latest modern appliances for handling lumber at small cost. He saws for the South American market principally, the product being shipped to Portland by rail. He also manufactures clapboards extensively, for which he finds a ready sale in Boston and the Eastern States. Mr. Dudley also has a mill at Scottstown, on the C.P.R., 20 miles from Megantic, equipped with two circular saws, re-saw, also clapboard machinery, in which he saws principally dimension lumber. Mr. Dudley's output from these mills this year is about 15 million ft. lumber and 1,200,000 clapboards.

E. T. Keene & Co., Keene's Siding, Quebec, will have three steam saw mills sawing for them this winter, and will haul the sawn lumber to Megantic Station, where they have opened an extensive piling yard, from which they can ship at any time. They saw for the South American and Boston markets, and intend getting out this winter and spring ten to fifteen million feet. Mr. Keene, the manager, is a "Rusher."

Chas. McCaffery & Son, of Nicolet, Quebec, have built a fine circular saw mill of 30 M capacity, on the new line of the Quebec Central from Tring to Megantic. The mill is 13 miles from Lake Megantic. They have done a good business this season, but since the line has been opened they are in a better position for shipping, and will consequently have a better chance next year. Their output will be in the vicinity of 3,000,000 feet, principally spruce. Their market is Boston and South America. Messrs. McCaffery & Son are practical mill men, and pleasant people to meet in a business way.

The Rust Owen Lumber Co., of Drummond, Wisconsin, have sent out an effective advertisement in the form of a blue pencil, bearing their imprint. They call it the jumbo, and the name is appropriate. Timber must be plentiful yet in that part of the world when they can afford to put so much wood into a lead pencil.

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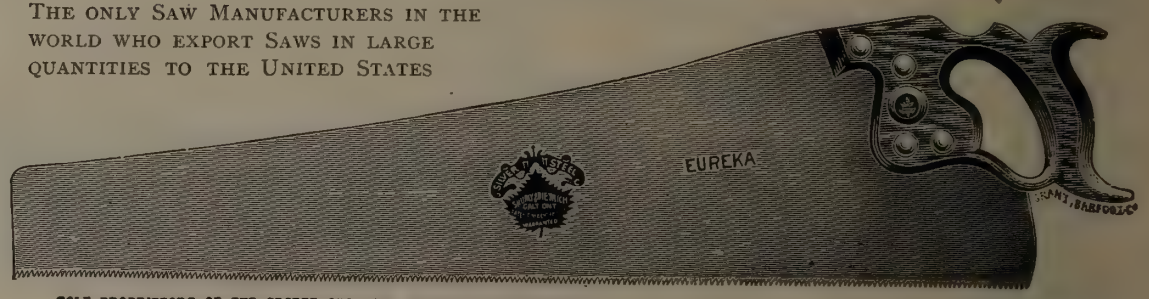

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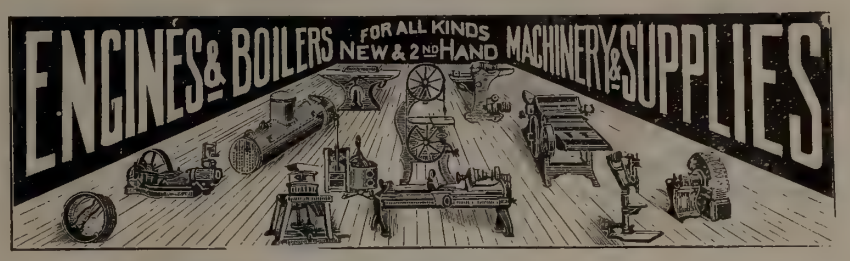

SPECIAL BARGAINS

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Eleven 14 ft. long x 52 in. diameter. 33 4 in. tubes.
One 11 ft. 6 in. long x 48 in. diameter. 49 3 in. tubes.
One 12 ft. long x 48 in. diameter. 54 3 in. tubes.
One 14 ft. long x 44 in. diameter. 43 3 in. tubes.
One 5 ft. 6 in. long x 30 in. diameter. 20 3 in. tubes.
One 10 ft. long x 44 in. diameter. 47 3 in. tubes.
One 12 ft. long x 26 in. diameter. 12 3 in. tubes.
One 14 ft. long x 50 in. diameter. 43 3½ in. tubes.
One 11 ft. 6 in. long x 50 in. diameter. 60 3 in. tubes.
One 11 ft. 6 in. long x 38 in. diameter. 20 3 in. tubes.
One 11 ft. 8 in. long x 44 in. diameter. 46 3 in. tubes.
One 14 ft. long x 48 in. diameter. 58 3 in. tubes.
One 5 ft. 9 in. long x 34 in. diameter. 30 3 in. tubes.
One 12 ft. long x 54 in. diameter. 65 3 in. tubes.
One 12 ft. long x 36 in. diameter. 33 3 in. tubes.
One 14 ft. long x 60 in. diameter. 76 3 in. tubes.
One 12 ft. long x 40 in. diameter. 41 3 in. tubes.
One 10 ft. long x 42 in. diameter. 47 3 in. tubes.
One 10 ft. long x 36 in. diameter. 25 3 in. tubes.
One 12 ft. long x 45 in. diameter. 32 3 in. tubes.
One 10 ft. long x 36 in. diameter. 34 3 in. tubes.
One shell 15 ft. x 42 in.
One 13½ ft. long x 52 in. diameter. 55 3 in. tubes.
One 5 ft. long x 30 in. diameter. 14 2¾ in. tubes.
One 6 ft. 9 in. long x 36 in. diameter. 26 3 in. tubes.
One return tubular boiler, 14 ft. long x 60 in. diameter. 101 3 in. tubes.
One 11¼ ft. long x 48 in. diameter. 40 3 in. tubes.
One 9 ft. long x 44 in. diameter. 47 3 in. tubes.
One 16 ft. long x 52 in. diameter. 63 3 in. tubes.

BOILERS, FIRE-BOX:

One 14 ft. long x 36 in. diameter. 27 3 in. tubes.
One 9 ft. 3 in. long x 30 in. diameter. 40 2 in. tubes.
One 11 ft. 6 in. long x 36 in. diameter. 39 2 in. tubes.
One 13 ft. 6 in. long x 33 in. diameter. 36 2 in. tubes.
One 12 ft. 6 in. long x 32 in. diameter. 36 2¼ in. tubes.
One 6 ft. long x 34 in. diameter. 39 2½ in. tubes.
One fire-box boiler, 10 ft. long x 42 in. diameter. 33 3 in. tubes. W. E. W. make. Return flue.
One W. E. W. fire-box, 11½ ft. long x 36 in. diameter. 27 2¾ in. tubes.
One fire-box boiler, 12½ ft. long x 42 in. diameter. 72 3 in. tubes.
One fire-box boiler, 6 ft. long x 30 in. diameter. 26 2¼ in. tubes.
One fire-box boiler, 11 ft. long x 36 in. diameter. 30 3 in. tubes.
One fire-box boiler, 4 h. p.

ENGINES—Horizontal, Upright, Marine, Gas and Hoisting:

One 28 in. x 36 in. heavy slide valve engine.
One 24 in. x 30 in. heavy slide. W. Hamilton's make, Peterboro'.
One 18 in. x 36 in. heavy slide.
One 14 in. x 36 in. Corliss engine, with condenser.
One 8 in. x 12 in. upright engine, Waterous Engine Works' make. Second-hand.
One new 8 h. p. upright automatic engine. Abell's make.
One second-hand 1 h. p. horizontal engine.
One 1 h. p. horizontal engine. New.
One 3 in. x 4 in. upright automatic engine.
Two horizontal engines, 5 in. x 9 in.
One 7 in. x 10 in. upright engine. English make. Second-hand.
One 8 in. x 12 in. horizontal engine. Second-hand.
One 5 in. x 10 in. horizontal engine. Second-hand.
One 4 in. x 9 in. horizontal engine. Second-hand.
One 12 in. x 14 in. horizontal engine. Second-hand.
One 5 in. x 8 in. Leonard horizontal engine. Second-hand.
One 4 h. p. boiler and engine, on base. American make.
One 9 in. x 10 in. Waterous Engine Works' make. Self-contained engine.
One 5¾ in. x 7½ in. Waterous Engine Works' make. Self-contained engine.
One 12 in. x 14 in. horizontal Waterous Engine Works' engine.
One 9½ in. x 12 in. horizontal Waterous Engine Works' engine.
One 11 in. x 14 in. horizontal. Thomas' make. Second-hand.
Five 4 in. x 4 in. marine engines.
One 2 in. x 5 in. marine engine.
One 3 in. x 4 in. plain engine.
One 15½ in. x 20 in. horizontal engine.
One 7 in. x 7 in. new Stevens engine.
One 9 in x 10 in. second-hand upright engine.

ENGINES—(Continued)

One 4 in. x 6 in. upright engine.
One 7 in. x 12 in. double cylinder, double drum hoisting engine. New.
One 16 in. x 21 in. "Tutton" slide valve engine.
One 2 h. p. gas engine.
One 12 in. x 30 in. Brown engine. Second-hand.
Two 4 h. p. gas engines.
One 12 in. x 12 in. Doty marine engine.
One 12 in. x 24 in. second-hand slide valve engine. Dickey, Niel Co.'s make.
One 10 x 28 in. "Cowan" slide valve engine.
One 5½ in. x 7 in. upright engine, with boiler. Connected.
One 6 in. x 6 in. upright engine. Doig make. New.
One 8¼ in. x 12 in. slide valve engine. Second-hand.
One 9 in. x 12 in. rebuilt engine. American make. Would do for hoisting.
One 9¾ in. x 12 in. Rock valve engine. Waterous make.
One 9½ in. x 12 in. Rock valve engine. Waterous make.
One 8¼ in. x 12 in. slide valve engine.
One 5 in. x 11 in. slide valve engine.
One 8¾ in. x 12 in. slide valve engine. Pump attached.
One 9¾ in. x 16 in. slide valve engine. Cowan make. Rebuilt.
One 9¼ in. x 12 in. slide valve engine. Rebuilt.
One 10 in. x 12 in. slide valve engine. Erie Iron Works' make.
One 16 in. x 28 in. pair twin engines. Kelley make.
One 7 in. x 12 in. slide valve engine.
One pair double hoisting engines. No boiler.

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Two Waterous Engine Works Co.'s. Champion style. On wheels.
One Morrison 12 h. p. On wheels.
One Whitelaw. On wheels.
One 4 h.p. oscillating engine and upright boiler, complete. On cast iron base.
One 12 in. x 14 in. 40 h. p. new "Western Empire" portable engine and boiler. On wheels.
One 10 in. x 14 in. "Western Empire" portable engine and boiler. On wheels.
Several 12 h. p. Leonard's, White's, and other makes.

PLANERS, SURFACE, and PLANERS and MATCHERS:

One 16 in. surface planer. J. C. & Co. make.
One 18 in. surface planer. J. C. & Co. make.
One 24 in. double feed rolls, 8 in. diameter.
One 24 in. double feed rolls, 6 in. diameter.
Two 24 in. Frank & Co.'s make, Buffalo.
One 24 in. revolving bed. Cowan.
One 16 in. heading planer. Greenwood make.
One 24 in. heading planer. Goldie & McCulloch make.
One 26 in. revolving bed, double. McG., Gourley make.
One 24 inch Cant Bros. planer and matcher.
One 18 in. Little Giant planer and matcher.
One 24 inch planer and matcher.
One 24 in. planer and matcher. Eclipse. Cant Bros. Co. make.
One 24 in. planer and matcher. Goldie & McCulloch make.
One 24 in. planer and matcher. Harper make.
Two 24 in. double planers and matchers. McKechnie & Bertram, makers, Dundas.
One 24 in. double planer and matcher and beader. Ball & Co., makers, Worchester, Mass., U.S.A.
One 24 in. double planer and matcher. Harper make.
One diagonal door planer.
One 24 in. double planer and matcher, new. Cowan make.
One Whitney pattern 28 in. surface machine.
One 24 in. planer and matcher. Second-hand. Bowmanville make.
One 24 in. planer and matcher. McKechnie & Bertram make.
One 24 in. open bed surface planer, light.
One 26 in. double revolving bed planer.
One door planer with saw attached.

WATER WHEELS:

One 40 in. turbine water wheel. Whitelaw make.
Two 30½ in. Leffels.
Five 15 inch Goldie & McCulloch's.
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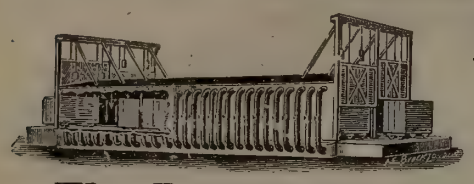

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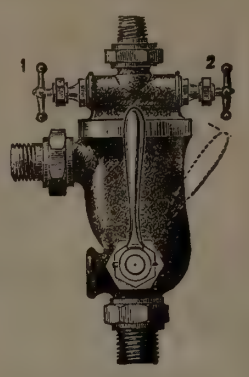

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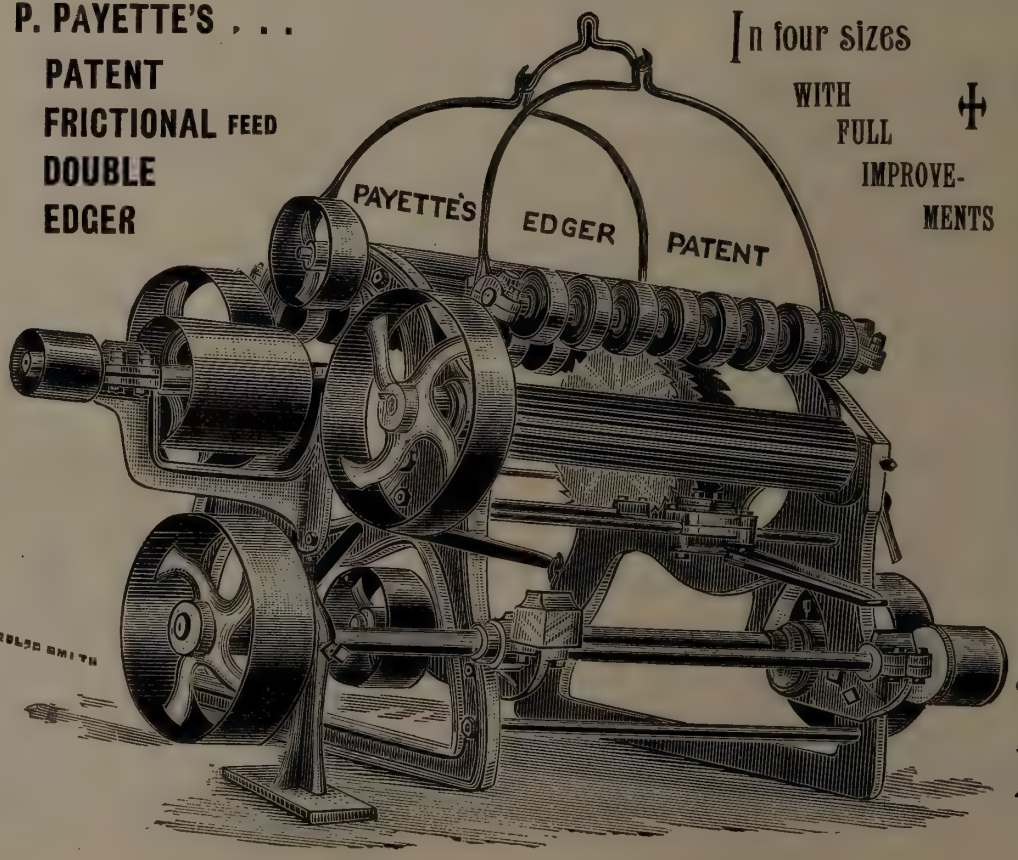

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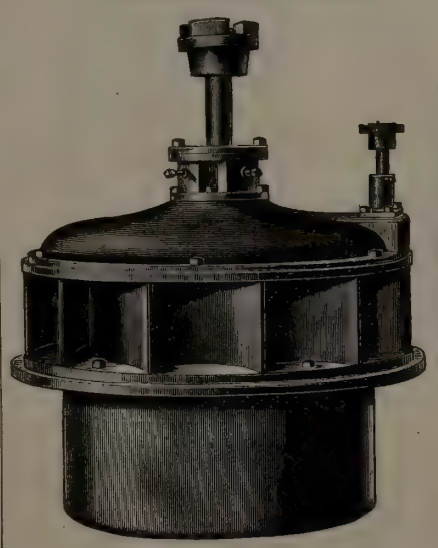

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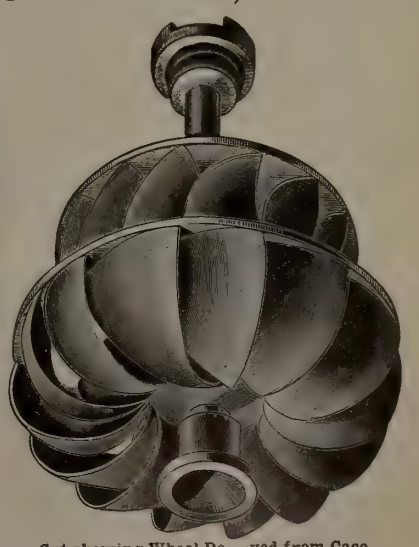

Cut showing Wheel Removed from Case.

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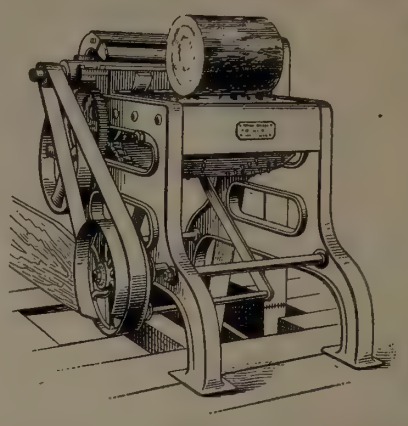

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It will do double the work of any other.
It is the only machine made that will peel Cedar Shingle Blocks.
It will peel dirty blocks without taking the edge off the knives as they cut from the clean bark or block out.
It is a self-feeder, and very easy to operate.
It requires less power than a face wheel.
All iron and steel, very simple and durable.
It will ross knotty and uneven timber without waste.
It occupies about the same space as an ordinary planer.
You can have a chance to try a machine before buying it.

... MANUFACTURED BY ...

EASTMAN LUMBER CO.

EASTMAN, QUE.

Canada Atlantic Railway

OTTAWA, ARNPRIOR AND PARRY SOUND RAILWAY

OPERATING THE

Ottawa and New York Lumber Line - Ottawa and Boston Lumber Line - Canada Atlantic Fast Freight Line

(Operating over the Grand Trunk, Central Vermont, and Boston and Maine Railways.)

——: SHORTEST AND QUICKEST ROUTE :——

... FROM AND TO ...

OTTAWA	ARNPRIOR	HAWKESBURY
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DETROIT	HALIFAX	NEW YORK
TONAWANDA	PORTLAND	ALBANY, &C.

AND ALL POINTS IN CANADA AND THE UNITED STATES.

For through rates, information and list of lumber dealers, apply to any officer of these lines or connections, or to

R. A. CARTER
Contracting Agent, 115 Board Trade
MONTREAL

JOHN SMITH
Ontario Agent, Board Trade
TORONTO

CAPT. J. H. WILLIAMS
15 Lumber District, Albany, N. Y.

C. J. SMITH
General Freight Agent, Ottawa.

P. S.—The opening of the Ottawa, Arnprior and Parry Sound Railway, Ottawa to the Georgian Bay, offers to the manufacturer and purchaser a new district not heretofore reached by any other line.

Dauntless Shingle and Heading Machine

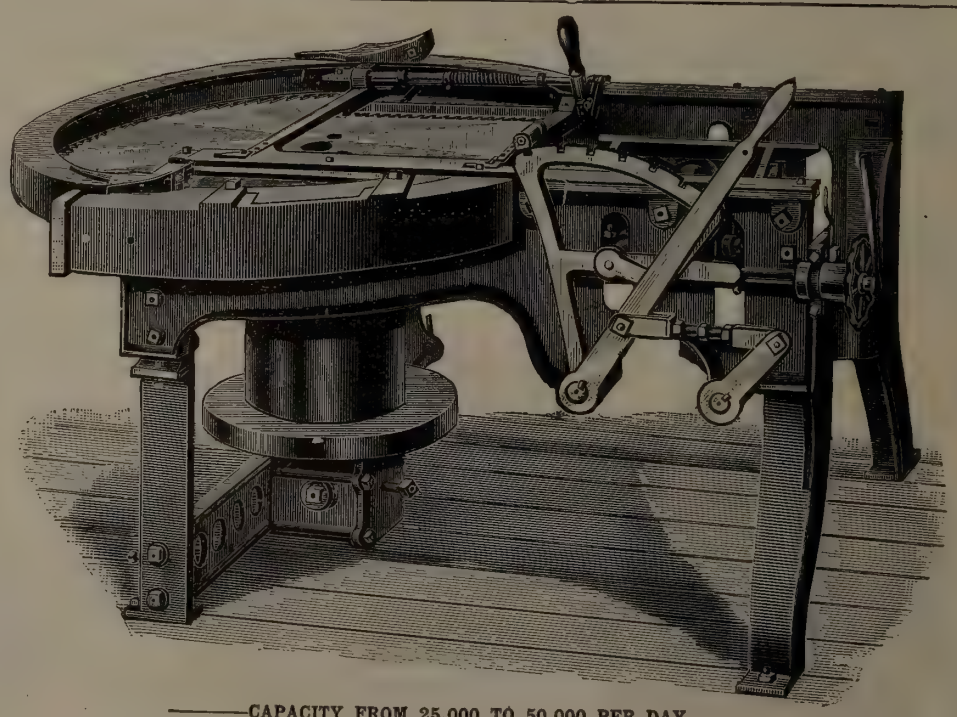
∴ WILL make more Shingles per day than any self-acting machine with vertical saw in existence, and more Shingles from the same quantity of timber.

THE FRAME———•

... Is of Iron throughout, very heavy and rigid, strongly bolted and braced.

THE CARRIAGE———•

... Is very light and strong, made of forged Cast Steel Plate, running on steel ways or tracks. Will take in a block 18 inches wide and 19 inches long, adjustable for 16-inch or 18-inch shingles.



———CAPACITY FROM 25,000 TO 50,000 PER DAY———

[COPY.]

HASTINGS, Dec. 3, 1894.

F. J. DRAKE, Esq., Belleville.

Dear Sir,—We have waited two years before giving you our idea of your machinery. This we did to thoroughly test it, and can now say we know what it can do.

Your Saw Mill is equal, or nearly equal, to any we have seen of much heavier make, and far in advance of any light rig in the market. The capacity per day is fully up to your guarantee, 40 M per day. We have tested with eight men.

The Shingle Mill cannot be beaten for any kind of timber. Ours being in a manner a custom mill, we have good, bad and indifferent timber, but for all it does the work satisfactorily.

You may use this in any way you please, or refer to us at any time.

Yours truly,

(Sgd.) W. J. & H. W. FOWLDS.

F. J. DRAKE

PATENTEE AND MANUFACTURER OF SAW, SHINGLE AND LATH MACHINERY

Care Canadian Locomotive & Engine Co., KINGSTON, ONT.

Four Words to Modern LUMBERMEN

Observe

how general the "Band Sawmill" for cutting lumber has become (24 Allis Bands sold in Canada since January 1894.)

Reflect

how great the profit from its use. 15 to 20% more lumber than the Circular from the same stock. Better Sawn, Smoother, Truer, nearer to size.

That the "Band is no experiment.

That there is no trouble now in procuring men to care for the saws (We teach your circular filer.)

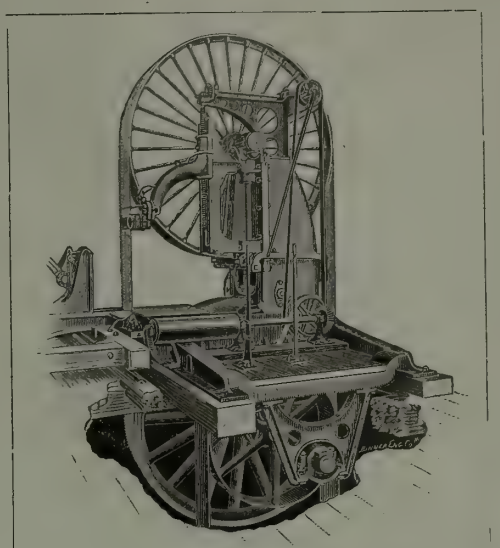
Try

for yourself how it will increase your profits and recoup you for all outlay the first season.

Consult

your own interests. Secure a "New Allis Band" from

Waterous, BRANTFORD, CANADA.



NEW "ALLIS" BAND MILL

It Will Pay You

to investigate the merits of our Machinery

. . . before ordering elsewhere . . .

Band versus Circular

CENTRAL COAL & COKE CO.

J. W. AMERMAN, Mngr. Lumber Dept.

LUMBER DEPARTMENT, Mills and Office, TEXARKANA, Texas, Sept. 7, '95.

THE EDW. P. ALLIS CO.

Gentlemen,—Do we prefer a band mill to a circular? Certainly we do. Why?

Because the difference in kerf alone saves from the sawdust pile at least 20 per cent. of lumber as compared with circular; because expenses are not increased through our recent substitution of band for circular, as the same sawyer, filer and carriage crew are employed now as when the circular was slashing away at our logs; because the outcome of higher grades shows a flattering gain, product looks better, being smoother and more evenly sawed; because our present output, instead of disclosing a decrease as expected, in log scale daily, exhibits a steady advance from week to week in quantity, and any expert lumberman can easily estimate board measure results,—band versus circular.

The band mill is not a device for white pine alone; it is a mill for every section where hard or soft woods are sawed, and I expect to live to see the time when not a single rotary will be in use in a Southern mill plant.

We prophesy that, like the Indian of scalp-lock and totem, this circular is doomed to extinction; that a new Allis band mill is better, cheaper and more durable in every way than a circular mill; and our present source of regret is that when we ordered from you in May one of your new Allis band mills, we did not arrange for just two of them.

Yours very truly,

J. W. AMERMAN, Manager.

FOR Price and Full Information regarding the . . . .

NEW ALLIS BAND

address the

WATEROUS ENGINE WORKS CO. LTD.

BRANTFORD, CANADA

27 NEW ALLIS BAND MILLS SOLD IN CANADA SINCE JAN., 1894, ALL OF WHICH GIVE EQUALLY AS GOOD RESULTS AS THE ABOVE.

Manufacturers of a complete line of high grade Saw Mill Machinery.

We have for many years been the representatives in Canada of the

EWART LINK BELTING

Our stock is ample and well assorted, insuring prompt shipment of all sizes and specials . . . .

Very large line of Correct Sprocket Wheel Patterns.

Special Lines for Log Jacks of

GIANT CHAIN,

TUBULAR CHAIN,

STEEL FLAT LINK CHAIN.

Also Block, 550, Steel, and other cheap chains for heavy refuse carriers,

CABLE CONVEYORS, ROPE DRIVES.

Send for New Link Belt Catalogue No. 15. Just out of press.

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HIGH GRADE MACHINERY

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...WHOLESALE DEALERS IN...

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PARTIES manufacturing or having for sale **Birch, Maple, Basswood, Soft or Rock Elm, White or Brown Ash, &c.**, should correspond with us, as we are always in the market for such desirable stock.

940 ELK STREET
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Annual Sales, 25,000,000 Feet. **We have our own Salesmen in New York and New England.**

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LUMBER - Wholesale and Retail - . COAL.
Handle all kinds of Pine and Hardwood Lumber
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White Pine Lumber
Write - - - for Prices
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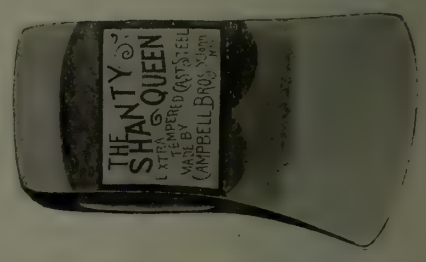

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CAMPBELL BROS.
Send for sample lot and try this axe in frosty weather . . .
Manufacturers
St. John, N. B.
— WRITE FOR PRICES —

Do not be Misled
THE Headquarters for Kiln-Dried, Bored, End Matched and Polished Maple Flooring is
G. Elias & Bro.
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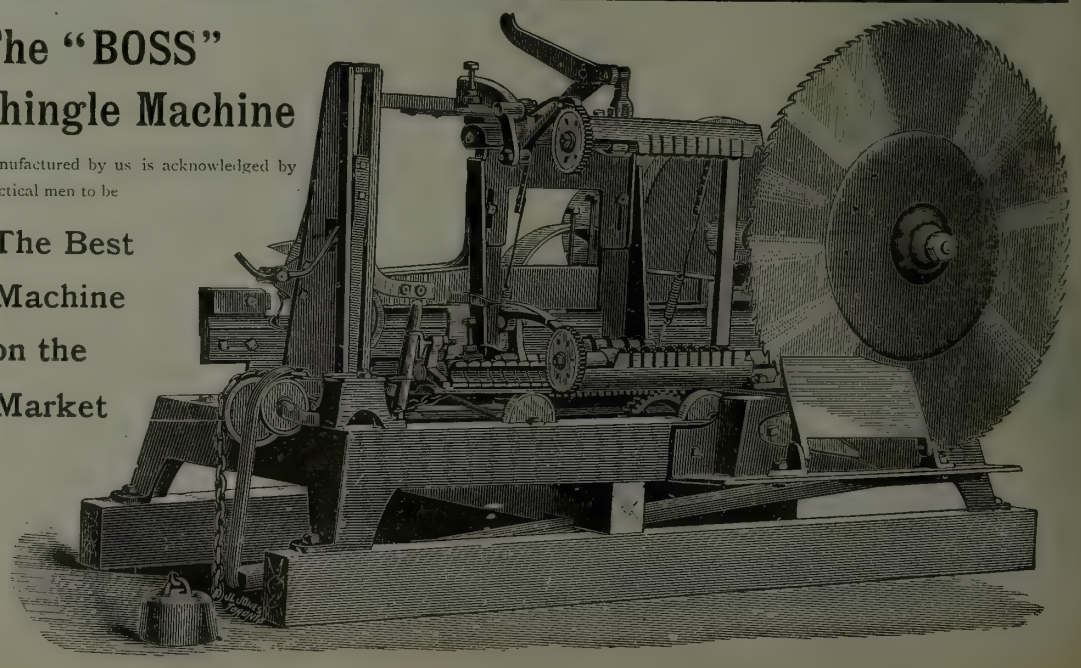
MANUFACTURERS OF
SAW MILL AND SHINGLE MILL MACHINERY
Shingle Machinery a Specialty
REPAIRING PROMPTLY AND CAREFULLY EXECUTED
Gravenhurst, Ont.

The "BOSS" Shingle Machine
Manufactured by us is acknowledged by practical men to be
The Best Machine on the Market



THE CANADA LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XVI. NUMBER 12. | TORONTO, ONT., DECEMBER, 1895 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents

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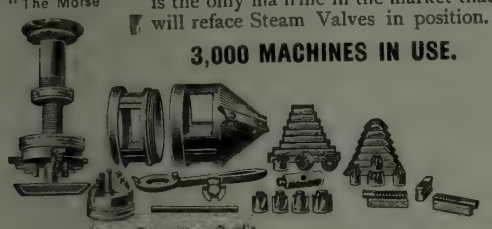
"The Morse" is the only machine in the market that will reface Steam Valves in position.

3,000 MACHINES IN USE.



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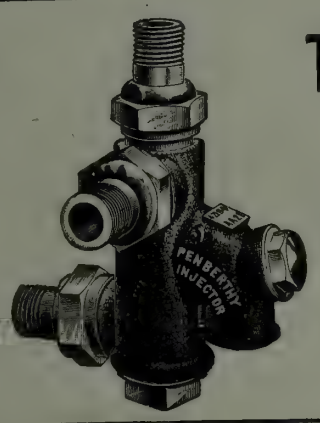

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Should be in every Lumber Mill

PENBERTHY JET PUMPS.. WATER GAGES OIL CUPS . . ARE THE BEST

85,000 Engineers have used it, and declare it unequalled as a Boiler Feeder.

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CORRESPONDENCE SOLICITED.

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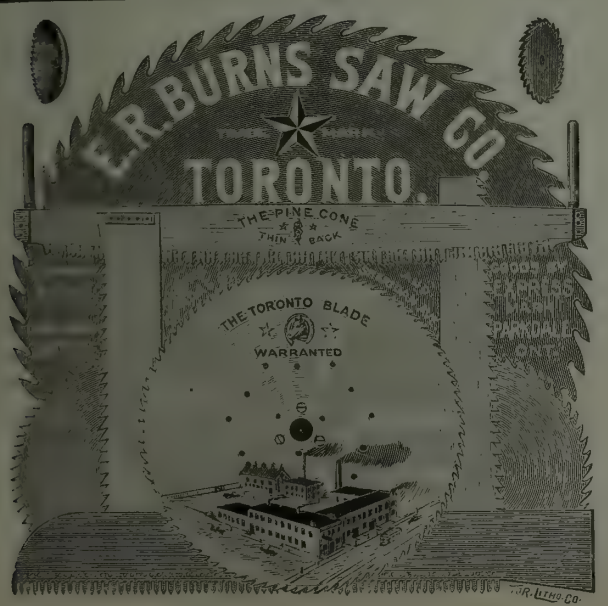

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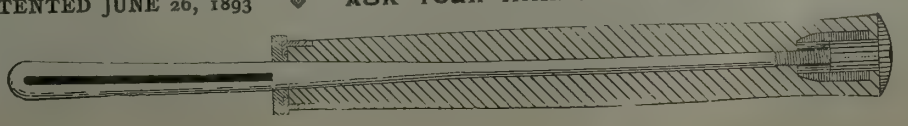
SHINGLE SAWS A SPECIALTY

.. AND ..

THE "BURNS" CROSS-CUT SAW HANDLE

The Strongest, Most Durable and Easily Adjusted Handle ever invented.

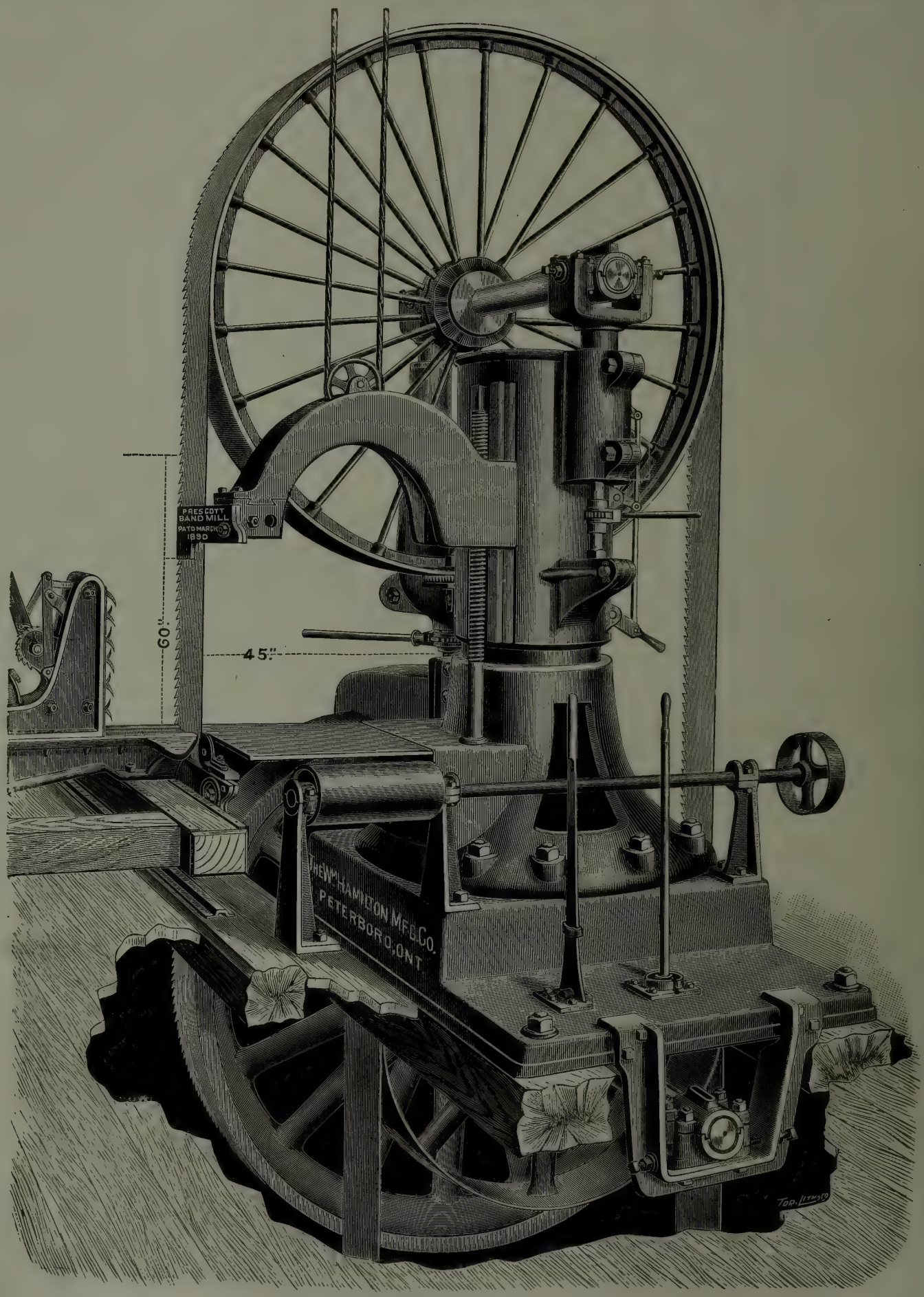
PATENTED JUNE 26, 1893 ◆ ASK YOUR HARDWARE MERCHANT FOR IT



SAWS

THE NEW PRESCOTT

Band Saw Mill



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PETERBOROUGH, ONT.

Branch Office: Vancouver B. C.

THE CANADA LUMBERMAN

VOLUME XVI. NUMBER 12. } TORONTO, ONT., DECEMBER, 1895 { TERMS, $1.00 PER YEAR Single Copies, 10 Cents

HON. A. S. HARDY,

COMMISSIONER OF CROWN LANDS FOR ONTARIO.

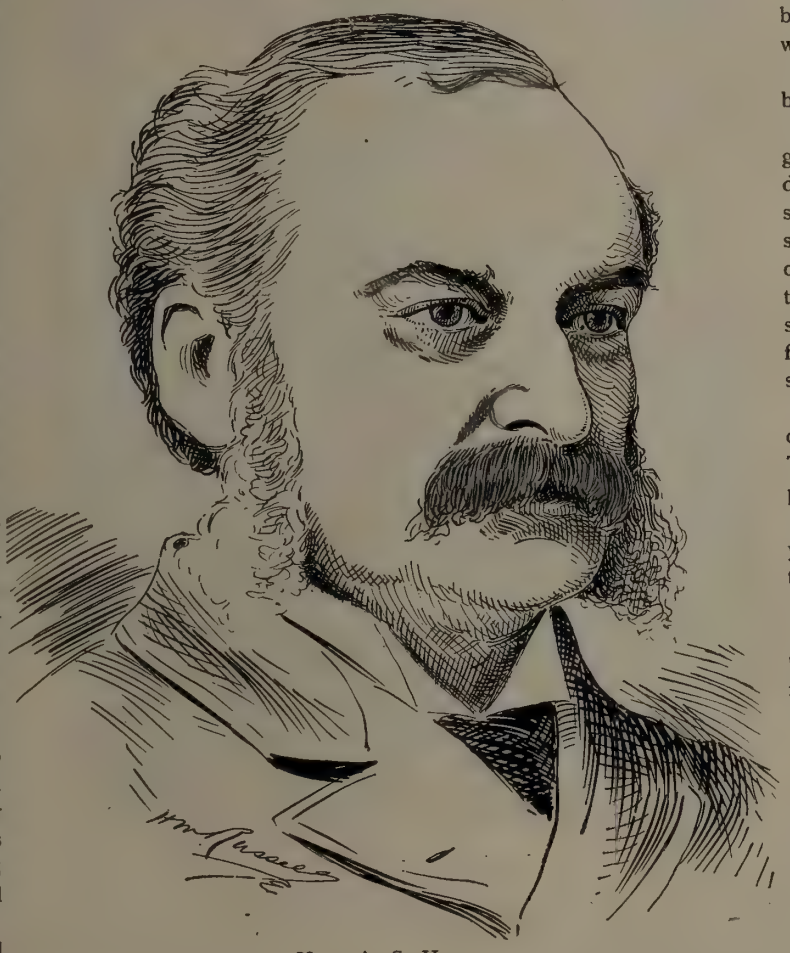
HON. ARTHUR STURGIS HARDY, Q. C., Commissioner of Crown Lands for the province of Ontario, whose portrait we present herewith, is a well known figure among lumbermen, from the fact that he has had in his hands for a number of years the administration of a department with which they have had much to do. A brief sketch of his career will be of interest.

Mr. Hardy was born at the little village of Mount Pleasant, in the county of Brant, Ont., on the 14th of December, 1837. His father was Russell Hardy and his mother Juletta Sturgis, both of V. E. stock. Russell Hardy was a farmer at Mount Pleasant, but subsequently moved to Brantford and engaged in commercial pursuits. The subject of this sketch commenced his education at the school in his native village, and afterwards attended the Brantford grammar school and the Rockwood Academy. Having made up his mind to study law, he entered his uncle's office at Brantford, and afterwards spent some time in the office of the Hon. R. A. Harrison, afterwards Chief Justice Harrison, in Toronto. In 1861 he passed as an attorney, and immediately commenced practice at Brantford. In 1865, at Easter term, he was called to the bar. At that time Hon. E. B. Wood was the leading lawyer in Brantford, in fact he was one of the leading practitioners in Ontario. Sometimes called "Big Thunder," his elocutionary powers were known far and wide, and by means of the power which a strong mind exercises over weaker ones, he was able to sway juries almost at his will. But the young lawyer who had just passed was ready to face him. The first brief he held was in an important case, in which he was opposed to his powerful elder. Mastering all the details of his case, he presented it with marked ability, and won. Thenceforward his success was assured. His business grew, and a lucrative practice was rapidly built up. His success in criminal cases was remarkable. From 1865 to 1867 de defended no less than 16 prisoners charged with capital offences, of whom only one was convicted, and he did not suffer the extreme penalty of the law. In 1867 he was appointed city solicitor for Brantford, in 1875 he was elected a bencher of the Law Society, and in 1876 made a Q. C.

Such a man was almost certain to be called upon to take an active part in politics, and few resist the temptation. When Hon. E. B. Wood entered the government of the late Hon. John Sandfield Macdonald, in 1867, Mr. Hardy was urged to oppose him. He wisely declined, preferring to give his entire attention for a time to his profession. He, however, took part in the campaign, and it was largely due to his efforts that Mr. Wood's former majority was greatly reduced. In 1873, when Mr. Wood resigned to take the appointment of Chief Justice for Manitoba, Mr. Hardy took the field as a candidate, and was elected, after a bitter contest, over Mr. J. J. Hawkins, a strong local candidate, by a majority of 189. Two years later, at the general election, no one was found to oppose him, and he was returned by acclamation. He has since sat continuously for South Brant.

In 1877 Mr. Hardy entered the government of Sir Oliver Mowat as Provincial Secretary and Registrar. On the retirement of the late Hon. T. B. Pardee in 1889 he was transferred to the Department of Crown Lands, which he has since continued to administer.

Mr. Hardy early evinced those qualifications which have contributed in such a marked degree to his success. While attending the Mount Pleasant school as a boy, he was fond of elocutionary exercises. He is a ready and effective speaker, a good debater, has a great amount of dash and fire, combined with attention to details, mental alertness and a pleasing manner. He is quick in detecting the weak points in an opponent's argument, ready at repartee, and can work in a humorous story with effect. He is withal a hard hitter, and where vigorous campaign work is to be done, is the member of the government usually selected. He is earnest and enthusiastic, a hard worker, and his administration of the crown lands department has been able and vigorous. Whether the policy pursued is the best for the country we leave for the politicians to decide.



HON. A. S. HARDY.

In the event of a vacancy in the premiership while the Reform party is in the ascendant, Hon. Mr. Hardy will be the coming man.

Mr. Hardy is a member of the Church of England. On the 19th of June, 1870, he married Mary, daughter of the late Mr. Justice Morrison, by whom he has four children. While his home is at Brantford, most of his time is spent at the seat of government in Toronto.

STRENGTH OF BRIDGE TIMBERS.

AT the fifth annual Convention of the American Association of Railway Superintendents of Bridges and Buildings, held at New Orleans in October, a report was presented by a committee which had been appointed to investigate the strength of bridge and trestle timbers, with special reference to Southern yellow pine, white pine, fir and oak. The report contains some very interesting facts for timbermen. It appears from the tests applied that Canadian pine stands high up in its adaptability for railway bridges and trestles, the only woods which surpassed it being Georgia yellow pine and Douglas yellow fir. Summarizing the conclusions of the committee we have the following facts brought out:—

Of all structural materials used for bridges and trestles timber is the most variable as to the properties and strength of different pieces classed as belonging to the same species.

The various names applied to the same species in different parts of the country lead to great confusion in applying the results of tests.

Variations in strength are generally directly proportional to the density or weight of timber.

As a rule, a reduction of moisture is accompanied by an increase in strength; in other words, seasoned lumber is stronger than green lumber.

Structures should be, in general, designed for the strength of green or moderately seasoned lumber of average quality and not for a high grade of well-seasoned material.

Age or use do not destroy the strength of timber, unless decay or season-checking takes place.

Timber, unlike materials of a more homogeneous nature, as iron and steel, has no well-defined limit of elasticity. As a rule, it can be strained very near to the breaking point without serious injury, which accounts for the continuous use of many timber structures with the material strained far beyond the usually accepted safe limits. On the other hand sudden and frequently inexplicable failures of individual sticks at very low limits are liable to occur.

Knots, even when sound and tight, are a cause of weakness both in beams and struts. They are detrimental to timber even in compression.

Except in top logs of a tree, or very small and young timber, the heart-wood is not so strong as the material further away from the heart.

Top logs are not as strong as butt logs.

Compression tests vary less for one species of timber than any other kind of test, and are therefore the most reliable.

Long timbers generally fail by lateral deflection or buckling when the length exceeds the cross section by 20 diameters.

Uneven end bearings and eccentric loading of columns produce more serious disturbance than is generally supposed.

Compound columns show the same unit resistance as each component stick.

More attention should be given in practice to the proper proportioning of bearing areas, in other words, the compressive bearing resistance of timber with and across grain, especially the latter, owing to the tendency of an excessive crushing stress across grain to indent the timber, thereby destroying the fiber and increasing the liability to speedy decay, especially when exposed to the weather and the continual working produced by moving loads.

The strength of timber, the report points out, varies greatly according to the physical properties of different sticks of the same species, due not only to locality where grown but also to percentage of moisture, degree of seasoning, grain, texture, proportion of hard and soft fibres, presence of knots, etc.

The committee recommend further tests of the various timbers.

The results so far are eminently satisfactory as to the quality of Canadian pine, and must help to encourage its use for bridges and trestles.

The Sutherland-Innes Co., of Chatham, have assumed control of a large stave mill at Munising, Mich.

LUMBERMAN FOR SENATOR.

A WELL-KNOWN Buffalo lumberman, Mr. Abraham J. Elias, whose portrait is presented herewith, has received the Democratic nomination for Senator for the 47th Senatorial District of the State of New York. This district is embraced within the city of Buffalo. We notice that the candidature of Mr. Elias is endorsed by some of the leading lumber firms of Buffalo, including Mr. J. B. Wall, of the Buffalo Hardwood Lumber Company. This seems to be one of the best guarantees of Mr. Elias' fitness for the high position to which he aspires.

THE ST. ANTHONY CO'S. MILL.

A YEAR and a half ago the country at the foot of Long Lake, an expansion of the Madawaska River, 144 miles west of Ottawa, was an unbroken forest. Now there is situated there one of the most complete and perfectly equipped saw-mills in Canada, and a thriving village growing up, containing an industrious community. This is due to the building of the Ottawa, Arnprior and Parry Sound Railway, which has opened up a district containing much valuable timber, that could not before be reached on account of its distance from railway communication. The railway is not yet completed, but work is being rapidly pushed, and it will be in operation, if no unforeseen delay happens, to Parry Sound next season. Meanwhile it is being operated to the end of the track.

The St. Anthony Lumber Co., which has built the mill referred to, is composed of Messrs. E. M. Fowler, of Chicago; Arthur Hill, of Saginaw, and E. C. Whitney, the manager, who makes his headquarters at Ottawa. Of course there have to be two or three other shareholders to meet the conditions of the law, which requires at least five persons to form a joint stock company, but the three gentlemen named are virtually the company. Mr. Whitney is a Canadian by birth, having been born three miles from Morrisburg, in the county of Dundas, but he has lived for 30 years in the United States, and gained his knowledge of the lumber trade at Minneapolis. He possesses much of that shrewd character and energy which is typical of so many of his fellow-citizens on the other side, and he will doubtless make the business of the St. Anthony Co. a remunerative one. He is a brother of Mr. Whitney, M.P.P. for the county of Dundas, and a prominent figure in the Ontario legislature.

The company purchased limits from Messrs. Pattee & Perley, the well-known Ottawa lumber firm, in 1892, and have since secured other limits, so that they have now nearly 400 square miles from which to draw their supply of logs. These limits are on the head-waters of the Madawaska and its tributaries, and are said to be the best in Ontario. They contain a vast amount of white pine which has never been touched. Their property at Whitney, where the mill is situated, consists of some 1800 acres. Long Lake affords excellent storage facilities for logs.

The mill buildings consist of the lumber mill, 88 x 208 feet, a shingle and lath mill 48x50, a sorting shed 32x270, a boiler and engine house 72 x 82, and an electric power house 36 x 46. The lumber mill contains three band saws and one gang. The band saws are driven by an 800 horse-power Milwaukee built engine and the gang by a 200 horse-power Saginaw built engine. The electric plant has a separate engine of 75 horse-power, built at Peterboro. Steam is supplied by 8 boilers, 60 x 20 feet each, having 18 six-inch flues. There is also a 125 horse-power boiler for the steam pump, but this is not fired when the mill is running. Saw-dust is used for fuel and the furnaces are fed automatically. The surplus and mill refuse is consumed in a burner 30 feet in diameter and 90 feet high.

The buildings are covered throughout with iron, no shingles being used whatever. The sprinkling system of fire protection is employed. No other mill in Canada has it. The boiler and engine house is fireproof.

The mill will cut white pine lumber, lath and shingles. It has a capacity of 200,000 feet per ten hours. The output will be shipped over the Ottawa, Arnprior and Parry Sound Railway to the United States market.

The mill differs from all others in Canada and is provided with the most modern machinery. The logs are not touched by hand from the time they enter till they are sawed. The lumber is sorted automatically, and is taken from the mill to the piling ground on small cars, the facilities being such that two single horses can haul it all away.

In June, 1894, Whitney was a forest; on July 25th, 1895, the mill commenced sawing. It is the intention of the company to build up a model community. The business of the place will be kept in the company's own hands, and no outsiders will be allowed to locate on their property. The sale of whiskey will be strictly prohibited, and drunkenness, or connivance thereat, will be punished with instant dismissal. The men are at present accommodated in the company's boarding houses, but cottages will be provided for the married men, to each of which a quarter of an acre of ground will be attached, which the men will be obliged to cultivate. Some fifty such cottages will be erected. It is the intention to gather together an industrious and thrifty community, which will be characterized for sobriety and ndustry. There are 340 men employed at the mill and about 500 in the woods.

MR. ABRAHAM J. ELIAS.

THE S. HADLEY LUMBER CO., LTD., CHATHAM, ONT.

THE S. Hadley Co., Ltd., of Chatham, Ont., do business in a large two storey brick building 60 ft. by 84 ft., situated on Wellington street. Their wholesale yard is on Thames street, on the bank of the Thames river, and the retail and storage yards are on Wellington street, one at their mill and one further down the street. On the ground floor is their engine room and lumber dressing room. The engine and boiler room, in one, is under the care of Mr. A. Jones, who has one assistant. The engine is a 45 h. p., McKeough & Trotter, makers, Chatham, and the boiler, by the same makers, is also 45 h. p. They intend putting in new engines and boilers. A dry kiln, with a capacity of 20,000 feet, is also on the ground floor, and was made by A. R. Williams & Co., Toronto. The same company have also placed one upstairs, having a capacity of 18,000 feet. The dry kilns are supplied by a Williams blower. The same blower heats the building with hot air.

The machinery on the ground floor consists of a double surfacer and planer, a large sticker, and a swing cross-cut saw. The machinery upstairs consists of a large and a small sticker, a universal jig saw, sand paperer and boring machine combined, a tread saw table, a shaper, a doweling machine, a blind and slat machine, a band saw, a tenoning machine, a large mortiser, a foot power mortiser, a tread boring machine, a turning lathe, and all the tools of a well equipped factory. A blower draws all the shavings from the machine into a 12 inch main and sends them to a 'cyclone' on the roof, when the wind passes out and the shavings shoot down into the shavings room or the furnace, at the will of the engineer, who controls their course by a slide which throws the shavings into the furnace pipe or the shavings room pipe.

The firm, consisting of three brothers, do an extensive trade in contractors' supplies and a wholesale lumber business. They also do fine woodworking, such as panels, mantels, and engraved furniture. They have a large list of customers and have been busy all season, and have good expectations of the spring trode.

A SAW MILL SUIT.

THE following suit recently came before the Court of Appeal for Ontario:—

McNAB VS. TOWNSHIP OF DYSART.—Judgment on appeal by defendants from order of Chancery Divisional Court, whereby, owing to difference of opinion, directing judgment to be entered for plaintiff for $200 and costs on High Court scale was affirmed. The plaintiff built a saw mill on the shore of Head lake, in the township of Dysart, upon or contiguous to the former site of a mill, and upon what he claimed was made ground, caused by reason of the deposit of a large amount of sawdust, refuse, and other stuff from the former mill, and not, as he claimed, to encroach upon any lands of defendants. The defendant Prust, the clerk of the said township, under orders from the corporation, entered and took down and removed the mill, and plaintiff brought this action for $5,000 damages. The trial judge found that one-half the mill was built upon an allowance for road of defendants, and that a consent given by defendants for erection of mill had been duly and properly rescinded, but that the by-law so doing, not having been confirmed by the County Council, was without force; and that the other half of the mill was erected on ground leased by plaintiff from one Irwin, the owner thereof, and that defendants were not justified in interfering with such half. Appeal dismissed with costs. Watson, Q.C., for appellants. Steers (Lindsay) for plaintiff.

CHATHAM, ONT., ITEMS.

[Special Correspondence CANADA LUMBERMAN.]

THE S. Hadley Lumber Co., Ltd., Chatham, report that barn boards are in good demand at present and stock is good. The prices are firm, collections hard and business slacking off. They have had a successful season and have received a boat load, besides that coming by rail, every two weeks from Georgian Bay.

P. L. Barry has let his stock run down as he desires to sell planing mill and stock and retire from business.

J. J. Piggott & Son have had a busy season both in the retail and wholesale yards in Chatham and Windsor, and the planing mills are running long hours to keep up with orders.

Blonde Bros., lumber dealers and contractors, are ending up a successful season, though some of their work will not be completed till far into the winter. They have the carpenter work of the R. C. church at Goderich.

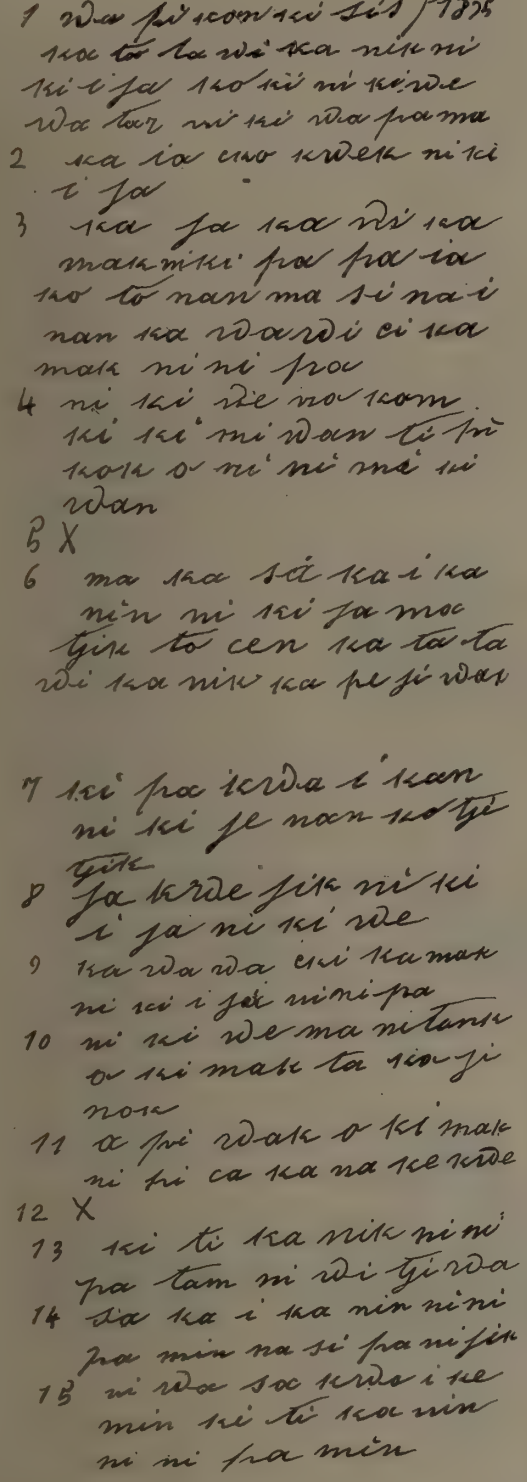
The water is low in the Thames river, making it difficult for boats with lumber cargoes to come up so far as Chatham.

The Sutherland & Innes Lumber Co. is said to be one of the largest and wealthiest in the world. Its headquarters are at New York and Liverpool, England. It operates 17 large mills in Canada besides many in the United States.

The value of the manufactures of wood imported into Canada and entered for consumption, during the month of October, was $60,969, and the duty collected thereon $13,863.45. The value of wood, cabinet makers, etc., imported for consumption, free, was $62,753. The value of products of the forest exported was, the produce of Canada, $2,903,977, produce of other countries, $20,576, total $2,924,553.

AN OJIBWAY DIARY.

WE present to our readers herewith a fac-simile of a couple of pages of the Ojibway diary recently sent in as a report to the Crown Lands Department at Toronto, and referred to in the last issue of the LUMBERMAN. The diary is written in lead pencil in a small book, and the fac simile is for the first part of the month of May, the dates of which will be seen on the margin. Sunday is marked by a cross, thus ×. Ignace Dufond, the author, is a fire ranger on Mr. W. McKay's limits, and is a



clever half breed. The Amable Dufond River is named after his father who lived in that section. The diary is all written in syllables and follows the phonetic system, regardless of rule, the syllable to express a certain sound not always being spelled the same. There is nothing to indicate the end of a word or sentence, so that it is rather difficult to read. Any of the readers of the LUMBERMAN who understand Ojibway can amuse themselves trying to make it out.

WHAT IS SAID OF DODGE PATENT FRICTION CLUTCH PULLEY.

QUACO WEST, St. John Co., N.B., Oct. 29th, 1895.

GEO. H. EVANS, ESQ.,
Agent Dodge Wood Split Pulley Co., St. John, N.B.

DEAR SIR,—I have had one of the Dodge Wood Pulley Co.'s Split Friction Clutch Pulleys in use for the last month. It transmits 50 h.p in a stationary rotary saw-mill, and never slips or shows the least sign of weakness. It gives me perfect satisfaction in every respect.

Yours respectfully, (Sgd.) S. PATTERSON.

TIMBER AND FORESTRY.

LECTURE BY SIR HENRI JOLY DE LOTBINIERE.

THE Y. M. C. A. of Montreal, has recently inaugurated a course of popular lectures on the national resources of Canada, the first of which was given on the 7th of November, by Sir Henri Joly de Lotbiniere, the well-known authority on forestry, who chose for his subject "Our Timber and Forests." The following is a report of the lecture.

Canada, he said, though it was looked upon as the land of forests, only ranked as the fourth timber exporting country in the world. Sweden and Norway exported a larger quantity of timber than we did, as did also Russia and Austria. Canada's exportations in the way of timber consisted chiefly of pine and spruce, the former of which was now found mainly in Ontario, while the greater proportion of the latter was to be found in this province. In "Forest Wealth of Canada," published by the Federal Government, Mr Johnson, Dominion Statistician, expressed the opinion that the first quality of pine had disappeared, and though there was a considerable quantity of the second quality, still Canada was within measurable distance of the time, with the exception of spruce, as to wood, and British Columbia, as to provinces, when it would cease to be a wood-exporting country. To prove his statement that the first quality of pine was rapidly disappearing, Mr. Johnson had furnished figures from the cullers' return of 1865 to 1893, which showed that there had been a gradual decrease in the average number of cubic feet per stick.

Up to within a few years ago, said Sir Henri, we alone worked our forests, but now our neighbors to the south had kindly come in, and were demonstrating the activity characteristic of them by removing our pine trees, as was shown by the fact that out of seven hundred and forty million feet of lumber cut down in Ontario last year, two hundred and forty million feet were exported to the United States. Canada had lost the monopoly of her forests, and if the present ratio of destruction was to continue it would be but a very few years before the forests of our country would disappear forever.

He contended that it was not the cutting down of the logs from which the country derived benefit, but it was the manufacturing of them, and it was, therefore, essential that Canada should take such steps as would insure the manufacture of logs into timber within the Dominion. If the timber was manufactured here, it would afford employment to those young men who were now forced to beg for work across the line. Canadians were not doing their duty to posterity or to themselves when, having lost the flower of their forest almost completely, they allowed the little that remained to be taken away to the United States in order to be manufactured there. It was the duty of the present generation not only to hand down the Canadian forests to their posterity unimpaired, but in an improved condition. The pine forest of our land had almost disappeared, and great care must be exercised in the future if a total annihilation was not to ensue.

As to spruce, which was found in the Province of Quebec much more plentiful than pine, the great danger that threatened it was the pulp wood industry, which consumed enormous quantities each year. To supply the raw material for the 1,250 tons of ground wood pulp, chemical pulp and sulphide pulp, now used in the United States, about 2,200 cords of spruce per day were required. Every twelve months 100,000 acres of forest is cleared of its mature spruce, while nearly 4,700,000 feet of spruce logs are used up for this purpose every twenty-four hours, or upwards of 500,000,000 feet per annum. During the last ten years the pulp business in the United States had increased 500 per cent. Five years ago the ground product was estimated at $12,375,000. It continued to be the great staple of paper manufacture. For its ordinary daily supply of paper the New York World requires all the marketable spruce fit to cut which grows on seven acres of average spruce forest, and the Petit Journal, published in Paris, France, with a circulation of 1,000,000 copies per day, consumes in a twelve month 120,000 fir trees of an average height of 66 feet. This was equivalent to the annual thinning of 25,000 acres of forest.

Last year the American manufacturers exported over $2,000,000 worth of pulp paper. This was two and one-half times the amount of their business in the same line in 1894, This year they expected that the amount exported would total a sum of $2,520,000. The pulp industry in the United States alone, in its drain upon the spruce forests of Canada, used up these native imports of 100,000 acres per annum. Wheels, horse shoes, water pipes, pails, tubs, flower pots, domestic utensils and furniture of every description, protective armor to torpedo rams, bullets for rifle use, boots and shoes, bed clothes, apparel for the body, food products, alcohol and yarn, were now manufactured from pulp wood.

The lecturer contended that the forest should be studiously protected by legislation. In Canada, the Dominion Government was the custodian of the forests, the latter being Crown property. They could control the output and could bring legislation to bear upon the question of preserving them unimpaired for future generations. To prevent the rapid destruction of the spruce forests, Sir Henri recommended that the cutting down of young trees should be prohibited by legislation.

He explained the important part which the forests played in the economy of the world. They were necessary to the fertility of the country, to the success of agriculture, to the navigation of the rivers, and for those industries which require a regular supply of water. The forest preserved the rain among its roots, thereby lending moisture to the surrounding country. Used with a wise discrimination, the Canadian forests would last forever.

In conclusion, Sir Henri maintained that the cheapest way of propagating trees was by sowing the seed of the kinds required, and making regular nurseries, from which they could be transplanted to the forest. Thus, with comparatively little trouble and inconvenience, there could be restored to the older settlements a great deal of the forest wealth that had been wasted. As in the case of planting, great care should also be exercised in pruning. Every tree grown in the open would necessarily have to be pruned each year, and as in everything else, there was a right way as well as a wrong way of doing this. The limbs should be cut off even with the trunk of the tree. When this was done nature speedily healed the wound and the life of the tree was saved. But if a small portion of the limb was allowed to remain the result would be death and destruction to the tree long before nature, in spite of strenuous efforts to the contrary, was able to cover the wound with the protective bark.

A number of specimens, showing the results of good and bad pruning, were exhibited by the lecturer, who concluded his remarks by touching upon the benefits which would accrue from interesting the young in agriculture.

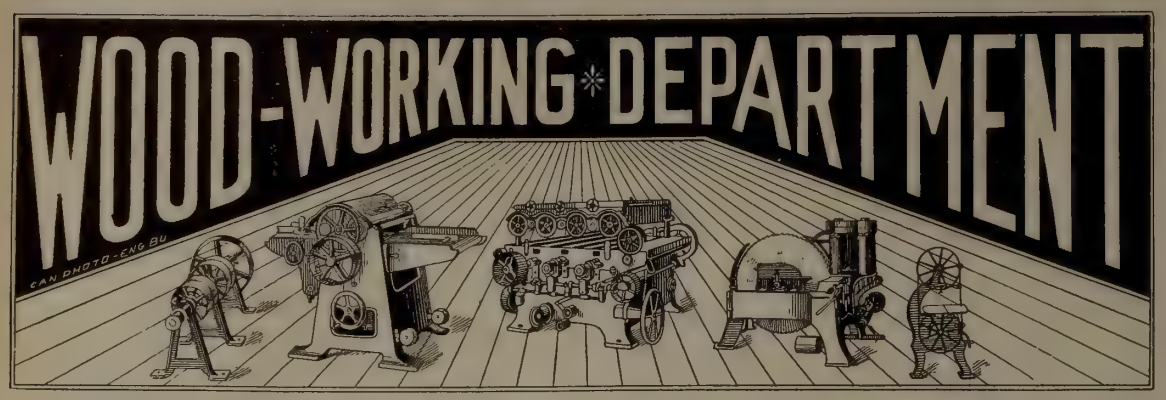
In replying to a vote of thanks Sir Henri added a few explanations with regard to the growing of pine from seed.

PUBLICATIONS.

It is announced that ex-President Benjamin Harrison is engaged in writing a series of magazine articles for The Ladies' Home Journal, in which periodical they will begin in the December number.

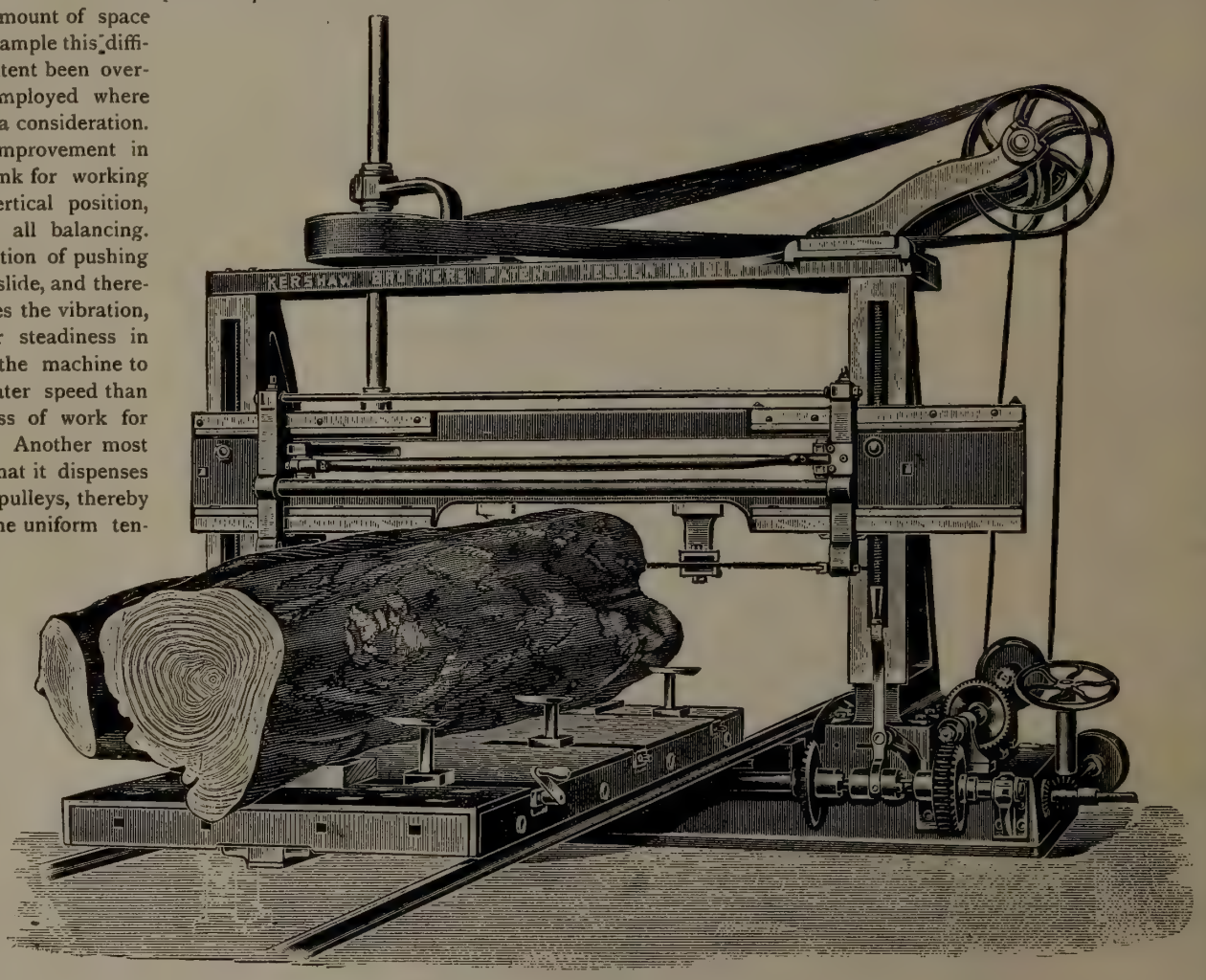
The Magnolia Metal Co., 74 Cortland street, New York, have recently published a new illustrated catalogue, containing results of tests by the United States Navy Department, Ohio State University, Cornell University, Mason College, etc., demonstrating the superiority of magnolia metal as an anti-friction metal. Its superior adaptability for machinery bearings in steamships, railroads, electrical, saw and rolling mill work, is proved by the numerous testimonials printed in this catalogue from companies who have tested its quality for these purposes.

People everywhere are standing aghast at the wondrous strides of the Family Herald and Weekly Star, Montreal. Certainly few Canadians were prepared to see a Canadian paper take the head of the procession and become such a conspicuous all-round favorite so soon. The Family Herald and Weekly Star, Montreal, is simply a marvellous production, and to think that it is only a dollar a year adds to everybody's genuine amazement. It is well worth while sending to the publishers, Montreal, for a sample copy, which we are told will be sent free just to enable people to see what can be produced in the newspaper line for a dollar a year. Few people will credit their own senses when they see it. Artists who have seen the premium picture to be given with the Family Herald this year ("Little Queenie" we think is the name of it) say that the premium is quite as wonderful as the paper itself.



HIGH SPEED HORIZONTAL SAW FRAME.

THE illustration herewith represents the most condensed horizontal saw frame (for working at a high speed) which has hitherto been brought into the market. For years different firms have endeavored to produce a good machine of this class with partial success only, but Messrs. Kershaw Bros. claim to have in this machine accomplished the purpose which has been so much desired. Many representatives of large firms in the timber trade have seen it in actual work and express the opinion that it is the best devised machine for doing the class of work for which it is intended that has ever been brought to the notice of the trade. One great difficulty in putting down this kind of machine up to the present has been the great amount of space required, but in this example this difficulty has to a great extent been overcome, and it may be employed where the saving of space is a consideration. It contains a great improvement in having the driving crank for working the saw placed in a vertical position, which dispenses with all balancing. It also prevents the action of pushing down and lifting up of slide, and thereby considerably reduces the vibration, insures much greater steadiness in working, and enables the machine to be worked at a far greater speed than any other for the class of work for which it is intended. Another most important feature is that it dispenses with all compensating pulleys, thereby keeping the belts at one uniform tension, and saving much expense. The slide carrying the saw is raised and lowered by power (to suit the different thicknesses of boards to be cut), worked from the quick return motion shaft, needing no belt. It can be worked by hand if desired. The feed motion is driven from the vertical crank, and the belts for this never vary, therefore dispensing with compensating pulleys. The machine is entirely self-contained, and all the working parts are brought within easy reach of the operator. The construction of the machine is very simple, and so arranged that it is not liable to get out of order. The machine is well adapted to meet the requirements of cabinet makers, joiners and builders, railway wagon builders, saw mill proprietors and others.



HIGH SPEED HORIZONTAL SAW FRAME.

A machine to cut 42-inch logs has just been completed and is in actual operation at the works, Hebden Bridge, Yorkshire, England.

A good engine in charge of a good man rarely requires to be stopped in working hours. When one is stopped frequently it would be a good plan to find out whether it is the engine that is out of order, or the man in charge of it.—The Engineer.

WOOD-WORKERS' LISTS.

By Owen B. Maginnis.

I HAD intended writing up this subject before, but deferred it, hoping some other better hand than I might take hold of it, as the subject is one of interest and importance to many.

Foremen usually make out lists; that is to say, it devolves on them to pick and count out the number of pieces of stuff of different dimensions which have to be selected, sawn out, and wrought to a finished shape. Some of the more extensive establishments have a draughtsman, who is partly a mechanic, to do this work; but in the average shop it is the foreman's duty, and in this article I will endeavor to lay before him some suggestions as to how this important matter should be done regularly and methodically.

Most work is made from standard patterns. When working from drawings which are furnished by the architect or designer, the foreman will, in many cases, be required to work out the construction in his own head, to economize the cost of construction, that the forms may come within the scope of the machinery in the mill. In addition to this, it may happen that he may reduce the cost of production by an analysis of the details, thus saving time and labor.

For example, in the trim, sash and door business, much lumber and working may be saved by a foreman who can change construction, and, by a judicious arrangement of the stuff, make the form fully adequate without injuring it. This is especially the case in hard woodwork, which of necessity must be economically treated, owing to the high price of the material, and where a backing of pine is introduced to lessen the amount of hardwood to be used. When the prices of San Diego or red and white mahogany, quartered oak, cedar, maple, etc., are remembered, it can readily be understood why economical construction is of so much importance in modern wood-work, and how a foreman must treat the construction so as to save the expensive material.

Many foremen redraw the details in the constructive form they judge will be the cheapest to adopt, and by doing this they render them so clear in their own minds that making out the lists is a comparatively easy matter This may either be done full size on manilla detail paper or on a drawing board, with all dimensions figured, and with the full laying out delineated, giving an elevation, with horizontal and vertical sections. Everything should be clearly shown, in order that a cabinet-maker or a bench-hand may at once grasp the method of putting the whole construction together, when the pieces are wrought by the machines and are brought to his bench. For doors and sash, a laying-out rod, as I once stated in these columns, will be sufficient, with a sketch of the elevation of the constructed detail; but for trim or difficult work, more explanation will be necessary. Laying out in pencil on boards is preferable to paper, because there is no danger of the drawing being torn or dirtied by use. After an experience of some years I would endorse the board, although the paper has the advantage of being easily filed away for future reference; still, when it becomes torn or dirty its usefulness is so much impaired that it is hardly safe to refer to it again. Owing to the continuous handling in the mill, by some woodworkers with not too clean hands, paper working drawings get terribly mussed, though they are often essential when the work is too large to lay out on a convenient board. I would suggest that where the board can be adopted, it is preferable.

The foreman having laid the job out in a fully comprehensive manner, the next step is to prepare the lists, and here arises the necessity for another consideration on his part. I refer to over lengths. It will of course be understood that all pieces will require to be slightly longer than their finished lengths, also wider than their finished width, in order that there may be sufficient over stuff to permit them being worked by the machines. The extra stuff must be gauged by the foreman, and will be determined by his experience and former results; but there must be sufficient to enable each and every wood-worker to shape the pieces to the forms demanded in the layout.

I will take one simple detail of hardwood doors, and endeavor to explain the listing of the stuff necessary to be gotten out for their construction. Supposing one dozen veneered quarter oak doors have to be made to order, and that they are all of the same size, and of the following dimensions:

	Ft.	In.
Width	2	8
Height	7	0
Thickness	0	2
Stiles	0	5
Top Rail	0	5
Bottom Rail	0	11
Inside Rails	0	4
Panels	0	10 15-16
Thickness of Raised Panels	0	1⅛
Moulding, Raised	0	1¼

Here we show the whole dimensions of the door

Now commencing with the stiles, we find that they must have pine cores, with quartered oak band strip. The cores will require to be glued up in separate thicknesses to form one whole piece, which is done to lessen the danger of its working under climatic influence, which one solid piece would certainly do. The method of using pine cores glued up in pieces of ⅞ or 1¼-inch stuff, is therefore universally followed, so that the foreman will require to figure thus in his list, or, rather, to make out his list as follows :

LIST OF STUFF FOR 12 QUARTERED-OAK VENEERED DOORS FOR MR.....

PINE CORES.

For stiles: 24 cores out of 1-inch stuff, to finish 4⅜ inches wide, 1⅛ inches thick.

For top rails: 12 cores, same stuff, to finish 4⅜ inches wide, 1⅛ inches thick.

For bottom rails: 12 cores out of 1⅛-inch stuff, to finish 11¼ inches wide, 1⅛ inches thick.

For inside cross rails: 48 cores out of 1-inch stuff, to finish 4 inches wide, 1⅛ inches thick.

FOR FRAME VENEERS OF ¼-INCH QUARTERED OAK.

Stiles: 48 pieces,	7 feet	—1 x 5¾	inches.
Top Rails: 24 pieces,	2 "	—0 x 5¾	"
Bottom Rails: 24 pieces,	2 "	—0 x 11¾	"
Inside Rails: 96 pieces,	2 "	—0 x 4¾	"

All above to finish ¼-inch less.

FOR PANELS.

48 pieces of plain oak, 11 x 23 inches, of one-inch stuff, to finish ⅞-inch.

96 veneers of quartered oak, 8¾ x 21½, of ¼-inch veneer.

PINE FILLETS.

280 feet sawn pine fillets, ⅞ x 1¼ inches, to go under moulding.

QUARTERED OAK MOULDING.

290 feet 1½-inch raised moulding, ⅞-inch thick, out of one-inch stuff.

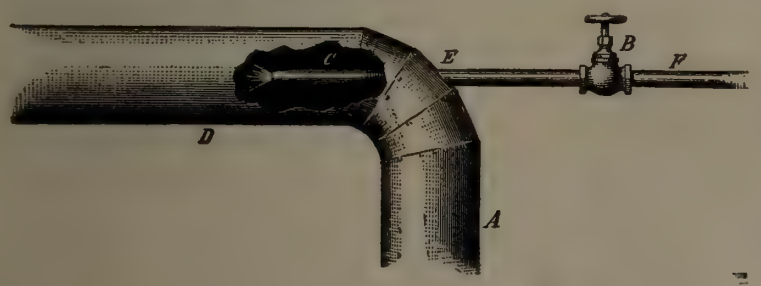
This is an approximate list of the stuff required for these doors, which, with the sketches I have enumerated, will be sufficient to enable the sawyer to cut out his stuff, and being passed from him to the planers, give them a full idea of the finished sizes. Sometimes the foreman will only give the finished sizes, relying on the sawyer to use good judgment in selecting and cutting up the stuff, but this method places a responsibility on the sawyer which many are not able to assume.

All lists should be returned for reference and kept clean.

In closing this article, I might say that it is submitted with the intention of placing before the fraternity a suggestion for this work, and I will be glad to welcome criticism, be it favorable or adverse, for the general benefit of all wood-workers.—The Wood-Worker.

SAWDUST AND SHAVING STEAM JET BLOWER.

AT a mill at Walterboro, South Carolina, there was an exhaust fan to convey sawdust from the mill to the refuse pile, which always proved a source of annoyance, as it was in a secluded spot under the mill and very seldom got any attention. Mr. W. J. Taylor, who had to do with the mill, designed a steam jet blower, the construction of which the accompanying cut will explain.



SAWDUST AND SHAVING STEAM JET BLOWER.

He says: "I first got a six-inch galvanized iron elbow, cut a hole in same large enough to insert a three-quarter inch steam pipe at *E*. I then put on six feet of piping, *A*, which formed the suction. Then I made my discharge pipe, *D*, 150 feet long, and at one place the pipe had to be elevated to a height of eighteen feet to allow railroad cars to pass under. I then ran my steam pipe from boiler to within one foot of elbow, put on three-quarter globe valve, *B*, then twenty-inch steam jet pipe, *C*, made of three-quarter steam pipe, with opening at discharge end closed down to three-eighths of an inch, which forms the jet. I turned on steam and it very easily kept all of the sawdust away from the mill, and we cut on an average from twenty thousand to thirty-five thousand feet of lumber per day. This blower can be constructed of wood where metal piping cannot be easily obtained, and for an experiment will answer every purpose for a long time. Of course, it does not work as well as the metal pipe, as there is more liability of its becoming clogged. Cheapness and efficiency are its chief points.

WOODWORKING IN JAPAN.

MR. R. L. Greenlee, of Greenlee Bros., woodworking machinery manufacturers of Chicago, who is making a tour of the world, has been spending several months in Japan, making a close study of that country and its people. The result of his observations is given in an interview with William E. Curtis, special correspondent of the Chicago Record. In the course of that interview Mr. Greenlee said:

I have been looking extensively into manufacturing while I have been in the country, and the result of my observation is a very strong conviction that the Japanese will soon be able to furnish themselves with all they use and wear and eat without assistance from foreign nations. They have very little woodworking machinery. Nearly all of the machinery I have seen in Japan, and nearly all the imported tools, are of English and Germam manufacture.

Lumber is worth about twice as much in Japan as it is with us. Common lumber, which we sell for $10 and $12 a thousand feet, will bring 40 yen—that is $20 gold —here. This is due chiefly to the scarcity of timber and the great labor required to work it up by their primitive processes. They have been cutting timber off their mountains here for 2,500 years, and, although the forests have been reproduced again and again during that period, it is difficult and expensive to get logs down from the mountain sides in the absence of the necessary facilities. They usually go into the woods and cut one log at a time, which they haul out by hand or by oxen for many miles. Where streams are convenient they use them as we do, but they have no saw-mills in the mountains, although there is an abundance of water power everywhere. I understand they have tried them, but they have not been successful.

They cut all their lumber by hand with a wide and thin saw during a time of year when they have nothing else to do, and each man who is engaged in business that requires lumber usnally buys his own logs and cuts them up himself at odd times. Women and men both work at it. One man or woman will work on the top of the log while another works underneath, but usually not with the same saw. I have seen four or five men working on the same log, each sawing off his own board. They raise the log at an incline of 45 degrees, with one end on the ground and a rest about the middle, and when they work down to the rest they tie it up and begin at the other end.

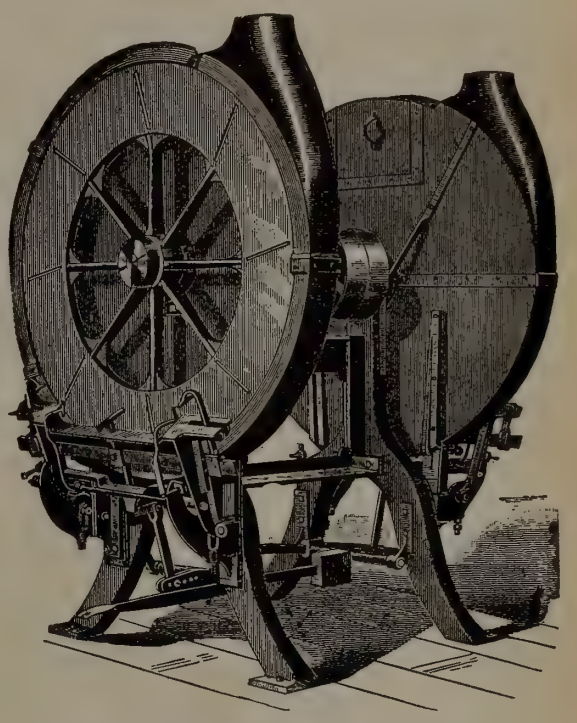
All the lumber is dressed by hand. I have found but one planing mill in the country. That is at Yokohama. It employs about 150 hands, and, curiously enough, its entire product is made into boxes and shipped to India. It does no business in the local market. The machinery is all from Boston. The manager tells me that the company is thinking of enlarging the plant by adding a sash factory and machinery for making blinds and doors, also for the India market. I do not know why they do not sell their goods in the local market, but I presume there is a good reason for it; perhaps they get better prices in India.

The Japanese make all the woodwork about a house by hand, and most of their houses are all wood. They are very skilful in all kinds of cabinet and joiner work, and are more rapid than our people. Their tools are better adapted for doing close work than ours, and are kept very sharp. Besides, they give a great deal more patience and labour to an article than our carpenters and cabinet-makers. You never see scratches from nicked tools in their planed work. They use very few nails, but mortise almost everything. It is usually so well done that it is difficult to detect the joints except by the grain, and it lasts for ever. Some of their ships are made without a bit of iron in their composition. Everything is mortised.

The Japanese are very skilful in handling machinery when once they learn how. They learn best by imitation. It is difficult to make them understand how to use a machine by explanation, but if they can sit by and see some one else do it they will learn very rapidly. And in copying machinery they reproduce the original with great exactness and fidelity, even to any blemishes or ornaments that may appear. I have seen some remarkable examples of their imitation. Usually the finish is a little rougher than the original, but the working parts are identical, and they get the finish all right after a little experience.

COMBINED FAN AND STAVE-JOINTER.

WE herewith present an illustration of the Holmes combined fan and stave jointer. One of the objections to all stave-jointers driven by power is the dust and shavings made, the removal of which demands constant care and expense, and occupies a large amount of valuable room, while the air in the entire building is completely filled with dust, destroying the health, comfort and clothing of all who are compelled to remain therein, at the same time forming one of the most dangerous tinders for the reception of sparks, taking up the oil from the boxes and journals, inducting crustation, heat, ignition, and not infrequently destructive conflagrations. All the dust and shavings are blown by the fan-jointer through conductors to the fuel-room, free of



COMBINED FAN AND STAVE JOINTER.

expense. This machine is built double or single and of sizes to suit from kegs to barrels; each wheel has its own shaft, tight and loose pulleys, and runs independent of each other.

The wheels being overhung, there is nothing to prevent the light from striking the face of the wheel from all directions, and giving the operator a full view of the stave he is jointing. No oil dripping upon the operator as he performs his work, as in jointers where wheels are in-hung. Full view across face of wheel in setting knives, as the shield is flush with face of wheel. Rim of shield, cast iron, and back of sheet iron, consequently no wear out to it.

The patent clamp used on the machine is claimed by the manufacturers to be the quickest, simplest and easiest acting clamp in the market, of great power and strength, holding the stave firmly, taking the wind out of crooked stock, presenting it to the wheel and releasing it as the clamp drops to its rest. More or less bilge is secured by simply moving two set-screws and raising or lowering the clamp. Bevel is changed by two set-screws, which move the foot of the clamp in or out. Hooks are adjustable to different lengths of stave in a moment's time. Double independent jointers, or both wheels on same shaft, as customer desires, the difference in price being slight. All size of jointers are made.

The machine is made by the E. B. Holmes Machinery Co., Buffalo, N. Y.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

MONTHLY AND WEEKLY EDITIONS

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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

THE SOUTH AFRICAN TIMBER MARKET.

THE recent enormous development of gold mining in South Africa has had the effect of giving a great impetus to the timber trade at the Cape, and a good deal of attention is being paid to the possibilities of that country as a market for our timber. British Columbia has exported a considerable quantity this season, and is naturally scanning the possibilities of the future.

There has been an abnormal inflation in the value of mining shares, many of which are quoted at prices far beyond their actual value. A crash is sure to come before long, and how far mining will be carried on afterwards is so very uncertain that the lumber trade depending upon it is precarious.

Up to the present Cape Colony has been practically a non-producing timber country, though she has stores of forest wealth in the interior. Although Cape Town, the principal city, was built many years ago, the country around has only been developed recently, and the import of timber to any extent is the growth of the last ten years. The demand has been supplied principally from Sweden and Norway, the former having sent double the quantity last year over the preceding year. About four years ago a firm operating on Puget Sound determined to have a share in this growing trade, and sent a trial cargo. The experiment was not a success, but it established the fact that if properly managed a large and remunerative trade could be built up, and since that time a considerable trade has been carried on, at first by means of small sailing vessels, and subsequently by large steamships, which carry as much as two or two and a half million feet.

One serious drawback to the trade is the fact that the inland buyer requires to have the goods delivered on his premises by the seller, and railway freight rates from coast points—Delegoa Bay, Port Elizabeth, etc.—are very high, for instance 5s. 9d. per 100 lbs. actual weight. Besides, there is the risk of demurrage at the port of discharge, as well as duty, landing charges, etc., with the risk of rejection on arrival. The dealers there are not disposed to buy f.o.b. or c.i.f.

As already stated, South Africa has great forest wealth of its own. With the growth of the country this will be developed, in fact the government, naturally desirous that as little as possible of the wealth of the country should go abroad, are taking steps not only to conserve the primitive forests, but to re-forest the denuded portions, and to that end has divided the country into four districts, with a conservator, rangers, foresters and other officials for each. In one of these districts, in 1894, 3,500,000 trees were planted at a cost of one half penny each, and in the other districts extensive planting was also done. All the railway ties required can be furnished at home, and a creasoting factory is projected, where railway timbers can be so treated as to increase their durability. Last year a large quantity of timber was brought in from the neighboring country of Becuanaland, which is shortly to be annexed to Cape Colony. The chances are, therefore, that in the course of a few years the Cape will be in a position to supply most of the home market.

The mining boom has created a demand for timber of unusually long lengths, say up to 18 inches square and 60 feet long. The Pacific coast fir is admirably adapted for this, while the Baltic cannot furnish it. Hence, a share of the trade has been easily secured for the former. Much lumber for building is also consumed, as may be inferred when we state that the population of Johannesburg and surrounding district is increasing, by immigration alone, at the rate of from 1,000 to 1,500 souls per month.

So long then, as the present mining boom continues, with the resulting influx of population, there will be a large demand for lumber at good prices, but the future is uncertain, and therefore it is a trade which must be entered into with much cauton and a great deal of risk.

CANADA'S LUMBER EXPORTS AND CONSUMPTION.

IF any of our renders ever thought of the matter they have probably come to the conclusion, without looking into the figures, that Canada, with her vast timber areas, exports more lumber than, with her comparatively sparse population, she consumes at home. Yet such is far from being the actual fact. She uses twice as much lumber at home as she sends abroad. A similar fact exists with reference to the New England states, where the home consumption is largely increasing. Is there not a lesson here, that we should be careful in the manner of disposing of our timber? While there can be no objection in encouraging our foreign trade, thereby bringing wealth into the country, we should not be too lavish in sending away what may in the future be required at home, at least there should be no waste, which it is to be feared goes on to a considerabie extent in our forest products.

Another fact is of interest, namely, that we export considerably more lumber to the United States than to Great Britain. In 1893 our export of forest products to the mother country was $11,105,482, while to the United States we sent $14,841,455 worth. Yet though we sent abroad nearly $26,000,000 worth of goods out of our forests our total production was $80,000,000 worth, so that we consumed at home about $54,000,000 worth, or more than $11 per head of the population.

AMERICAN FORESTRY ASSOCIATION.

THE American Forestry Association, which recently held its annual convention at Springfield, meeting, by the way, in a church, had its attention called, by means of a letter from Secretary Morton, to a very prolific cause of forest fires, and a suggestion as to a means by which the danger might be minimized. He wrote:—

"It is very important that the American Forestry Association should formulate and commend to the various States a system regulating the clearing up of debris after cutting the large trees for timber. The devastation of the woodlands by fire could be avoided if each State would make it a penal offense to leave the brush not utilized for lumber lying upon the ground as kindling for the great forest fires. Until there be uniform legislation in regard to this matter the annual forest conflagrations will continue. It is deemed advisable that the Geological Survey and the Division of Forestry cooperate in mapping and determining the value of the national forest reserves. The Geological Survey might continue its topographic mapping of the national forest reserves and locate all areas suited to the purpose. This is already authorized by law."

We in Canada might gain a hint here.

EDITORIAL NOTES.

HIGH freight rates and lack of tonnage, with possibly a little slackness in the market, caused a falling off in the lumber which passed through the Soo canal, United States side, during October, of nearly one-third. The figures for 1894 were 108,274,000 feet, for 1895, 77,263,000 feet. It does not take much to change the current of trade.

AT the recent annual convention of the National Association of Builders of the United States, a resolution was offered calling upon the Secretary of the Interior to enforce all laws looking to the protection of the public forests from unnecessary and wanton destruction; also urging upon the governors of the several states the recommendation of legislation in their annual messages looking to the preservation of the forests.

A PECULIAR law suit was recently tried in Wisconsin which will interest lumbermen who drive logs down streams. The plaintiff had given a boom company the right to overflow his land, and in the course of operations some of their logs floated over his property, so he sued them for storage. The court gave judgment for the company, holding that the stream, in its widened condition, was a public highway, open to all. So this enterprising individual saw his prospective source of revenue ruthlessly cut off.

THE railways of Maine are reaching out for business in the northern part of the state. While spruce is the staple lumber of that state there is a good deal of hardwood, which has been unavailable because it was not practicable or economical to attempt to drive it on the rivers, and accordingly the market was supplied from what could readily be loaded on the cars. But the railways are penetrating further and further every year, and developing a lumber business which could not otherwise have been done.

WHILE the Franco-Canadian treaty opens up a promising market for our timber, there is another European country with which we might cultivate trade to our own advantage, namely, Denmark. An official now stationed at its capital writes to this effect: "The opening of the free port of Copenhagen affords a good opportunity to American dealers. Lumber shipped in bulk can be stored at low rates in the ample yards of the free port and from there be distributed to the various ports of the Baltic, according to the demands of trade."

IT does not look as if there would be much use for soup kitchens this winter. Any able bodied man who is willing to work can find employment, for the demand for labor is, strange to say, greater than the supply. This may not be strictly correct locally in all instances, but there is work in the country, and if it cannot be found in one place it can in another. Lumbermen find it hard to get men for the woods. Particularly is this the case in Michigan and throughout the northwestern states. Last year the labor market was overstocked, this year the demand is greater than the supply. This is a healthy sign.

THE manner in which facilities for reaching the market enhances the value of timber properties is well brought out in a case which has come under our notice. About five years ago the owner of two hundred acres of land near Eganville, a small village in Ontario, offered it for sale to the owner of the neighboring property, the price asked being eleven tons of hay, delivered at Eganville, eight miles distant, hay being then worth twelve dollars a ton. The offer was declined, the land not being considered worth what was asked. The building of the Ottawa, Arnprior and Parry Sound Railway, which

passes within four miles, has so enhanced the value of about 150 acres of cedar, hemlock and hardwood bush upon it, that the proprietor has sold the timber for $640 and still has the land left.

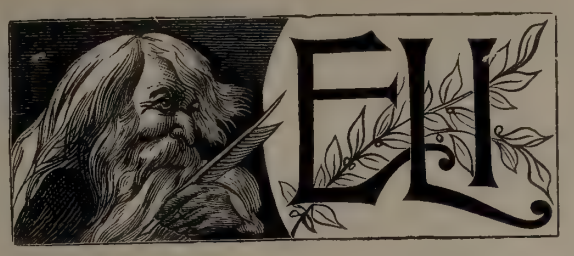
THE growth of the pulp business is most remarkable and promises in the near future to outvie its past record. The consumption of paper has grown so enormously of late that immense quantities of pulp are required by the paper makers, and in addition it is used for a great variety of fabrics hitherto made from other vegetable or animal materials. The outside world is looking more and more to Canada as a source of supply, but the temptation to meet this demand must not lead to prodigality in dealing with her spruce timber. Some leading lumbermen advocate an export duty to check the outflow.

THERE are a good many moose destroyed in connection with the lumber shanties every year. The men shoot them, or they are killed by settlers and others, who sell them to the lumbermen for food. As the killing of moose, elk, reindeer and cariboo is absolutely prohibited in the province of Ontario till October 25th, 1900, in order to prevent their utter extermination, notice has been issued by the government that the law will be strictly enforced, and lumbermen have been cautioned against violations of the statute. We trust the warning will be heeded, for their own sakes as well as for the preservation of this species of game. The penalty for infraction of the law is $50.

DURING the past season only about two-thirds the quantity of logs taken across from Canada to Michigan last year were floated over to be sawed in Michigan mills. Two concerns which put 100,000,000 feet of logs into the Georgian Bay last season will not have more than 25,000,000 feet this year. Some of our contemporaries in the United States do not like this, and object to free lumber, which allows their men to cut up their logs in Canada and take over the lumber without having to pay duty, but if a duty was to be imposed, Canada would simply be obliged in self protection to impose an export duty on logs, and they would be no better off. It is wiser all round to leave things as they are.

TWO of the greatest fire fighters in America, Chief Bonner, of New York, and Chief Sweenie, of Chicago, have pronounced the sky scraping buildings of their cities huge fire traps, especially when their contents run largely to inflammable materials, and this although their construction is supposed to be fire-proof. The iron of such buildings is liable to expand and let the floors fall, causing a general collapse. Both these veteran fire chiefs pronounce in favor of buildings of brick and yellow pine. In such the fire burns more slowly, and there is a better chance of saving the contents. The dealers in yellow pine can afford to present these men with a handsome testimonial. They have given their business a valuable advertisement.

THE treaty between Great Britain, on behalf of Canada, and France, signed at Paris 6th February, 1893, came into force on the 14th of October, 1895. Under its provisions Canadian building timber in rough or sawn, wood pavement, wood pulp, flooring in pine or soft woods, furniture, staves, and wooden strips, when imported direct, accompanied by certificate of origin, will receive the advantage of the minimum of tariff on entering France, Algeria, or the French colonies. It now remains for Canadian lumber dealers to exploit this new field and work up a trade with France in our forest products. The importations of lumber into that country amount to about $40,000,000 annually, of which Canada sends comparatively a small amount, the official figures for 1894 being $117,682. Mr. Edward Jack, of Fredericton, N. B., who for years has been a student of French affairs, views the present situation as exceedingly hopeful, and suggests that the proper authorities send some one to France for the purpose of investigating the character, size and description of Canadian lumber which would suit the French market.



CHEAP wheat, oats, corn and potatoes do not encourage the farmers to launch out and erect new houses, barns and other improvements, thereby promoting the sale of lumber, but it does mean that poor people can have plenty to eat the coming winter, so I do not worry because the prices of farm produce are low.

* * * *

I do not generally approve of monopolies, but Switzerland proposes to establish one which I am prepared to endorse. The government is the monopolist, but does not look for profit. It merely seeks a pretext for prohibiting entirely the manufacture of phosphorous matches, which produces disease and death to those engaged in it. Its results are said to be as bad as leprosy.

* * * *

Some time ago I had occasion to visit a small saw mill which was worked by steam, and it struck me that he safety valve on the boiler was too heavily loaded. On enquiry it turned out that the man who was running it did not know much about safety valves or boilers, and a brief calculation showed that he was carrying a load of steam far beyond the safety point. I have no doubt there are many who have to do with steam machinery who cannot calculate the proper position for the weight on a lever safety-valve. To such I would commend a study of the interesting article on the subject to be found on another page.

* * * *

Don't I wish I was a lumberman. They can talk of millions as glibly as I can about single dollars, and perhaps have a better right to. I read that Donald Grant, a Minnesota railway contractor, has, with half a dozen associates, secured a concession of 14,000,000 acres of land from Venezuela, and has organized a company with a capital of $25,000,000 to work the limits, which contain some of the finest wood in the world, and are said to be worth $50,000,000. The name of the chief promoter is of a Scotch flavour. I wonder if he does not belong to that canny race of which Max O'Rell tells such a good story as to their success in foreign countries. Well, if I cannot handle millions I am at least spared much anxiety, and with this I must console myself.

* * * *

The canal mule and his driver are to be displaced by that ever encroaching power electricity. The test made at Tonawanda, in moving boats on the Erin canal by the trolley system, seems to have demonstrated its practicability, and the approval of Mr. Chas. R. Barnes, state electrician, a practical man of twenty years experience, has been given. Mr. Lamb, the inventor of the system, is receiving well deserved congratulations. Three and a half miles an hour at the start is a very good gait. I am pleased for the mule's sake, for few animals had a harder life than he, I am also glad for the forwarder's sake, for a saving of 88 per cent. in towing by mule and of 70 per cent. by steam is a consideration these hard times.

* * * *

A CROP bulletin issued by the Department of Agriculture for Ontario recently reports a falling off in the hay crop this year of over 700,000 tons, which represents a loss to the farmers of more than the value of the entire wheat crop of the province. It also means something to the lumberman, for a short crop must result in high prices. But the price will not go up as it once did, for railways are great equalizers, and hay can be brought from where it is more abundant at a comparatively small cost for freight. But if the hay crop was light oats gave an extraordinary yield and are cheap, so that lumbermen will simply have to feed less hay and more oats. When the new steam logger comes into use the price of fodder will be of small moment. All it requires is wood and water, which can always be found on the spot. And this is a world of compensations. Though hay for the horses may be dear provisions for the men are cheap.

* * * *

MR. G. W. HOTCHKISS, a veteran lumber journalist, rather startled his companions on the recent Hoo-Hoo excursion to Duluth, by asserting that there were some present who would, before their business career terminated, handle African and Siberian lumber. He said that the great forest of white pine in the latter country, said to be 3,000 miles long and 1,000 miles wide, the only pinus strobus in the world, so far as known, outside this continent, would be cut into lumber and laid down in New York, when the Nicaragua canal and the trans-Siberian railway, the latter promised for 1897, are opened, at as low a figure as Pacific coast lumber can be supplied for to-day. As for Africa, while it is importing timber from America to-day, it has large forest wealth of its own, and the tide of business may soon be turned, as it has been in many another instance. Conditions change rapidly nowadays, and Mr. Hotchkiss' prediction may come true, and that before very long.

FORESTRY FOR FARMERS.

THIS is the title of a pamphlet lately published by the U.S. Department of Agriculture, the author being Mr. B. E. Fernow, chief of the division of Forestry, who is well and favorably known to Canadians interested in the important matter of which he treats. In this pamphlet he begins in a very logical way by showing how trees grow—their food, materials, growth, soil and light conditions, and physiology of tree growth. In treating of the question of "sap up and down," he says:—"The growing tree in all of its parts is more or less saturated with water, and as the leaves, under the influence of sun and wind and atmospheric conditions generally, transpire, new supplies are taken in through the roots and conveyed to the crown. This movement takes place even in winter, in a slight degree, to supply the loss of water by evaporation from the branches. In the growing season it is so active as to become noticeable, hence the saying that the sap is "up" or "rising," and when toward the end of the season the movement becomes less, the sap is said to be "down." But this movement of water is always upward, hence the notion that there is a stream upward at one season and in one part of the tree, and a stream downward at another season and perhaps in another part of the tree, is erroneous. The downward movement is of food materials, and the two movements, of water upward and food downward, take place simultaneously. In the part which describes how a forest is to be planted, the writer discusses the subject of what trees are to be planted, and the adaptability of the trees to climate and soil, the mutual relations of different species, with reference especially to their relative height, growth and light requirements. He makes the very just remark that "Mixed forest plantations (made of several kinds) have so many advantages over pine plantations (made of one kind) that they should be preferred except for very particular reasons. Mixed plantations are capable of producing larger quantities of better and more varied material, preserve soil conditions better, are less liable to damage from winds, fires and insects, and can more readily be reproduced."

Any person who has noticed a sapling of the white pine, growing in a pasture by itself, cannot fail to see how many branches it usually has in the middle or lower portion of its trunk, and how much it differs from the same kind of tree when it stands in the thick woods. The reason of this is that as the lower limbs have abundance of air and light, their growth is much more vigorous than if the light and air were partially excluded from the lower part of the tree, when that vigorous growth which is wasted on the branches would be spent on the development of the crown and trunk. He finds that our sapling pines in New Brunswick grow best on sandy soil, more especially when they are found associated with the white birch, which, when the pines become tall and overshadow them, die out and leave the field to their long-lived associates.

Mr. Fernow points out the manner in which the farmer should treat the wood lot, and concludes by giving directions as to how the wood crop should be cultivated. On the whole this little work of 60 pages is probably the best on practical forestry which has yet made its appearance in America.

Fredericton, N. B. EDWARD JACK.

The lumber cut at Duluth for 1895 will aggregate nearly 500,000,000 feet. The mills will run till ice compels them to stop.

The Jackson saw mill at Tonawanda, which was burned on Oct. 27th, is the last of the log mills at that point. It had not been run for a year on account of the falling off in demand for the long bill stuff that it used to cut.

THE LEVER SAFETY-VALVE.

THE following interesting article on the safety valve is reproduced from a late issue of The Locomotive :

GENERAL REMARKS.—We have received so many requests for a rule for calculating the position of the weight on a safety-valve, and the blowing-off pressure when the position of the weight is given, that we have thought it wise to publish such a rule in The Locomotive. It would be easy to give a simple formula for the purpose, but we have considered that the wants of engineers would be best met by explaining the theory of the lever-valve, and showing, as clearly as possible, the reason for each step in the calculation.

OBJECT OF THE SAFETY-VALVE.—The object of the safety-valve, as every one knows, is to prevent the pressure in the boiler from rising to a dangerous point,

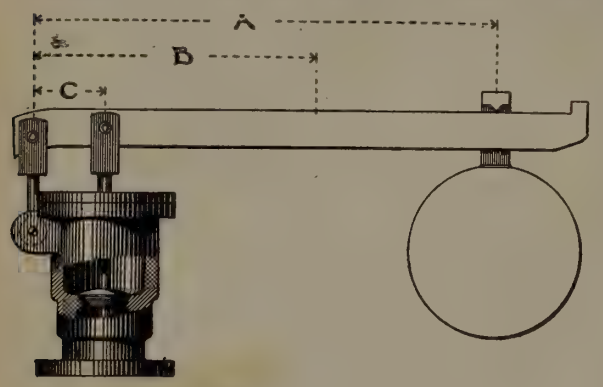


FIG. 1—DIAGRAM OF A LEVER SAFETY-VALVE.

by providing an outlet through which steam can escape when the pressure reaches a certain limit, which is determined by the strength of the boiler, and by the conditions under which it is to work. The simplest device for attaining this end is the "dead-weight" valve, the principle of which is illustrated in Fig. 2. It consists simply of a plate of iron, laid upon a nozzle, and held down by a weight. The calculation of the blowing-off point of such a valve is very simple. In the valve here shown, for example, the steam acts against a circle two inches in diameter. The area of a two-inch circle is $2 \times 2 \times .7854 = 3.14$ sq in., and the weight tending to hold the cover plate down being 314 lbs., it is evident that the valve will not blow off until the steam pressure reaches 100 lbs. per square inch. Dead-weight valves are used somewhat in England, but they are seldom met with in this country, the commoner form here being that suggested in Fig. 1. It may be well to say that Fig. 1 does not purport to be a good form of valve. We should certainly object to it, if it were placed upon a boiler offered to us for insurance, because no guides are provided for the lever or for the valve stem. These features were intentionally omitted in the engraving, in order that their presence might not draw the attention away from the main points under consideration — he calculation, namely, of the blow-off pressure and of the position of the weight.

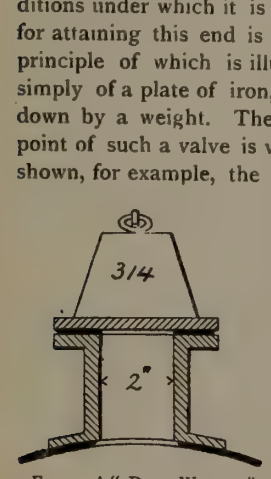


FIG. 2—A "DEAD-WEIGHT" VALVE.

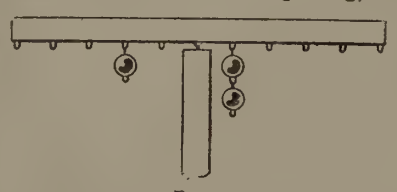


FIG. 3.

THEORY OF THE LEVER.—In order to be able to perform safety-valve calculations intelligently, one must have a clear idea of the principle of the lever ; and it is hoped that such an idea may be had from a study of the illustrations that are presented herewith. These represent a lath or other light piece of wood which is balanced upon a knife edge, and into which, on the under side, a number of small staples are driven at equal distances. A number of balls of lead are also supposed to be provided, all exactly alike, and all being furnished with a hook at the top and a staple at the bottom. Two of these weights, when hung upon the first staple, as shown in Fig. 3, will just balance one weight hung upon the second staple, on the other side of the fulcrum. In the same way, four of them, when hung upon the first staple, as shown in Fig. 4, will just balance one hung upon the fourth staple. Five upon the second staple, as shown in Fig. 5, will just balance two upon the fifth staple ; and three upon the fifth staple will just balance five upon the third staple, as shown in Fig. 6. It will be seen that in every one of these cases the lath is balanced, provided the weight upon one side, when multiplied by its distance from the fulcrum, is equal to the weight upon the other side, multiplied by its distance from the fulcrum. This is the principle of Archimedes, and it is used in all calculations relating to the lever. (The reader may find it a profitable exercise to show that the systems shown in Figs. 7 and 8 are balanced. A suggestion is afforded him in Fig. 7, while in Fig. 8 he is left entirely to his own resources. He should find no difficulty in either case, however, if he has grasped the fundamental idea which is contained in the illustrations given above).

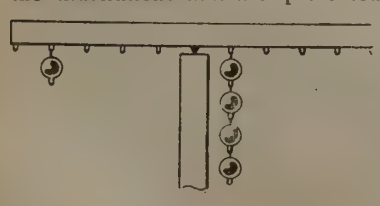


FIG. 4.

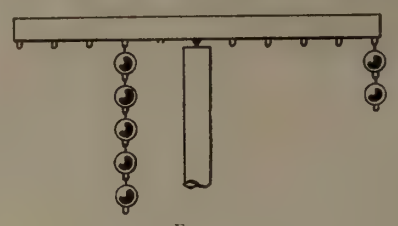


FIG. 5.

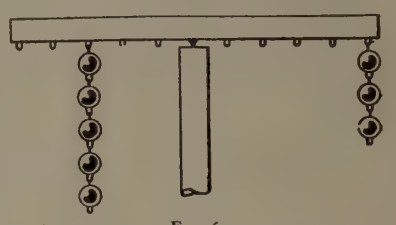


FIG. 6.

APPLICATION TO THE SAFETY-VALVE.—We are now prepared to apply the principle of the lever to the safety-valve, although there is still one point to be cleared up before we can give a complete rule. (The point to which we refer is the influence of the weight of the arm which carries the ball ; but for the present moment we shall consider this arm to be devoid of weight, and we shall introduce a correction for it later on.) Fig. 9 is a crude representation of a safety-valve, in which the total steam pressure against the disk of the valve is supposed to be 40 lbs., and the ball is supposed to weigh 10 pounds. If the valve stem is 6″ from the fulcrum, the ball will have to be 24″ from the fulcrum in order for the valve to blow off at the given pressure —that is, at 40 lbs. This is easily seen, since 6×40 equals 10×24 ; but if the reader has any doubt about the applicability of Archimedes' rule in this case, he may note that the upward pressure due to the steam can be conceived to be replaced by a 40 lb. weight hung 6″ to the left of the fulcrum, as indicated by the dotted circle. The lever will then be equivalent to the one shown in Fig. 10, which is similar in all respects to those shown in Figs. 3 to 8, and to which Archimedes' rule plainly applies. If the blowing-off pressure were not given in Fig. 9, and we were required to find it from the other data there shown, we should reason as follows : When the valve is on the point of blowing off, the upward thrust of the valve-stem is just balanced by the downward tendency of the ball ; and, therefore, from Archimedes' principle, 10×24 must equal 6 times the thrust of the valve-stem. But 10×24 equals 240, and hence 240 is 6 times the thrust of the valve-stem, and $240 \div 6$ (= 40 lbs.) must be the total pressure exerted on the disk of the valve when it is about to blow off. If the pressure per square inch were desired, we should have to divide 40, the total pressure on the valve disk, by the area of the disk in square inches.

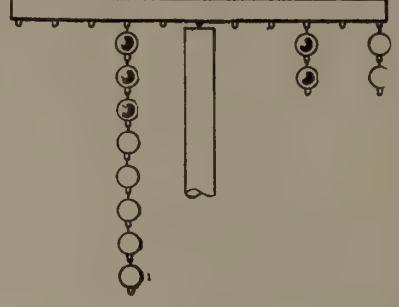


FIG. 7.

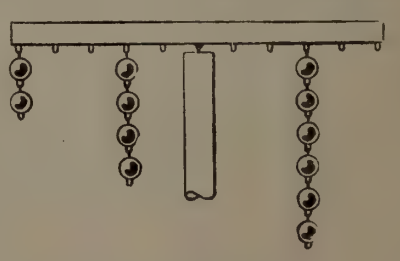


FIG. 8.

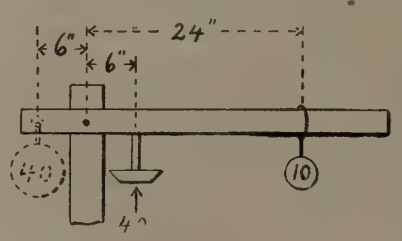


FIG 9.

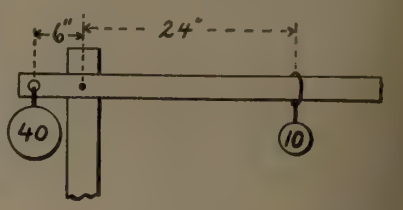


FIG. 11.

THE ARM OF THE VALVE.—In order to take the weight of the valve-arm into account, we shall first make a short digression for illustrating the meaning of the expression "center of gravity." Consider, first, the system shown in Fig. 11, where there is one ball on the first staple and one on the fifth. The one ball on the fifth staple is equivalent to five balls on the first one ; so that the two balls on the right hand side of the fulcrum are equivalent to six balls suspended from the first staple. They are therefore balanced by the two balls on the third staple ; and, in general, if two balls be hung from any of the staples, they would be exactly balanced by a pair of balls whose distance from the fulcrum was the average of the distances from the first two. Fig. 12 is a further illustration of this fact. Now, referring to Fig. 13, let us conceive the valve-arm to be without weight, except two small and equal pieces of it, whose distances from the fulcrum are respectively 10″ and 20″. By analogy with the two preceding illustrations, we see that these two little masses would be just balanced by a similar pair of masses, spaced at equal distances ; they would be just balanced by four similar masses, hung at a distance from the fulcrum equal to half the length of the arm. While this kind of reasoning is applicable, strictly speaking, only to the case in which the valve-arm is of equal thickness and width throughout, and has no irregularities whatever, we may, in practice, apply it to all valve-arms approximately uniform in cross-section ; and by extending the conception of Figs. 13 and 15 until the little masses become so numerous as to fill the entire lever, we conclude that a valve-arm of this sort would be balanced by a similar arm suspended (as shown in Fig. 15) at a distance from

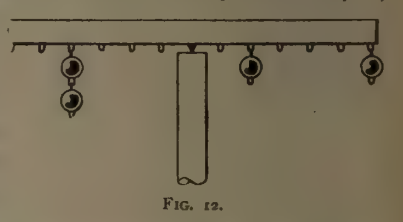


FIG. 12.

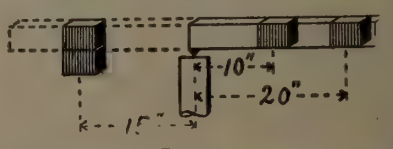


FIG. 13.

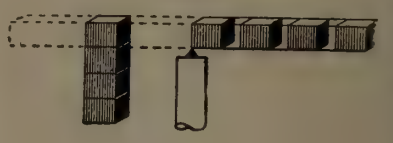


FIG. 14.

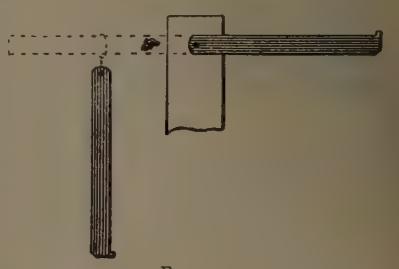


FIG. 15.

CANADA LUMBERMAN

WEEKLY EDITION

The Lumberman Monthly Edition, 20 pages } $1.00 PER YEAR { The Lumberman Weekly Edition, every Wednesday

THIS PAPER REACHES REGULARLY THE PRINCIPAL LUMBER MANUFACTURERS AND DEALERS THROUGHOUT CANADA, AND WHOLESALE BUYERS IN THE AMERICAN AND FOREIGN MARKETS.

VOL. I. TORONTO, ONT., NOVEMBER 27, 1895 No. 47.

CANADA LUMBERMAN

PUBLISHED BY

C. H. MORTIMER

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Branch Office:
NEW YORK LIFE INSURANCE BUILDING,
MONTREAL.

Weekly Lumberman, published every Wednesday. Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

Lumberman, Monthly. A 20-page journal, discussing fully and impartially subjects pertinent to the lumber and wood-working industries. Contains interviews with prominent members of the trade, and character sketches and portraits of leading lumbermen. Its special articles on technical and mechanical subjects are especially valuable to saw mill and planing mill men and manufacturers of lumber products.

☞ Subscription price for the two editions for one year, $1.00.

LUMBERMAN'S

VEST-POCKET

INSPECTION BOOK

Containing Rules for the Inspection and Measuring of Pine and Hardwood Lumber in the leading markets of Canada and the United States. Embracing also many useful tables and calculations of everyday service to lumbermen.

Prepared by the Editor of the "Canada Lumberman."

Toronto, Canada
C. H. MORTIMER, Publisher
1895

THE above is a fac simile of the title page of the latest and most complete Lumber and Inspection Book published.

We shall be pleased to send you a copy on receipt of four 3 cent Canadian postage stamps

ADDRESS:

THE CANADA LUMBERMAN,
Toronto, Canada

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue.

FOR SALE, ABOUT 20 000 FT. OF 2-IN. BASS 1st. and 2nd. Box 24, CANADA LUMBERMAN.

WOOD LOT—50 ACRES—HEAVILY TIMBERED: cedar, hemlock, black ash, and tamarac; adjacent to three railway lines; Oxford county. Apply 117 Bedford Road, City.

WANTED.

FIFTY-TWO CARS, ONE CAR PER WEEK. White pine sawed 1 inch square and four feet long. White sap to be the only defect. Send proposals or enquiries to

THE LYON & BILLARD CO., Meriden, Conn.

FOR SALE—TIMBER LIMITS

48 million feet white pine timber, 12 inches and up.
7 million feet red pine timber, 11 inches and up.
1¾ million feet tamarac timber.
1½ million feet of spruce timber.
100,000 tamarac tie timber.
50,000 cedar tie timber.
65,000 cords spruce pulp wood timber.

comprising 100 square miles on a tributary of the Ottawa river, good water, Province of Quebec, at $110,000. Terms to suit purchaser.

Apply to

Box 257, Sudbury, Ontario.

TENDERS WANTED.

SALE OF BURNT AND OTHER TIMBER

TENDERS WILL BE RECEIVED AT THIS Department up to and including the THIRD DAY OF DECEMBER next, for the right to cut the pine trees over seven inches in diameter on the stump on the under stated areas in the township of Grant, in the District of Nipissing:

BERTH No. 1.—Con. 1, S. ½ lot 5, S. ½ 6, S. ½ 8, lots 9, 10, 11 and 12. Area 2½ miles.*

BERTH No. 2.—Con. 2, lots 9, 10, 11 and 12. Area 2 miles.*

BERTH No. 3.—Con. 3, lots 9, 10, 11 and 12. Area 2 miles.

BERTH No. 4.—Con. 4, lots 9, 10, 11 and 12. Con. 5, lots 9 and 10, and those parts lots 11 and 12 south of Tomiko river. Area 2⅓ miles.

BERTH No. 5.—Con. 5, parts lots 11 and 12 north of Tomiko river. Con. 6, lots 7, 8, 9, 10, 11 and 12. Area 2 miles.

* NOTE.—The timber on berths 1 and 2 has been damaged by fire, and some cutting has taken place on them.

Tenders should be for each berth separately, and should state the amount the parties tendering are prepared to pay as bonus for the right to cut all the pine trees over seven inches in diameter on the stump. The timber when cut to be subject in addition to the following rates of dues: On sawlogs $1.25 per thousand feet board measure; on square or waney timber $25 per thousand feet cubic. No pine trees of a less diameter than seven inches on the stump shall be cut. The Department reserves all timber except the pine, together with the right to dispose of such other timber at any time, and purchasers of the other timber will have the right to cut the same and to make roads and do whatever may be necessary in the premises to cut and remove the same.

TERMS OF PAYMENT.—One-half cash, balance in three and six months with interest at seven per cent.; notes for balance to be endorsed by parties satisfactory to the Department. A marked cheque for two hundred dollars must accompany each tender. The highest or any tender not necessarily accepted.

For further particulars apply to the Department of Crown Lands, Toronto.

A. S. HARDY,
Commissioner of Crown Lands.

Department of Crown Lands,
Toronto, October 18th, 1895.

FOR SALE.

A SAW MILL, DWELLING HOUSE, AND about four acres of land, never failing supply of water. Address, J. T. KERR, Iona Station, P. O.

WANTED.

BROWN ASH, BIRCH, BASS, GREY AND soft elm. Will contract for large or moderate quantities for cash.

DUNBAR & CAPE,
18 Broadway, New York City.

WANTED.

CEDAR RAILROAD CROSS TIES HEWN two sides to 6 inches in thickness by 7 inches to 14 inches width of face, 8 feet long.

DUNBAR & CAPE,
18 Broadway, New York City.

ATTENTION LUMBERMEN!

THE PARTIES HERE SIGNED BELOW will buy any quantity and any and all grades of lumber, and pay half cash and and half real estate, improved or vacant Detroit property. We have $150,000 worth of Detroit property and we are stocking a new lumber yard. Apply to SHATTOCK & DAVIS, Room 3, Cleland Block, 29 and 31 State St., Detroit, Mich.

CURRENT TRADE CONDITIONS.

ONTARIO.

FROM the Ottawa Valley comes a report that the export lumber trade is brisk-ening up somewhat, though there is little change in prices. Sales to the English market have been very steady, there having been little variation in the quantity sent from Canadian ports for the last five years. The stocks at the mills are larger. Some manufacturers have contracted for their next season's cut. Each of the large shipping firms take the same as last year at the same prices, which, for the higher qualities particularly, were then considered very high. The Hawkesbury cut has gone to Messrs. Dobell, Beckett & Co.; the Edwards to Messrs. W. & J. Sharpless and J. Burstall & Co., in equal quantities; the Gilmour to Messrs. McArthur Bros & Co.; the Gilmours, of Trenton, to the same firm; and the Booth, one third each to Messrs. W. & J. Sharpless, Messrs. Robt. Cox & Co., and Messrs. J. Burstall & Co. A Liverpool correspondent states: It is reported that Mr. J. W. Todd, who is now in the Ottawa pine districts, making further purchases for the winter trade of his Liverpool house, Messrs. Watson & Todd, has purchased about 1,000 stds of deals and boards, which will be promptly shipped at advanced prices. This is probably the cut of Gillies Bros., Carleton Place. The strong rise in Canadian freights will further brace the cost of any remaining consignments which may come forward before the close of the season, and sellers will therefore have to obtain a considerable improvement on recent market quotations to cover cost of importation. In the Toronto district there is nothing new to note. Pine and hardwoods are both moving slowly. From western Ontario good accounts come as to the condition of the hardwood trade. A Blenheim firm, A. L. Hamill & Co., have been shipping a quantity of oak to Germany, getting therefore a very low rate, viz.: 29 cents, rail and water included, to Antwerp. They are now sending a quantity of black ash to Liverpool. Another firm in the same locality is just completing an order for 3,000,000 feet of elm to a factory in Cleveland for the manufacture of washboards. The price is understood to be $11 a thousand. Laird Bros., of Dresden, say stocks are moving actively with them, the demand being for barn boards. They have supplied the new Presbyterian church with lumber at fair prices, and prices remain firm. Trade has been fair and in advance of last season. The general consensus is that the United States market shown signs of improvement.

QUEBEC AND NEW BRUNSWICK.

The possibility of a duty being again imposed on lumber entering the United States, which would come into effect in 1897, is spurring on the spruce men to make 1896 a banner year in their business, and there is every prospect of great activity the coming winter. Prices for spruce in both the English and United States markets are such as to encourage them to take out good stocks, and they have every reason to expect a prosperous season next year. Stocks in the foreign markets are light, and those who can supply dimension timber for the eastern market, for immediate delivery, can realize well. Cargoes of yard random in the eastern market bring $12.50 to $13, and a good average of ordered stock commands $13 to $13,50. Frames are very firm at $14 to $14.50. Lath 1½ inch is worth $1.75, slab lath $1.65 to $1.70. Shingles are selling well, cedar being quoted at $2.85 for extras. A further advance in prices has taken place as regards New Brunswick spruce deals on the west coast of England. At Liverpool the stock is only some 8,000 stds, as against 18,000 stds in 1894, the consumption last month being more than half as much greater than the supply. A St. John cargo afloat has been sold to Messrs. Thomas Rimmer & Son, at the highest figure recorded for a long time past, and should the present strong demand continue, and there are every signs that it will, buyers must be prepared to pay even still heavier prices. A good deal of milling property is changing hands, and on the whole, our lumbermen have reason to be satisfied with the outlook.

BRITISH COLUMBIA.

Trade is rather slack at present. The Australian market is overstocked, and the demand from Central and South America is very limited, as is also that from Shanghai. The demand from South Africa, however, continues brisk. Prices continue about the same, but the Pacific coast association, should it materialize, will stiffen prices.

UNITED STATES.

The state of the weather, betokening the arrival of winter, has given a check to the free movement of lumber, and is hastening the closing of the season's business. Movements of stocks by vessel are nearly at an end, and a review shows that about as much lumber has reached wholesale distributing points on the lakes as last year. Receipts at Buffalo, Tonawanda, Chicago and Toledo have been heavy during November, and in the east arrivals both by rail and boat have been large. In the Northwest and Southwest the distribution to the retail trade has fallen off. This is due to the low price of produce, which has induced farmers to hold rather than sell, and placed a damper on the rural demand for lumber. Prices as a result are not so buoyant as in the summer and early fall, and there is not the usual tendency to put up prices as winter approaches. In the east the spruce trade has improved, and all stock offered is readily taken at such figures as will yield a profit. In white pine there is considerable doubt felt as to the future. Southern yellow pine is cutting into the demand for it and remains firm as to price. Hemlock is in urgent demand in northern states. Cypress is gaining ground in New York and New England States. Hardwood is much sought after, oak leading. The call for railway and car stock is urgent. Poplar is selling well, but prices are not improving. Cypress has largely taken its place. Cherry is in growing demand. Many of the lumbermen are looking to Congress for such legislation as will remove the present uncertainty as to the monetary situation, and do not anticipate much improvement till such legislation has been enacted.

FOREIGN.

In the English market the usual dullness which prevails at this season has set in and business is confined to cargoes previously sold, which are being hastened forward with all possible speed. Dealers are beginning to make arrangements for next season's business, but it is rather early to forecast what it will be with any degree of certainty. A sale of best Swedish scantling at £5 5s 6d f. o. b., which means about £7 5s landed, is reported, which is certainly a good price. A sale of white battens in Scotland at £5 5s f. o. b. is also reported, but 5s more is now asked. Buyers seem disposed to make contracts for next year's supply at this year's closing prices, but shippers are in no hurry to commence business yet. Business is fairly active in Canadian woods, and the market is strengthening every day. Common qualities are wanted especially 3rd and 4th spruce. Those who have them are asking £6 15s and £6 5s c. i. f. Pine of the lower descriptions is also in demand, 1st and 2nds not being wanted. A number of sales of next year's product as noted elsewhere, have been made on the basis of this year's prices.

STOCKS AND PRICES.

The Canada Lumber Co.'s mill at Carleton Place, shut down for the season on the 19th.

Mr. W. A. Lockhart has sold 650 acres of lumber land at St. Martins, N. B., to Mr. W. Malcolm Mackay at $1,575.

The standing timber on 360 acres owned by the Log Cabin Fishing Club, at Lake Lomond, N. S., is offered for sale by tender.

Tenders are asked for the shingle mill and machinery of the estate of E. M. Law & Co., of Victoria Harbour, Ont., also for a quantity of shingles.

The river St. John rose 10 inches at Fredericton one night last week. If the river remains open a few days all the logs will reach the booms.

The stock of handles, lumber, logs, etc., belonging to the insolvent estate of Capt. John Ellison, of Port Stanley, Ont., is being disposed of by tender.

The Ontario and Western Lumber Co. has cut from 25,000,000 to 30,000,000 feet this year. There are seven large mills under control of the company.

Mr. W. R. Johnston, merchant, of Bathurst, N. B., has leased a rotary mill from Mrs. R. Jennings, of Janeville, and will fit it up for making shingles.

The lumber cut on the Restigouche this year will, it is expected, be slightly short of that of last year, which was between twelve million and fourteen million.

It is thought that the Muskoka Lumber Co. will not operate on the Restigouche this winter, but they may do something on Green River, sending their cut down the St. John.

The saw mills of Messrs. Baptist & Curtis and the St. Maurice Lumber Co., at Three Rivers, have closed for the winter. A great many of the men have left for the woods.

Telegraph poles are in demand. Mr. Sherman, local agent for H. D. McCaffrey, of Oswego, N. Y., says he is ready to purchase 50,000 or more, to be delivered along the line of the Grand Trunk.

Mr. John Dovey, of Lindsay, Ont., has decided not to rebuild his mill recently burned until next spring, and will not work his limits this winter, as he has enough stock for next year. He lost $4,000 worth of shingles in the fire.

Tonawanda Island has seldom held as much pine lumber as it does now. Sales for October were heavy, in fact it was one of the most active Octobers they have seen, but still the stocks are large. Yet there is less complaint of low prices than at most wholesale centres.

Lumbering around Bear River, N. S., promises to be as active this winter as last. Messrs. Clarke Bros. have commenced operations at Lake Tom Wallace where they have about 200,000 feet to saw up now and at Round Lake there will be a million feet.

Mr. George Johnston, inspector for the Wilson Lumber Co., of Toronto, which purchased the season's output of the Carew's mill, Lindsay, Ont., is busily engaged superintending the shipping of it. The lack of sufficient cars is retarding operations.

J. Piggott & Sons, Windsor, Ont., say that stocks are moving actively and that pine for general house use is in good demand. The lumber for the new Presbyterian church sold well at Detroit prices. Stocks are good and prices are declining, but trade has been good, better than it has been for years, and prospects are good for the spring trade.

The sale of the Turner lumber tract, at Albert N. B., attracted much attention, all the larger firms of New Brunswick and Nova Scotia being represented. It was purchased by Mr. T. B. Calhoun for, it is understood, a St. John man, and was knocked down at $6,635. The property consists of a level tract on the line of the Albert Southern railway, and will cut about two million feet of lumber. Although the lumber can be easily handled and the property is a very desirable one, it is generally considered it was well sold.

NEW BRUNSWICK NOTES.

A. L. Wright & Co., Salisbury, N. B., have finished their season's cut, about 3,500,000 feet, of which some 2,800,000 feet was shipped to England, via Shediac, the remainder going the United States and local markets. Their operations this winter will be about the same as last. Their mill is steam power, gang and rotary, and well equipped for manufacturing, having planer, lath and box making machinery and shingle machine, which enables them to work their stock very fine, the refuse being cut up into short lengths for fire wood, which finds ready sale in Moncton.

C. & J. Prescott, Albert, N. B., are sawing up the last of their season's cut, 700,000 ft., of which was hung up, the rains of the last few days enabling them to get the logs to the mill. They cut deals for the English market, which are taken by scow to Grindstone Island, about three miles, and loaded in barges direct for Liverpool. The mill is single gang with lath machine, water power. Their cut was 3,000,000 ft. and they expect about the same this winter.

G. D. Prescott, West River. N. B., has got the last of his drive of logs to his mills and which he will finish sawing in a few days. His output this year will be 2½ millions. This winter he will get out 3 million ft. Mr. Prescott has a very nicely arranged steam rotary mill, with capacity of 30,000 feet a day, also lath machine sawing 25,000. He saws principally English deals.

George J. Vaughan, Point Wolfe, N. B., will get out the usual quantity of logs 4½ to 5 millions. His cut this year is all marketed, with the exception of some laths he is holding over for early spring shipment. Mr. Vaughan has had some offers for his mill and timber property, but his views as to price were considered too high. There is no doubt that the property is a valuable one.

J. S. Atkinson & Co., Albert, N. B., have a portable sawmill cutting deals for them in the woods this winter, which will be shipped from Grindstone Island in vessels direct for Liverpool. They intend getting out 1,000,000 ft.

J. S. Goodwin, Riverside, N. B., has his portable mill in the woods ready for work when the snow comes. He intends putting a double edger in his mill which will add to its capacity 20 to 25 per cent. His deals are also shipped from Grindstone.

Turner & McLellan, Riverside, N. B., have a steam mill of 25,000 capacity, the stock for which is hauled in from the surrounding country. They get from ½ to ¾ million feet.

A. & J. Bray, Lower Cape, N. B., have a water power gang saw mill, in which they cut about half a million feet per year. They are getting the usual quantity this winter.

Wilson Bros., Demoiselle Creek, N. B., have a water power rotary mill. They cut about 400,000 feet.

W. H. Duffy, Hillsboro, N. B., has two mills, a portable which he runs in the winter sawing 1,000,000 feet, and a water power gang mill at Turtle Creek, where he saws about the same quantity. The deals are shipped by the Salisbury & Harvey railroad to Riverside, then scowed to Grindstone and loaded on vessels for England.

Dawson, Duffy & Steeves, Dawson Settlement, N. B., are putting in a new steam portable mill and intend getting out a million feet of deals. They will be hauled to Baltimore on the T. & H. railroad, thence by rail and scow to Grindstone.

John W. Wright, Stony Creek, N. B., has his portable mill at work in the woods sawing for Nelson Smith, Coverdale. The spruce will be sawn into deals for the English market and the pine will go to local markets, principally to Moncton.

T. C. Le Blanc, Fox Creek, N. B., has his portable mill in the woods, three miles from Salisbury Station, sawing for Early Kay, merchant and mill owner, Salisbury.

Mr. Kay's water mill, at Pallet River, has been idle most of the summer, the water being so low that he did not get his drive in until very late. He finds it better to put a steam mill in the woods.

The Alma Lumber & Shipbuilding Co., Alma, N. B., have finished up a very good season's cut, about five million ft. Their cut this winter will be about the same as last. They have a two gang mill, with lath machines, planer and shingle machine, good water power. The mill is a model of convenience and neatness. Mr. Ludgate is the efficient mill-wright and superintendent.

SHIPPING MATTERS.

The ss Turret Crown has loaded lumber at Quebec for Hull.

The following shipments from the port of Montreal have been made during the week ending November 25th: Memphis, to London, 8,989 deals, 983 ends, 5,611 boards; Iona, to London, 21,758 boards; Amarynthia, to Glasgow, 23,800 deals; Lake Ontario, to Liverpool, 82,100 boards. NOTE—These are the last shipments of the season.

Mr. J. W. T. Bryce is the successful tender for the supply of lumber for Toronto for the coming year at $12.29 per M for planking, and $12.24 per M for scantling. Messrs. W. F. Grant & Co., will supply cedar paving posts at $4.95 per cord, and culls at $4.10.

LUMBER FREIGHT RATES.

LUMBER freight rates for pine on the Grand Trunk Railway have been made a fixture, as below. Of any intended change due notice will be given lumbermen.

General instructions in shipping by Grand Trunk are embodied in these words in the tariff schedule: On lumber in carloads, minimum weight, 30,000 lbs. per car, unless the marked capacity of the car be less, in which case the marked capacity (but not less than 24,000 lbs.) will be charged, and must not be exceeded. Should it be impracticable to load certain descriptions of light lumber up to 30,000 lbs. to the car, then the actual weight only will be charged for, but not less than 24,000 lbs. The rates on lumber in the tariff will not be higher from an intermediate point on the straight run than from the first named point beyond, to the same destination. For instance, the rates from Tara or Hepworth to Guelph, Brampton, Weston or Toronto, would not be higher than the specific rates named from Wiarton to the same points. The rates from Cargill and Southampton to points east of Listowel and south and west of Stratford will be the same as from Kincardine, but in no case are higher rates to be charged than as per mileage table published on page 9 of tariff.

Rates from leading lumber points on pine and other softwood lumber, shingles, etc., are as follows: From Glencairn, Creemore, Aurora, Barrie and other points in group B to Toronto, 6½c.; Collingwood, Penetang, Coldwater, Waubaushene, Sturgeon Bay, Victoria Harbor, Midland, Fenelon Falls, Longford, Gravenhurst and other points in group C, to Toronto, 6½c.; Brace, bridge to Toronto 7c.; Utterson, Huntsville, Navor-Emsdale, Katrine to Toronto, 7½c.; Burk's Falls, Berriedale and Sundridge, to Toronto, 8c.; South River, Powassen and Callender to Toronto, 9c.; Nipissing Junction and North Bay, 10c. Rate from Goderich, Kincardine and Wiarton to Toronto, 6½c. These rates are per 100 lbs. Rates from Toronto east to Belleville are 7½c. per 100 lbs.; to Deseronto, 9c.; to Brockville and Prescott, 10c.; to Montreal and Ottawa, 11c. The rates on hardwoods average about from 1c. to 2c. per 100 lbs. higher than on softwoods. For rates on railway ties, mahogany, rosewood, walnut, cherry, and other valuable woods, application must be made to the district freight agent.

On the Canadian Pacific the rates on pine and soft woods may be illustrated as follows: Cache Bay, North Bay, Sturgeon Falls and Warren, to Toronto, 10c; Algoma, Cook's Mills, Massey, Spanish River and Whitefish to Toronto, 13c.; Ottawa to Toronto, 10c From Ottawa, Hull, Aylmer and Duchesne Mills to station on the Lake Erie and Detroit River, Erie and Huron, Toronto, Hamilton and Buffalo, and Michigan Central Railways, the rate is 14½c. per 100 lbs. Regulations apply as to minimum size of carload of 30,000 lbs., and an advanced rate is charged for hardwoods.

Lumber freight rates on the Canada Atlantic Railway are as follows: Ottawa to Toronto, 10 cents per 100 lbs.; Ottawa to Oswego, $1.90 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Montreal, $1.25 per M ft., (3,000 lbs. and under per M ft.); Arnprior to Montreal, $1.75 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Quebec, $2.25 per M ft.; Arnprior to Quebec, $2.75 per M ft.; Ottawa to Buffalo, 12 cents per 100 lbs.: Ottawa to Port Huron and Detroit, 14 cents per 100 lbs. Ottawa to New York, 15 cents track delivery 17 cents per 100 lbs lightered; Arnprior to New York 17 cents track delivery 19 cents lightered; Ottawa to Boston, Portland and common points, local 15 cents; exports 13c. per 100 lbs.; Arnprior to Boston, Portland and common points, local 17 cents; export 15 cents per 100 lbs.; Ottawa to Burlington, 6 cents per 100 lbs.; Ottawa to Albany, 10 cents per 100 lbs.; Arnprior to Albany, 12 cents per 100 lbs.; Ottawa to St. John, N. B. and common points, 20 cents per 100 lbs.; Ottawa to Halifax, N. S. and common points, 22½ cents per 100 lbs. Minimum carload weight for shipment of lumber, lath, shingles, etc., is 30,000 lbs., and rates quoted above are in cents per 100 lbs., except when quoted per M ft. the minimum carload charged is 10 M ft., lumber not exceeding 300 lbs. to the M feet. Ottawa rates apply on shipments from Rockland and Hawkesbury.

MODIFICATION OF HARDWOOD RATES.

THE Grand Trunk Railway and Canadian Pacific have made the rates on hardwoods from certain points to Toronto and Hamilton as follows. The regulations are over the signature of Mr. John Earls, W.D.F.A., of the G. T. R., and given in reply to a letter from Toronto hardwood men:

"After careful consideration we have come to the conclusion that, on and after Jan. 1st, 1895, a modification will be made in the present arrangements for hardwood lumber, to the effect that the rate will be 7½c. per 100 lbs. from our Northern and Northwestern branches to Toronto and Hamilton. This rate, however, will not apply from main line points and the straight run between Toronto, Sarnia and Windsor; also that so far as rates on common lumber to points like Guelph, Galt, London, Woodstock, Ingersoll, etc., from all lumber shipping stations the rate will be the same on hardwood as on pine." On the old principle, we suppose, that half the loaf is better than none, hardwood men have something, possibly, to be thankful for, though there is no good reason why the rates generally on hardwood should not be as low as on pine. It is understood that the C. P. R. rate will be made uniform at 7½c. from same points.

FOR SALE

DRY HEMLOCK, ROCK AND SOFT ELM slabs for sale at 75 cents per cord on cars. No edgings.

J. E. MURPHY, He worth Station, Ont.

MILLS

Having Brown Ash 12, 14 and 16 ft. firsts and seconds, inch Bass firsts and seconds 12 feet, or any other Hardwood Lumber, can sell same for cash by addressing

H. D. WIGGIN,
No 89 State St., BOSTON, MASS.
Inspection at mill.

CANADIAN EXPORTERS AND WHOLESALERS

ROBERT THOMSON & CO.
....MANUFACTURERS OF....
LUMBER PINE and HARDWOOD AND TIMBER
TORONTO OFFICE:
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WHOLESALE LUMBER
OFFICE:
20 Aberdeen Chambers
Jas. G. GANE & Co.
HARDWOOD a Specialty
TORONTO

o o o GILMOUR & COMPANY o o o
MANUFACTURERS OF
WHITE PINE LUMBER
Write for Prices. : : : : *TRENTON, Ontario, Canada.*

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Manufacturers and Wholesale Dealers
LUMBER • LATH • SHINGLES
Contractors for Railway Supplies
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MIDLAND, ONT.

DONOGH & OLIVER o o o o
Wholesale Dealers in
Lumber, Lath and Shingles
TORONTO: 204-205 Board of Trade Building. -:- BUFFALO: Dock foot of Hertel Avenue.

Geo. Cormack
Wholesale Dealer in all kinds of
LUMBER, LATH AND SHINGLES
Bills cut to order.
Lumber shipped to all parts by rail or vessel.
Excellent quality of 18 inch Pine Shingles for sale.
WHITBY, ONTARIO

Huntsville Lumber Co., Ltd.
: HUNTSVILLE, ONT. :
MANUFACTURERS OF LUMBER LATH AND SHINGLES
WE are open to cut White Pine and Hemlock Bill Stuff. Have for Sale a Quantity of Dry Mill Stocks and Sidings, also 16 in. Pine Shingles and 4 ft. Lath 1½ in. wide.
CORRESPONDENCE SOLICITED

The Georgian Bay Lumber Co.
MANUFACTURERS OF
LUMBER : AND : LATH
Mills at Waubaushene and Port Severn • WAUBAUSHENE, ONT.

THE PEMBROKE LUMBER CO. LTD.
MANUFACTURERS AND WHOLESALE DEALERS IN
DIMENSION TIMBER OF ALL SIZES AND KINDS, JOISTS, CAR DECKING, CAR SILLS, SHIP DECKING, AND ALL KINDS OF ROUGH AND DRESSED LUMBER.
Write us for Quotations on all Bills
PEMBROKE, ONT.

Ottawa Lumber Co. Ottawa Canada
WHOLESALE LUMBER, LATH, SHINGLES, ETC.
Write for Stock List

KILN-DRIED BIRCH FLOORING SHEETING .. and .. CEILING $20.00 SAMPLES BY MAIL KNIGHT BROS. Burk's Falls, Ont.

FOREIGN EXPORTERS AND IMPORTERS

WE want to buy FOR CASH the following kinds of Lumber : : : : :
1¼, 1½, 2, 2½, 3, 4in. White Ash
1 1¼ 1½ 2 2½ 3 in. Soft Elm
Write us promptly, stating what you have to offer in each kind and quantity of each thickness, also dryness, etc., with lowest prices.
Empire Lumber Co. - Buffalo, N. Y.

• Ottawa & New York Lumber Line •
- - - BONDED LINE BETWEEN - - -
CANADIAN POINTS, NEW YORK CITY AND ALL POINTS REACHED BY WATER FROM ALBANY
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ALWAYS IN THE MARKET FOR HIGH GRADE LUMBER.
L. G. MULLER
MAPLE FLOORING, N. C. PINE, o o o o CYPRESS REDWOOD.
Lumber and Logs for Export
NO. 1 BROADWAY - NEW YORK.
POPLAR, PINE, and HARDWOOD LUMBER

YOUNG & KEELER COMPANY
WHOLESALE DEALERS AND MANUFACTURERS
Elm, Basswood, Birch and Maple
Canadian mill men invited to offer stocks. -:- 54 South Street, NEW YORK.

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Wholesale Dealers in
PINE AND HARDWOOD LUMBER
Shingles and Lath
Correspondence invited 270 West Genesee St., BUFFALO, N. Y.

SCATCHERD & SON 1053 Seneca Street, BUFFALO, N.Y. . .
: WANT :
ROCK ELM
COMMUNICATE AT ONCE. 7, 8, 14 and 16 feet, firsts and seconds

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Magnolia Metal Co., New York.
Machine Knives, Peter Hay, Galt, Ont.
Rails, John Gartshore, Toronto.
Silver Solder, P. W. Ellis & Co., Toronto.

PRICES CURRENT.

TORONTO, ONT.

TORONTO, Nov. 27, 1895.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x1c and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		2 30
XX shingles 16 inch		1 40
Lath, No. 1		1 75
Lath No. 2		1 40

HARDWOODS—PER M. FEET CAR LOTS.

Quality, 1s and 2s unless otherwise specified.

Ash, white, 1 to 2 in.		$26 00	$28 00	Cherry	1	1½	50 00 60 00
" " 2½ to 4		30 00	32 00	"	2	4	60 00 65 00
Ash, black, 1sts and 2nds, 1 to 1½ in		21 00	23 00	Elm, soft	1	to 1½	$14 00 $15 00
Ash, black, 1sts and 2nds, 2 to 4 in		23 00	25 00	" "	2	3	15 00 16 00
"sh, M. R., 2	"	1½	18 00 20 00	" rock	1	1¼	16 00 18 00
" 1	"	4	20 00 24 00	" "	1½	3	20 00 22 00
Birch, 2	"	1½	22 00 24 00	Hickory	1½	2	28 00 30 00
"	"	4	24 00 26 00	Maple	1	1½	16 00 18 00
" sqrs. 4x4	"	8x8	24 00 26 00	"	2	4	18 00 20 00
Basswood 1	"	1¼	16 00 18 00	Oak, red, p'n	1	1½	28 00 30 00
" 1½	"	2	19 00 20 00	" "	2	4	30 00 32 00
" m. r. 1	"	1¼	14 00 16 00	" white	1	1½	28 00 30 00
Butternut 1	"	1½	23 00 25 00	" "	2	4	30 00 35 00
" 2	"	3	25 00 28 00	" quart'd	1	2	48 00 52 00
Chestnut 1	"	3	24 00 2 600	Walnut	1	3	85 00 100 00
				Whitewood	1	2	32 00 36 00

OTTAWA, ONT.

OTTAWA, Nov. 27, 1895.

Pine, good sidings, per M feet, b.m	$30 00	35 00
Pine, good strips, " " "	26 00	30 00
Pine, good shorts, " " "	18 00	25 00
Pine, No. 1 dressing sidings, per M feet, b.m	18 00	22 00
Pine, " " strips, " " "	15 00	18 00
Pine, " " shorts, " " "	13 00	14 00
Pine, 10 s.c. and better stock, " " "	14 50	16 00
Pine, 8 s.c. " " " " "	12 00	13 50
Pine, " sidings " " "	13 00	15 00
Pine, " strips " " "	10 00	12 00
Pine, " shorts " " "	8 50	10 00
Pine, box culls " " "	9 00	11 00
Pine mill culls " " "	10 00	10 00
Lath per M	1 20	1 50

QUEBEC, QUE.

QUEBEC, Nov. 27, 1895.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	16 @	22
For fair average quality, according to average, etc., measured off.	20	26
For good and good fair average " " " " "	25	30
For superior " " " " "	32	40
In shipping order " " " " "	36	42
Waney board, 18 to 19 inch " " " " "	36	42
Waney board, 19 to 21 inch " " " "	38	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	40	49

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	22	30

BIRCH.

16 inch average, according to average and quality	21	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $40 to $43 for 3rd quality.
Bright spruce, according to mill specification, $40 $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality. F.O.B. batteau.

SAGINAW, MICH.

SAGINAW, Mich., Nov. 27, 1895.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$45 00	Selects, 1 in., 8 in. and up wide	$38 00
1¼, 1½ and 2 in.	45 00	1¼, 1½ and 2 in.	40 00
2½ and 3 in.	50 00	2½ and 3 in.	45 00
4 in.	55 00	4 in.	50 00

FINE COMMON.

1 in., 8 in. and up wide	33 50	2½ and 3 in., 8 in. and up wide	40 00
1¼, 1½ and 2 in.	35 00	4 in.	45 00

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	25 00	2½ and 3 in., 7 in. and up wide	35 00
1¼, 1½ and 2 in.	30 00	4 in.	38 00

STRIPS. A AND B (CLEAR AND SELECTS).

1¼ in., 4, 5 and 7 in. wide	34 00	1 in., 4, 5 and 7 in. wide	32 00
6 in. wide	36 00	6 in. wide	36 00

FINE COMMON OR C.

1¼ in., 4, 5, 6 in. wide	30 00	1 in., 6 in. wide	30 00
1 in., 4, 5 in. wide	28 00		

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24 00	1 in., 4, 5, 6 in. wide	23 00

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in.	17 00	1 in., 4, 5 and 7 in.	17 00
1 in., 6 in.	18 00	1 in., 6 in.	18 00

NO. 2 FENCING OR NO. 4 FLOORING.

1 in., 4, 5 and 7 in.	14 00	1¼ in., 4 to n.	14 00
1 in., 6 in.	14 50	No. 3 fencing, 1 in., 6 in.	13 00

SHELVING.

No. 1, 1 in., 10 in. stocks	25 00	No. 2, 1 in., 7 and 8 in. stocks	19 00
1 in., 10 in. and up wide	26 00	1 in., 10 in. stocks	21 00
1 in., 12 in. stocks	29 00	1 in., 12 in. stocks	24 00
1 in., 12 in. and up wide	30 00	1 in., 10 in. and up wide	22 00
1¼ in. 1½ and 2 in., 8 in. and up wide	29 00	1 in., 13 in. and up wide	25 00

BARN BOARDS OR STOCKS.

No. 1, 12 in.	20 00	No. 2, 9 in.	14 00
10 in.	17 50	8 and 7 in.	14 00
9 in.	17 50	No. 3, 12 in.	13 00
8 and 7 in.	17 50	10 in.	12 00
No. 2, 12 in.	16 00	9 in.	12 00
10 in.	14 00	8 in.	12 00

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$10 00	1 in., 13 in. and up wide	$12 00
1 in., 6 in. wide	11 00	1¼, 1½ and 2 in., 7 in. and up wide	12 00
1 in., 7 in. wide and up	11 00		

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9 in. wide	17 00	1 in., 10 in. and up wide	17 00
1 in., 6 in. wide	17 00	1¼, 1½ and 2 in., 8 in. and up wide	17 00

COFFIN BOARDS.

No. 1, 1 in., 13 in. and up	20 00	No. 1, mill culls	9 00
No. 2	17 00	No. 2, or red horse	7 00

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23 00	No. 2	19 00
No. 1 (nearly clear)	21 50	No. 3	16 00

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16 ft.	$ 8 50	Hemlock, 2x4 to 10, 12 to 16 feet	8 00
18 ft	10 50	2x12	8 50
20 ft	11 50	Add $1 to each additional 2ft. in length.	
22 and 24 ft	12 50		

SHINGLES, 18-IN.

Fancy brands, XXXX	3 20	Standard brands. river made, XXXX	2 85
Clear Butts	2 00	Clear Butts	1 85

WHITE PINE LATH.

No. 1	1 60	No. 2	1 35
		Hemlock	1 25

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA N. Y., Nov. 27, 1895.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in.	$44 00	46 00	No. 3, 1¼ to 2 in. 15 00 17 00
2½ and 3 in.	50 00	53 00	Shelving, No. 1, 13 in and up, 1 in. 30 00@31 00
4 in.	54 00	56 00	Dressing 1¼ in. 24 00 25 00
Selects, 1 in.	39 00	40 00	1¼ x 10 and 1 26 00
1¼ to 2 in.	39 00	40 00	1½ in. 24 00 25 00
2½ and 3 in.	47 00	50 00	2 in. 25 00 26 00
4 in.		52 00	Mold st'ps, 1 to 2 in. 31 00 33 00
Fine common, 1 in.	34 00	35 00	Barn, No. 1, 10 and 12 in. 19 00 21 00
1¼ and 1½ in.	34 00	36 00	6 and 8 in. 18 50 20 00
2 in	34 00	36 00	No. 2, 10 and 12 in. 15 00 16 00
3 in.		45 00	No. 3, 10 and 12 in. 13 00 14 00
4 in		45 00	6 and 8 in. 12 50 13 50
Cut'g up, No. 1, 1 in.	26 00	28 00	Common, 1 in. 15 00 16 00
1¼ to 2 in.	32 00	34 00	1¼ and 1½ in. 17 00 18 00
No. 2, 1 in.	15 00	17 00	2 in 18 00 20 00
No. 2, 1¼ to 2 in	22 00	23 00	

WHITE ASH.

1st & 2nd, 1 inch,	26 00		2½ to 4 in.	28 00	30 00
1¼ to 2 in.	27 00	28 00	Strips	17 00	18 00
			Culls	9 00	10 00

BLACK AND BROWN ASH.

1st & 2nd, 8 inch up,	20 00	22 00	Com. & good culls	8 00	10 00

BIRCH.

1st & 2nd, 6 inch & up, red	25 00	28 00	1st & 2nd, white, 6 in. & up,	18 00	
			Com & good culls.	8 00	10 00

ELM.

1st & 2d, rock, 8in. & up,	18 00	22 00	1st & 2d, soft, 8 in. & up,	16 00	18 00

MAPLE.

1st & 2d, hard, 6in. & up	16 00	18 00	1st & 2d, soft, 6in. & up,	14 00	16 00

WHITE OAK.

1st & 2nd, plain, 8 in. & up	26 00	28 00	Clear squares, 5x5 to x8		30 00
Good common	13 00	15 00	1st & 2nd quartered, 6 in. up	40 00	45 00
Good culls	9 00	10 00	No. 2 quartered	20 00	25 00

NEW YORK CITY.

NEW YORK, N. Y., Nov. 27, 1895.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$28 00 @ 40 00	Building orders	$26 00 @ 37 00
Decking	44 00 50 00		

SPRUCE.

6 to 9 in.	13 00	14 00	10 to 12 in.	15 50	16 00
6 to 12 in.	14 50	15 50	Lath	1 85	2 00
9 to 12 in.	15 50	15 75			

HARDWOOD.

4/4 and thicker, No. 1 and 2	Black Ash, 10 to 16					23 00
" " "	Soft Elm,	"				17 00
" " "	Hard Maple,	"				21 00
" " "	Basswood,	"				20 00
" " "	Birch,	"				23 00
" "	Black Ash, Com. and Shipping Cull, M.C.O.					14 00
" "	Soft Elm,	"	"			12 00
" "	Hard Maple,	"	"			14 00
" "	Basswood,	"	"			12 00
" "	Birch,	"	"			14 00

ALBANY, N.Y.

ALBANY, N. Y., Nov. 27, 1895.

PINE.

Uppers, 3 in. up	$50	$52	Dressing boards, narrow	$19	$21
2½ in.	50	52	West India shipping boards.	15	17
1 to 2 in.	45	48	Box boards	11	14
4 inch uppers	50	52	10-in. dressing and better	26	30
Selects, 2½ in. up	40	42	10-in. common	14	15
1 to 2 in.	36	40	12-in. dressing and better	25	32
Fine common, 2½ in. and up	38	40	Common, 1x11	14	16
1 to 2 in.	34	38	No. 1 barn, 1x12		20
No. 1 cut, 1 to 2 inch	28	35	1x10	18	21
No. 2	22	25	1x8	16	18
No. 3	17	20	No. 2 barn, 1x12	17	19
No. 1 molding, 1 to 2 in.	35	36	1x10	16	17
No. 2 molding, 1 to 2 in.	30	32	1x8	15	16
Stained saps		20	Shaky or star clear, 1 to 2 in.	19	21
Bracket plank	30	35	Dressing	16	18
Shelving boards, 12-in. up	28	30	Common	11	15

LUMBERMEN'S SUPPLIES

SUGAR.

	c. per lb.	
Granulated	4⅜	4½
Extra bright refined	4	4⅛
Bright Yellow	3⅞	4
Medium Yellow		3⅝
Dark Yellow	3⅜	3½
Raw		

SYRUPS AND MOLASSES.

SYRUPS.	Per gallon bbls.	½ bbls.
Dark	28	30
Medium	30	35
Bright	35	40
Very Bright	50	00
Redpath's Honey		40
" " 2 gal pails		1 25
" " 3 gal pails		1 50

MOLASSES.

	Per gal.	
Trinadad, in puncheons	0 32	0 35
" bbls	0 36	0 37
" ½ bbls.	0 40	0 40
New Orleans, in bbls.	0 30	0 32
Porto Rico, hdds	0 38	0 40
" barrels	0 42	0 44
" ½ barrels	0 44	0 46

RICE, ETC.

	Per lb.	
Rice, Aracan	3½	3¾
" Patna,		4¾
" Japan		5
" Imperial Secta		5½
" Extra Burmah	3⅞	4
" Java Extra	6½	6¾
" Genuine Carolina	9½	10
Grand Duke	6¾	6½
Sago	4¾	5½
Tapioca	4½	5½
White Beans, per bushel		1 75

FRUITS.

FOREIGN.	c. per lb.	
Currants, Provincial, bbls.	3¾	4
" ½ bbls	3⅞	4⅛
" Filiatras, bbls	4	4½
" ½ bbls	4½	4¾
Currants, Patras, bbls	5	5½
" ½ bbls	5¼	5¾
" cases	5	6½
" Vostizzas, cases	6½	7½
" ½ cases	6¾	7¾
" 5-crown Excelsior (cases)	8	8½
" ½ case	8¼	8¾
Dates, Persian, boxes	4½	5
Figs, Elemes, 10lb. boxes	10	12
7-crown	16	18
P" Natural Figs, 28lb bxs		
runes, Bosnia, casks	4	4½
" " cases	5½	7
" " bags		
" Anchor C, bags		
" " E, "		
" " G&J, cases		5½
Raisins, Valencia, off-stalk	4¾	
Selected	6	6¾

CANNED GOODS.

	Per doz.	
Apples, 3's	$0 85	$0 90
" gallons	2 00	2 00
Beans, 2	0 85	0 95
Corn, 2's	0 90	0 95
" Epicure		1 15
Peas, 2's	0 85	0 95
" Sifted Select		1 45
Peaches, 2's	2 00	2 25
" 3's	3 00	3 25
Plums, Gr. Gages, 2's	1 85	2 00
" Lombard	1 50	1 60
" Damson Blue	1 50	1 60
Pumpkins, 3's	0 90	1 00
" gallons	2 10	2 25
Tomatoes, 3's	0 85	0 90
'Thistle' Finnan Haddies	1 35	1 40
Salmon, talls	1 25	1 35
" flats, No. 1	1 50	1 60

CANNED MEATS

(CANADIAN.)

Comp. Corn Beef 1lb cans				$1 65	$1 70
" "	2	"	2 65	2 75	
" "	4	"	4 80	5 00	
" "	6	"	7 50	7 75	
" "	14	"	18 00	18 50	

COFFEE.

GREEN.	c. per lb	
Mocha	28	35
Old Government Java	25	32
Rio	20	21
Plantation Ceylon	29	38
Porto Rico	24	26
Guatemala	24	23
Jamaica	22	23
Maracaibo	24	24
Caffaroma, 1 and 2lb tins, asstd		30

DOMESTIC.

Apples, Dried, per lb	6	6½
" Evaporated	8	10

TOBACCO AND CIGARS.

British Consols, 4's; Twin Gold Bar, 5's	59c
Ingots, rough and ready, 8's	57
Laurel, 3's	49
Brier, 7's	47
Index, 7's	44
Honeysuckle, 8's	56
Napoleon, 8's	50
Victoria 12's	44
Brunette, 12's	44
Prince of Wales, in caddies	48
" in 40lb. boxes	48
Bright Smoking Plug Myrtle, T & B, 3's	60
Lily, 7's	47
Diamond Solace, 12's	50
Myrtle Cut Smoking, 1lb. tins	70
¼ lb. pg., 6 lb. boxes	70
oz. pg., 5 lb. boxes	70

the fulcrum equal to half the length of the arm itself. This amounts to saying that a uniform valve-arm acts the same as it would if its weight were all concentrated at the middle point of the arm. The point in a body which possesses this property is called the center of gravity of the body. As we have said, the center of gravity of a straight lever may, in practice, be considered to be half way out towards the end of the lever ; but if the lever has an appreciable taper, the center of gravity will be nearer the fulcrum. The position of the center of gravity can be found, in such cases, by calculation ; but it is simpler to take the lever out, and balance it across a three-cornered file, as shown in Figs. 16 and 17. It will balance when the center of gravity is just over the edge of the file, and the distance *B* can then be measured directly.

CALCULATION OF THE BLOWING-OFF PRESSURE.—We are now prepared to give a complete example of the calculation of blowing-point of a safety-valve. Let us take the valve shown in Fig. 18. The arm is 32 in. long and weighs 3 pounds ; the ball weighs 20 pounds and is set 28 inches from the fulcrum; the valve-stem is 4″ from the fulcrum ; the valve-disk is 2″ in diameter, and the disk and stem, together, weigh 1½ pounds. It is required to find the blowing-off pressure. In the first case, let us consider the ball. It is possible to load the valve-disk directly (just as in the case of Fig. 2) with a weight which shall have precisely the same effect, in preventing the escape of steam, that the actual 20-pound ball has ; and our first undertaking will be to find out how big this imaginary "dead weight" would have to be. When we say that it is to be "equivalent" to the 20-pound ball on the lever, we mean that it would just balance that ball, if it were on the left side of the fulcrum, instead of on the right ; and hence, by Archimedes' principle, 28″ × 20 lbs. must equal 4″ multiplied by the imaginary "dead weight." Now 28 × 20 = 560, and 560 ÷ 4 = 140. In other words, the 20-pound weight, at a distance of 28″ from the fulcrum, has just the same effect as a 140-pound weight would have, if placed directly upon the valve-disk. In the same way we may investigate the effect of the valve-arm. It weighs 3 pounds, and its center of gravity is 16″ from the fulcrum. A three-pound weight, 16 inches from the fulcrum, is the same thing as a 12-pound weight, 4 inches from the fulcrum ; because 3 × 16 = 48, and 12 × 4 = 48. Hence the valve-arm is equivalent to a 12-pound weight placed directly upon the valve-disk. The whole lever valve may therefore be regarded as equivalent to a "dead weight" valve loaded with 153½ pounds ; for the ball is equivalent to a dead load of 140 pounds, the arm is equivalent to a dead load of 12 pounds, and the valve-disk and stem, taken together, weigh 1½ pounds ; and 140 + 12 + 1½ = 153½. We have therefore found out that the valve will begin to blow when the total pressure of the steam against the valve-disk is 153.5 pounds. The part of the disk which is exposed to the stem is 2″ in diameter, and its area is therefore 2 × 2 × .7854 = 3.1416 square inches. The total steam pressure against this area being 153.5 pounds, the pressure against each square inch of it will be 153.5 ÷ 3.1416 = 48.9 pounds (nearly). A valve with the dimensions given above will therefore blow off at just a trifle less than 49 pounds per square inch ; and the calculation is similar in all cases.

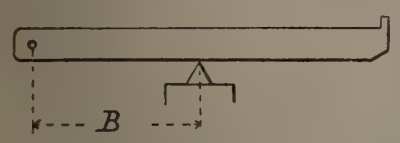


FIG. 16.

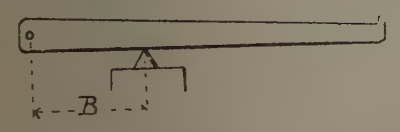


FIG. 17.

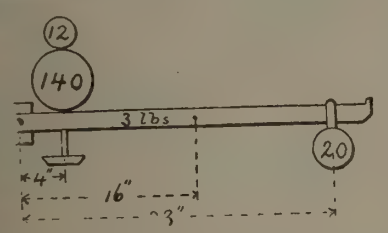


FIG. 18.—FINDING THE BLOWING PRESSURE.

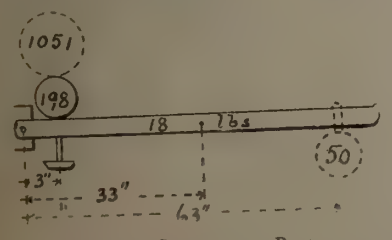


FIG. 19.—SETTING THE BALL.

SETTING THE WEIGHT.—The method of setting the weight, when the blowing-off pressure is given, is almost precisely the reverse of the calculation given above. As an example, consider the valve shown in Fig. 19. The dimensions are as follows : Diameter of the valve = 4″, length of the lever = 66″, weight of the ball = 50 lbs., weight of the lever = 18 lbs., weight of the valve-disk and stem = 7 lbs., distance of valve stem from fulcrum = 3″. It is required to set the ball so that the valve shall blow at 100 lbs. per square inch. The calculation is as follows : The area of a 4 inch disk is 4 × 4 × .7854 = 12.56 sq. in., and if the steam pressure is 100 lbs. per square inch, the total upward pressure against the valve-disk is 12.56 × 100 = 1,256 pounds. If the valve were of the "dead weight" kind, a load of 1,256 lbs. on the valve-disk would therefore cause it to blow at 100 lbs. per square inch. We therefore have to set the ball at such a place that the action of the ball, the lever, and the direct weight of the valve-disk and stem, shall be equal to a direct load of 1,256 lbs. Now, the lever weighs 18 lbs., and its "center of gravity" is (say) 33″ from the fulcrum. It is therefore equivalent to a 198-pound weight laid directly on the valve-disk ; for by Archimedes' rule we must have

33″ × 18 lbs. = 3″ × equivalent dead load.

Now 33 × 18 = 594, and 594 ÷ 3 = 198 lbs., as stated above. In Fig. 19 this dead load (which is equivalent to the weight of the lever itself) is represented by the small weight marked "198" ; and the large dotted ball above it (whose weight we are about to find) represents the dead load that is equivalent to the 50 lb. ball out on the lever. The dotted weight, together with the 198 lb. weight, and the weight (7 lbs.) of the disk and stem, must be equal to 1,256 lbs., as we have seen. That is, the dotted weight must be 1,051 lbs.; because

1,051 + 198 + 7 = 1,256

The problem has now resolved itself into placing the 50 lb. ball at such a point that it shall be equivalent to a dead load of 1,051 pounds. The valve stem being 3″ from the fulcrum, Archimedes' gives us

1,051 lbs. × 3″ = 50 lsb. × distance of ball from fulcrum.

Now 1,051 × 3 = 3,153, and 3,153 ÷ 50 = 63.06 inches. That is the ball must be placed 63 inches from the fulcrum, in order that the valve may blow at 100 lbs. per square inch.

RULES.—The processes of calculation which are explained above may now be summarized in the following two rules* :

RULE I. To find the blowing pressure when the position of the ball is given. Multiply the weight of the ball by its distance (*A*) from the fulcrum, and divide by the distance (*C*) of the valve stem from the fulcrum. (This gives the dead weight that is equivalent to the ball.) Then multiply the weight of the lever by the distance (*B*) of its center of gravity from the fulcrum, and divide by the distance (*C*) of the valve stem from the fulcrum. (This gives the dead weight that is equivalent to the lever.) Add together the two "dead weights," so calculated, and add in, also, the weight of the valve-disk and stem. (This gives the total weight that is keeping the valve-disk down.) Then divide the sum thus found by the area of the valve disk, in square inches, and the quotient is the pressure, in pounds per square inch, at which the valve will blow.

RULE II.—To set the ball, so that the valve shall blow at a given pressure. Multiply the area of the valve-disk by the blowing off pressure, expressed in pounds per square inch. (This gives the total effort of the steam to force the valve-disk up.) Subtract, from this total pressure the weight of the valve and stem. The remainder is the "dead weight" to which the lever and ball, taken together, must be equivalent. Then multiply the weight of the lever by the distance (*B*) of its "center of gravity" from the fulcrum and divide by the distance (*C*) of the valve stem from the fulcrum. The result is the "dead weight" to which the lever is equivalent ; and if this be subtracted from the total dead weight, just mentioned, the remainder will be the "dead weight" to which the ball alone must be equivalent. Multiply this remainder by the distance (*C*) of the valve stem from the fulcrum, and divide the product by the weight of the ball. The quotient is the distance, *A*, that the ball must be placed from the fulcrum, in order that the valve may blow off at the desired pressure.

* The letters refer to Fig. 1.

CAUTIONS.—In applying these rules two things must be carefully observed. In the first place, the diameter of the valve-disk must be measured at *a b*, in Fig. 20, and not at *c d* ; for the steam acts only on the circle whose diameter is *a b*. Again, if the valve stem has a square top, as indicated in Figs. 21 and 22, *m n* must be taken as the "distance of the valve stem from the fulcrum" ; because the moment the valve raises in the least degree, the pressure of the stem is all applied to the lever at *n*, as is plainly indicated in Fig. 22.

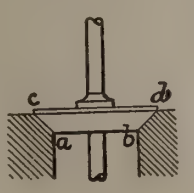


FIG. 20.

Although the foregoing article is intended simply to explain the principle underlying the lever safety-valve, it may be well to touch upon one point concerning the construction of such valves. The point we have in mind is this : When the boiler is under steam, it is an easy matter to try the valve, and find out whether it works freely or not. It ought also to be easy to do this, when the boiler is out of use ; and in many cases it is so. Usually when the boiler is not under steam, it is sufficient to raise the weight and the lever, and then to try the valve stem with the thumb and finger ; but some valves are so constructed that the valve-disk is free from the stem, and in such cases that the fact that the stem is free proves nothing whatever, so far as the disk itself is concerned, and the disk must be separately investigated before the valve can be pronounced in good condition. If there is no escape pipe screwed into the valve, the disk can usually be reached from the exhaust side, and its condition noted ; but if such a pipe is provided (as it is, in many cases) the inspector has to examine the disk as well as he can, from the inside of the boiler. If the valve does not happen to be secured directly to the nozzle, an examination from the interior of the boiler is not practicable, and then the waste pipe has to be unscrewed, or the bonnet of the valve taken off, before the disk can be reached. These difficulties, when combined with the fact that there is often no external evidence to show whether the valve is secured to the stem or not, lead us to recommend strongly that valves with separate disks be avoided altogether. They have no very marked advantage over those in which disk and spindle are all in one piece, and as they are likely to deceive one into the belief that all is in good condition, when in reality the disk may be stuck fast, we feel justified in condemning their use altogether.

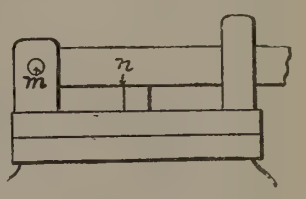


FIG. 21.

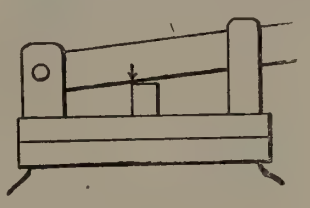


FIG. 22.

SPONTANEOUS FIRES.

LAMPBLACK has been known to take fire spontaneously :

Oiled or greasy rags have been seen to blaze up in a few minutes after having been thrown on the floor.

Dried rubbish exposed to the heat of the sun's rays has been seen to catch fire under circumstances that rendered any other cause impossible.

The sun's rays focused through a window pane on a plank in the floor containing pine sap have been known to set it on fire.

Sawdust used for cleaning floors, or absorbing spilled oil and varnish, should be removed from the buildings.

Sawdust accumulations around journals of machinery are prolific sources of fires.

Matches in the pockets of cast-off clothing are dangerous.

Varnish and turpentine cans placed too near the stove in cold weather are liable to explode and catch fire.

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE water in the Ottawa is still very low, and vessels are constantly getting aground on banks of saw-dust. More islands (sawdust) appear in the river than are laid down in the geographies. Some difficulty is experienced in getting into the Rideau canal locks.

The cut at the Chaudiere mills this season will fall short of that of 1894 by some fifty million feet. It must not be inferred that the lumber business in this city is declining. The shortage is due to other causes which may not occur again.

The municipal census shows the population of Ottawa to be 49,674, and places it fourth in size among the cities of Canada. Ottawa owes this largely to the lumber trade.

For the five months, May to September, both inclusive, the number of rafts reported at Ottawa through the Rideau canal was as follows, for the months named :—1895, 1 ; 1894, 0 ; 1893, 7. The Rideau does not appear to be much of a route for rafts.

The project of a canal to the Georgian Bay by way of the Ottawa River is not a new one, but it has taken on new life and is being boomed for all it is worth. Mr. Macleod Stewart is the most active promoter. If carried out it will have an important influence on the lumber trade.

After six years of litigation Antoine Ratte, proprietor of a boat livery in this city, has recovered damages from the Chaudiere mill owners for dumping sawdust into the river. The millmen were made joint defendants and the damages were divided as follows :— J. R. Booth, $1,827.77 ; Perley & Pattee, $879.14 ; Bronson & Weston, $879.14. The costs in the case are very large. Mr. Ratte entered a similar suit twelve years ago, which went to the privy council, and now he is in a position to enter another action for damage done since the suit just decided was entered upon.

A statement having been put forth that Mr. J. R. Booth, the great lumberman, who is building the Ottawa, Arnprior and Parry Sound Railway, had brought outsiders here to work for 90 cents a day, that gentleman has referred doubters to his pay rolls, which show that $1.25 a day was the lowest paid during the summer. During the winter some men did get from 90c. to $1.10 a day of 8 or 9 hours, doing work which was not really required till the spring. To men in the woods Mr. Booth pays $17 to $24 per month, according to the nature of their employment.

Canadian firms have sent between 6000 and 7000 men into the woods this year, and United States firms operating in Canada about 2000 more. Wages average as follows :—Foremen $50, cooks $35, log cutters $22, teamsters $20, general hands $18, road cutters $16, all with board. The prospects for a good season are bright.

OTTAWA, Can., Nov. 22, 1895.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE Everett mill men talk of shipping a cargo of shingles and siding by way of Cape Horn next spring.

An effort is being made to form a lumber association for the entire Pacific coast. The San Francisco men are working it up.

Reports from Melbourne, Australia, are to the effect that stocks of fir timber are exceedingly low, and that prices are stiffening. When the reduced tariff goes into effect on 1st January we expect a great impetus to our trade. The reduction being on sizes 12 x 12 and over, it will promote the shipment of large sizes at the expense of the smaller, but is nevertheless satisfactory to our millmen.

It is reported that the Ross-McLaren Lumber Co. are seriously considering the erection of a large cargo mill near Cape Caution ; also that a Tacoma firm have a party looking up a site on the mainland, near the north end of Vancouver Island, for a similar venture.

Mr. Francis Rotch, manager of the Seatco Manufacturing Co., Bucoda, went to Central America on the Transit, the first steamer of the Puget Sound Central American line, to represent his mill and Tacoma merchants. Soon after his arrival he cabled an order from San Jose de Guatemala for 300,000 feet of fir lumber. So do new markets open up for Pacific coast timber.

A Norwegian ship, the Mathilda, of 2269 tons register, recently arrived at Vancouver, from Nagasaki, Japan, to load lumber and canned salmon for Buenos Ayres. She will likely be followed by others. This is a new departure in our west coast trade.

Shingles are an interesting topic here, but there is very little to report, trade for this year being practically over. So far as I know now, the amount of shingles produced this year will be about the same as last ; and although not at present in a position to give the exact amount of the cut, I think about 125,000,000 is an outside figure. As to prices I can speak with more certainty, as I know that shingles have not been netting the manufacturers within 10 to 15 cents per thousand as much as they did last year. The reason of this is that we have had to compete with our neighbors in Washington. For example : We would have had no trouble in getting $2.50 per 1000 for our extra 6 to 2's delivered in Ontario, but Washington parties issued price lists at $2.35, and as a result we had to drop to $2.35 and $2.40. Possibly 25 per cent. of the cut of British Columbia has been sold in the United States this year at prices never below what Puget Sound manufacturers and dealers sold at, and in a good many instances 5 to 10 cents per 1000 more.

NEW WESTMINSTER, B.C., Nov. 18, 1895.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN].

ABOUT 80 schooners took cargoes of lumber at Fredericton for the United States this summer. Fully three times as much was sent in October as during the same month last year.

Men are being hired for the woods at wages ranging from $14 to $20 per month.

A number of men hired in this province for lumbering in Maine have been turned back at the frontier on account of the Alien Labor law. This seems to be a small business.

The cut of logs on the upper St. John this winter will be considerably larger than that of last year. The cut on the St. John above the Grand Falls will total about eighty millions. About twenty-five millions will be got out on the Tobique, which is larger than last year's cut. The cut on the Aroostook will fall short. The operators are Allan Hammond, who will get out about three million on Black Brook and Half Way Brook for Cushing & Co. ; Robt. Aiken, who will cut about two million for Miller & Woodman at the head of the Madawaska, and Cornelius Hagerman, who has contracted to get out a million on the St. Croix for W. H. Murray.

Adams & Co., of New York, have bought all the New Brunswick property of the St. Lawrence Lumber Company—the Bathurst mill and property from the English bondholders, and the stores, tug-boats and other plant from the liquidators. The Burnsville mill and property they bought from the Merchants' Bank of Halifax. Men have been sent into the woods on both properties, and six to eight million logs will be cut this winter. Adams & Co. will construct the extension of the Caraquet Railway to Lacadie, for which subsidies have been granted.

ST. JOHN, N. B., Nov. 23, 1895.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

NORWAY pine and hemlock are very much depressed in price at present. The former is selling at $8 to $8.50, the latter at $7 to $8. There is no money in them at such prices.

Nearly as much lumber has been shipped from Alpena this season as from the Saginaw river, that is by water. This is quite a change.

The Mosher failure is still a fruitful source of discussion in the Saginaw Valley. The liabilities, according to the latest statement, are not far from $1,000,000.

Four large steel pontoons, 30 feet long and 12 feet in diameter, have been built at Bay City, to be used for raising the steamer Cayuga from the bottom of Lake Michigan, where she lies in 101 feet of water.

The lumber shipments by water for October were only 17,840,000 feet, a very small showing for one of the closing months of the year. Up to date the shipments are 54,000,000 feet less than 1894, and 200,000,000 feet less than 1892. There is more lumber in proportion on the docks than usual. As for shingles, only 8,165,000 have been moved by water this season. Over 200,000,000 are handled here annually, an increasing number being transported by rail. In 1893 the Michigan Central and Flint & Pere Marquette each carried about 2340 car loads.

There has been a considerable falling off in the business of the Saginaw Valley, due partly to recent failures, partly to other causes. There will be large stocks held over. This will have an effect in curtailing the cut of logs, both here and in Canadian woods. There have been only about two-thirds the usual quantity of logs brought across the lake this season, and next year there will be less still.

J. T. Hurst and the Holland-Emery Co. cut 100,000,000 feet last year. This year they will not cut more than 20,000,000. They have, however, 30,000,000 feet hung up, so that they will have 50,000,000 feet for next season.

The Fair Haven Stave Co. have done a good business this season. They say fruit barrel staves are in large demand for eastern markets, and that they will carry over nothing but a few No. 2 staves. Such a season was not expected and the mills did not stock up for it, so they are all pretty well cleaned out. The outlook for next season is uncertain. Timber is becoming scarce and dear, and prices are too low for staves and heading to enable a profitable business to be done. The Carey Hoop Co., of Harbor Springs, which makes coiled hoops, report trade in that branch fairly good.

The factory of the Improved Match Co., at Detroit, a branch of the Match Trust, was destroyed by fire Nov. 16th. Three persons were burned to death. The factory was working day and night. The loss is about $45,000. The fire was started by an employee stepping on a match, and it spread with alarming rapidity. There is a lesson here to be careful with matches.

Colonel A. T. Bliss, of this state, owns a tract of 130,000,000 feet of fine white oak timber in Arkansas, about eighty miles from Hot Springs, and in view of the steady demand for quarter-sawed oak, is considering the project of organizing a company to erect a milling plant on the tract and manufacturing the timber.

The old passenger steamer Fountain City, which, in the sixties, was the largest passenger steamer on Lake Michigan, has been changed into a steam barge for the lumber trade, with a carrying capacity of 700,000 feet.

The Michigan Salt Co. has advanced the price of salt 5c. a bbl., which makes it 55 cents for fine.

Shaw & Tyman will run their saw mill at Sault Ste. Marie all winter.

The demand for men for the woods in the eastern end of the upper peninsula is greater than the supply. Several firms have agents at St. Ignace hiring men as they cross the straits, but when hired and their fare paid they have to be closely watched to prevent other agents from stealing them away at stations along the line.

Pack, Woods & Co., of Oscoda, have been re-estimating their pine, and find they have enough on the Au Sable waters to keep their mill going 5 years. They also have considerable on the Georgian Bay, and think they can saw it as advantageously at the mouth of the Au Sable as anywhere.

The Northern Michigan Hardwood Lumber Association held an important meeting at Traverse City recently to consider the depressed state of the market. They propose to curtail the output some 50 or 60 per cent. They say they do not desire to create a corner in hardwood, but simply to prevent it being slaughtered at rates which are unprofitable. The matter will be further considered at their December meeting.

The Henry Howard Estate, Port Huron, has not been three days without a special order on the head sawyer's slate this summer.

SAGINAW, Mich., Nov. 23, 1895.

THE NEWS.

—The N. & B. mills, Marysville, Mich., have closed down on account of low water.

—The sawing season at Minneapolis has closed. The cut is about the same as last year.

—A sea wall is to be built on the lake front in Chicago, which will require about 3,000,000 ft. of yellow pine.

—Mr. Christopher O'Kelly, a well known lumberman, of Pembroke, Ont., died a few days ago. He was almost an octogenarian.

—The Chatham Manufacturing Co. have closed down for the season and are taking stock. They will reopen on the first of January.

—A combination has been formed among the clothes pin manufacturers of the United States. The output exceeds 500,000,000 annually.

—The Rathbun Co.'s match factory at Deseronto now employs about seventy hands. Eight machines are in use and two more will be put in shortly.

—The Minister of Public Works is being urged to improve the navigation of the St. Maurice, on which considerable lumbering is done, and where the Messrs. Drummond take out a large quantity of wood to be made into charcoal for their Radnor forges.

—Mr. Cameron, manager of the Western Lumber Co., Winnipeg, says of the course of trade: The season for business is gradually changing in the west. Formerly we did considerable trade in the fall, but now it is mostly transacted between April 1 and September 1.

—A spar 128 feet in length, 28 inches in circumference at one end and 26 inches at the other, is being shipped to England by the Hastings mill, Vancouver. It is for a racing yacht, and is of the finest quality, not having a knot or blemish of any kind in its entire length.

—Farnworth & Jardines wood circular, Liverport, 1st November, gives the arrivals from British North America for the month of October as 28 vessels, 26,807 tons, against 42 vessels, 36,417 tons, for the same month last year. The total arrivals to date are slightly in excess of 1893 but considerably behind those of 1894.

PERSONAL.

Mr. A. H. Campbell, of Toronto, the well known lumberman, will spend the coming winter with his family in Europe.

Mr. H. A. Wiley, a member of the firm of Thos. Marks & Co., Port Arthur, was in Toronto recently, hiring men to cut spruce on the firm's limits on Lake Superior. A considerable amount of their output goes to Indiana, where it is made into paper.

Mr. A. A. Benson, representing the Waterous Co., of Brantford, having completed the Hamilton mill at Strait Shore, N. B., has gone to Ellerhouse Station, N. S., to look after the erection of a mill for Mr. T. G. McMullen, of Truro. He has made lots of friends while in the lower provinces.

A representative of the CANADA LUMBERMAN has had the pleasure of meeting in Montreal Mr. Paul Duluard, lumber merchant, of Paris, France. Mr. Duluard does an extensive trade in lumber, and especially in pulp wood, in France, and has come to Montreal for the purpose of making arrangements with a couple of houses to act as his agents. He has hitherto been doing business with Norwegian and other foreign exporters, but the coming into force of the Franco-Canadian treaty has led him to seek better conditions here. After arranging his business in Montreal Mr. Duluard will leave for New York, whence he will sail for France.

Lumbermen's Supplies

We are making a Specialty of **Lumbermen's Supplies,** and are offering, with other goods, a **good Japan Tea,** fine draw and make, at **12½ cents.** Get a sample of this splendid Tea suitable for the Camp.

H. P. Eckardt & Co.

WHOLESALE GROCERS - TORONTO.

CAMP SUPPLIES

Being extensive operators in the lumber business, as well as Wholesale Grocers, we are exceptionally well qualified to fill orders for Lumbermen's Supplies.

MAIL ORDERS GIVEN PROMPT ATTENTION.

DAVIDSON & HAY

Wholesale Grocers TORONTO

WHY BAND SAWS BREAK

SIXTEEN REASONS, AND HOW TO AVOID THEM

Being instructions to filers on the care of large band saw blades used in the manufacture of lumber.

A book filled with valuable information on the care of band saws. Giving the reasons for breaking; analyzing each reason; giving instructions to dispense with the causes as laid down in each reason; and full details on filing and brazing. The proper styles of hammers to use are illustrated and described, and views of blades showing the blows of the different styles of hammers form an important part of the illustrations. Improper and unequal tension are then treated, and the manner of properly setting irregular teeth is described. In connection with the treatise is a history of the invention, manufacture and use of the saw from its origin to the present time. The work in whole makes an accumulation of information such as has never before been published.

The book is printed on fine paper, good clear type, and is handsomely and substantially bound in cloth. It will be sent to any address on receipt of the price, **ONE DOLLAR.**

Address— CANADA LUMBERMAN, Toronto, Ont.

Pumps & HYDRAULIC MACHINERY

DUPLEX AND SINGLE STEAM AND POWER

The Northey Mfg. Co. Ltd.

TORONTO

THE LAURIE ENGINE CO. - MONTREAL

SOLE AGENTS FOR PROVINCE OF QUEBEC.

PAPER PULP BOARDS.

AMONG the recently granted Canadian patents, as described in the last issue of the Patent Record, is one for a process of making paper pulp boards, etc. The patentee is Wm. Norris Cornell, of Brownville, N. Y., and the claim is as follows:—

An improved process of making paper pulp board in imitation of natural wood, which consists in winding convolutionally on a paper machine, a pulp board of less than the desired thickness, then in adding a separate piece or pieces of pulp to the partially finished pulp board and finally in finishing the winding of the pulp board to the desired thickness, whereby said separate piece or pieces of pulp cause the pulp board to slip and wrinkle on the forming roll, substantially as set forth. 2nd. An improved process of making pulp board in imitation of natural wood, which consists in winding convolutionally on a paper machine, a pulp board of less than the desired thickness, then in adding to the partially finished pulp board a separate piece or pieces of pulp of greater density or drier, and of another color than the pulp board, and finally in finishing the winding of the pulp board to the desired thickness, whereby the said separate piece or pieces of pulp cause the pulp board to slip and wrinkle on the forming roll, substantially as set forth. 3rd. An improved process of making pulp board in imitation of natural wood, which consists in winding convolutionally on a paper machine, a pulp board of less than desired thickness, then in adding to the partially finished pulp board a separate piece or pieces of pulp of greater density or drier, and of a darker color than the pulp board, then in finishing the winding of the pulp board to the desired thickness, whereby said separate piece or pieces of pulp cause the pulp board to slip and wrinkle on the forming roll, then in removing the pulp board from the machine and finally in drying, sand papering, and finishing pulp board, substantially as set forth.

The water in the Rideau has not been so low for years. Mr. W. C. Edwards' mill at New Edinburgh has been working less than half time.

There is only one pulp mill on the North Pacific Coast, that at Everett, Wash., which uses 2,500 cords of wood per month and turns out 15 tons of paper per day.

The ships India and Hindostan, which have loaded lumber regularly for some years at the Moodyville mill, Vancouver, will hereafter load at the Hastings mill.

It is reported at Huntsville that Mr. Marshall, of Wiarton, Ont., has purchased the Fairy Lake Lock saw mill from the Canada Permanent Loan Society, and will fit it up for sawing hardwood.

ROBIN, SADLER & HAWORTH

MANUFACTURERS OF

OAK TANNED LEATHER BELTING

MONTREAL AND TORONTO

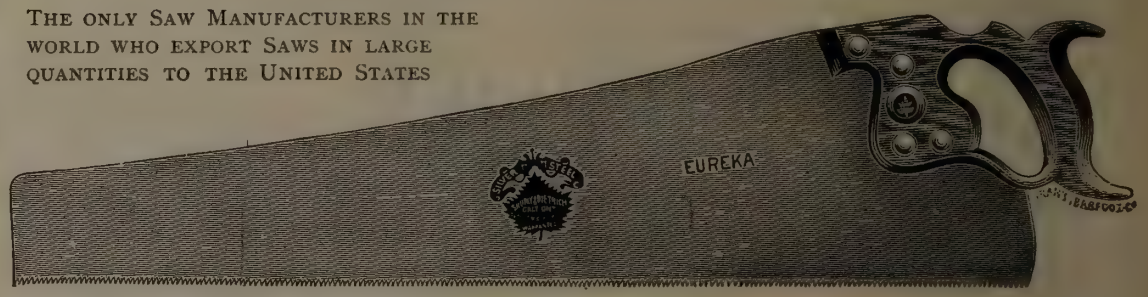
SHURLY & DIETRICH

GALT, ONT.

MANUFACTURERS OF

SAWS

THE ONLY SAW MANUFACTURERS IN THE WORLD WHO EXPORT SAWS IN LARGE QUANTITIES TO THE UNITED STATES



SOLE PROPRIETORS OF THE SECRET CHEMICAL PROCESS OF TEMPERING : : Our Silver Steel Saws are Unequalled

WEST & PEACHEY

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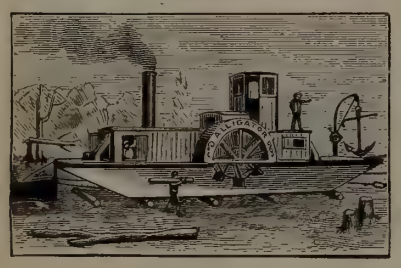
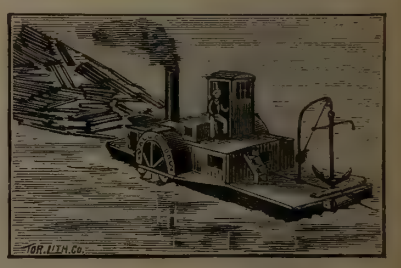


ALLIGATOR STEAM WARPING TUGS



STEAM ROAD MAKER

ENGINES AND BOILERS FOR STEAM YACHTS

Saw Mill Machinery

OAK TANNED BELTING

TORONTO
20 FRONT ST EAST
TELEPHONE 475

THE J.C.McLAREN BELTING Co

MONTREAL

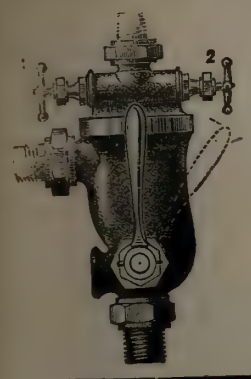
The large mill at Angus, Que., in which Hon. W. D. Ives and Messrs. G. Vandyke and R. H. Pope are interested, is nearly ready for work. It has one modern saw, with ample power, and will be run night and day, producing 65,000 feet every 24 hours. The slabs and edgings will be ground up and made into paper at a pulp and paper mill near by, which belongs to the same parties. This mill will help to develop the spruce interests of the Eastern townships.

Haines & Company
LUMBER DEALERS
ESTABLISHED 1861. Office and Yards, foot of Erie St. **Buffalo, N. Y.**
Within 7 minutes' walk of principal hotels and depots.

RAILS FOR TRAMWAYS

NEW AND SECOND-HAND STEEL AND iron rails for tramways and logging lines, from 12 lbs. per yard and upwards; estimates given for complete outfit.

JOHN J. GARTSHORE,
49 Front St. West, Toronto.



"NIAGARA" INJECTOR
PRICE LIST

Size. Number.	Price.	Suction and Feed.	Steam.	Gals. per hr. 60 lbs. Pressure.	Horse Power.
7½	$ 6 00	½	⅜	60	2 to 10
10	6 75	½	½	120	10 to 20
12½	8 40	⅝	½	220	15 to 30
15	9 36	¾	½	300	20 to 40
17½	12 00	1	¾	420	30 to 50
20	13 50	1	¾	540	40 to 80
25	20 00	1¼	1	900	70 to 120
35	30 00	1½	1¼	1,740	150 to 225

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ST. JOHN, N. B.

THE ROYAL ELECTRIC COMPANY

MONTREAL, QUE. Western Office: TORONTO, ONT.
Cable and Telegraph Address, "Royelectric."
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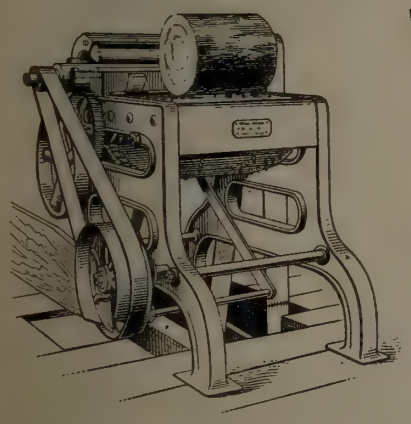
Electrical Machinery and Apparatus
... FOR ...
LIGHT and POWER

SPECIAL ATTENTION GIVEN TO
LONG DISTANCE TRANSMISSION OF ELECTRICITY
FOR LIGHT AND POWER
ALSO FOR
ELECTRIC PLANTS FOR MILLS
Distant water powers utilized and Mills lighted and operated safely.
CORRESPONDENCE SOLICITED.

... STEARNS BROTHERS ...

Patent Rossing Machine



Why you should use this Rosser.....

It will do double the work of any other.
It is the only machine made that will peel Cedar Shingle Blocks.
It will peel dirty blocks without taking the edge off the knives as they cut from the clean bark or block out.
It is a self-feeder, and very easy to operate.
It requires less power than a face wheel.
All iron and steel, very simple and durable.
It will ross knotty and uneven timber without waste.
It occupies about the same space as an ordinary planer.
You can have a chance to try a machine before buying it.

... MANUFACTURED BY ...
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Every Lumberman wants it — **35** cents buys it
Scribner's Lumber and Log Book
SAVES TIME SAVES MISTAKES SAVES MONEY
BRIMFUL OF EVERY-DAY, PRACTICAL INFORMATION
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Head Office: SOHO MACHINE WORKS — TORONTO
BRANCHES { 345 St. James St., MONTREAL
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The London Machine Tool Co., LONDON

Have the following for sale at close prices:

Engine, 24" × 30", William Hamilton Mfg. Co. make.
Engines, 16" × 26", coupled on one shaft, first-class.
Engine, 18" × 20", with fly-wheel and pulley.
Boilers, 48" × 14', several in stock.
Boiler, 44" × 14', 43 3" tubes, good order.
Boiler, 44" × 12', 46 3" tubes, perfect every way.
Planer & Matcher, Bertram & Co. make, 7" feed rolls.
Planer, Matcher & Moulder, "Eclipse," new, modern tool.
Moulder, 3 side, 10", Cowan & Co, endless bed.
Lathe, Shafting, 30' long, swings 24" over shears, modern tool.
Lathe, Pulley, will turn up to 18' diameter.
Lathe, 18" × 8' London Tool Co. make.
Lathe, 16" × 8', Stevens Mfg. Co. make.
Stave and Hoop Machinery, complete outfit.
Saw-Mill, complete outfit for sale.
Wood Splitter, "Hildrith" patent, best in the market.
Pumps, all sizes, duplex and single.

New Iron-Working Machinery

Lathe, gap 26" and 40" swing x 20' 8" bed.
Lathe, gap 26" and 40" swing x 16' bed.
Lathe, gap 26" and 40" swing x 14' bed.
Lathe, 48" swing x 18' bed.
Lathe, 36" swing x 16' bed.
Lathe, 24" swing x 12' bed.
Lathe, 20" swing x 12' bed.
Lathe, 20" swing x 10' bed.
Lathe, 18" swing x 10' bed.
Lathe, 18" swing x 8' bed.
Lathe, 16" swing x 10' bed.
Lathe, 16" swing x 8' bed.
Lathe, 16" swing x 6' bed.

Radial Drilling Machine, 66" arm.
Radial Drilling Machine, 50" arm.
Drilling Machine, 42" centre, slightly second hand.
Drilling Machine, new, 36" centre.
Drilling Machine, new, 30" centre.
Drilling Machine, new, 24" centre.
Drilling Machine, new, 20" centre.

Iron Planer, 24" x 24" x 8', new.
Iron Planer, 30 x 30 x 10', new.
Iron Planer, 24 x 24 x 6½', new.
Iron Planer, 20 x 20 x 5', new.
Iron Planer, 52 x 48 x 15', second hand.
Iron Planer, 72 x 72 x 16', second hand.

Milling Machine, Brown & Sharpe pattern, No. 5 Universal.
Milling Machine, Brainard, back-geared.
Milling Machine, Lincoln, back-geared.

Iron Shaper, Pratt & Whitney pattern, 12 x 22.
Iron Shaper, Goold & Eberhart pattern, 16 x 20.

Lathe, turret, several styles, for immediate delivery.
Lathe, Fox, for immediate delivery.
Lathe, spinning, for immediate delivery.

Presses, Styles, Nos. 1, 2, 3, 3½ and 4.
Presses, Bliss, Nos. 18, 19, 20, 22, 30, 32, 36, 74 and 82.
Presses, drawing, Nos. 1½ and 4.
Presses, special, made to order.

Full line of Machinery Supplies, Brass Goods, Belting, Lace Leather, Files, Taps, Dies, etc.

SEND FOR CIRCULARS AND REFER TO THIS JOURNAL

THE A. R. WILLIAMS MACHINERY CO., LTD.
. . . . . Toronto

TRADE NOTE.

The Ottawa Saw Co., although only one year in business, are taking a leading position in Canada as saw manufacturers. They report that the last year's business has been successful beyond most sanguine expectations both as to quantity of work turned out, and the general satisfaction that it has given. Their works are fitted with the latest improved machinery, and the tempering plant is the outcome of many years study and experience; the workmen are all tried and carefully selected. The members of the firm are practical saw makers of long experience in shops and mills in both Canada and United States, and they claim that their gang circular and shingle saws cannot be equalled in Canada. The Ottawa Saw Works Co. seeing the growing demand for a high grade band saw have added this industry to their works. During the past summer they supplied a number of these saws to different mills, and the results have been so good that they will now make this a special feature of their business. They further inform us that already they have booked a number of full outfits in saws for large mills for next seasons use. They also make a specialty of repairing.

J. W. Howry & Sons, of Fenelon Falls, Ont., are reported to have sold recently 50,000 feet of cork pine lumber to a Toronto firm at $60 a thousand, to be used in the manufacture of pianos.

OBITUARY.

Alderman Hurteau, of Montreal, who was engaged in lumbering for many years, is dead. Consumption was the cause of death.

Mr. John A. Humphrey, ex-M. P. P. for Westmoreland, N. B., is dead. He managed his father's mills at Moncton from 1845 to 1849, when he purchased the mills, and has run them ever since. He left an estate of nearly a quarter of a million.

Turkey imports large quantities of lumber from the United States. The attention of Canadian lumbermen is called to this country as a new opening for their trade.

Can your Son keep your books?

Send him for a few months to the . . . .

BRITISH AMERICAN COLLEGE OF TORONTO, LTD.

owned by the President of the Board of Trade, the Manager of the North American Life Assurance Co. and other leading business men. Thorough satisfaction guaranteed. Students may enter any time.

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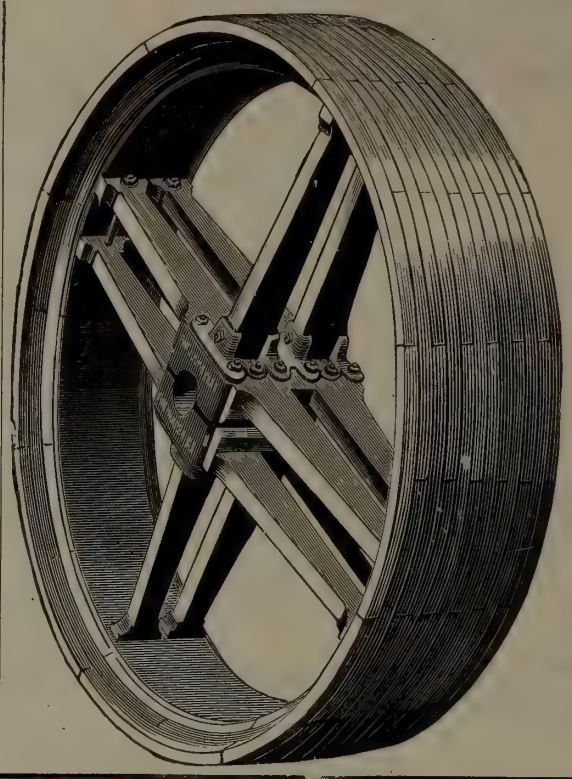
Send four 3-cent Canadian postage stamps and secure a copy of the LUMBERMAN'S VEST POCKET INSPECTION BOOK—the most unique and complete book of its kind yet published. Address, CANADA LUMBERMAN, Toronto.



DODGE PATENT . . . WOOD SPLIT PULLEYS

FOR MODERN SAW-MILLS

See What the Big Fellows say

BUELL, HURDMAN & Co., Lumber Manufacturers,
HULL, P. Q., CANADA, November 29, 1894.

THE DODGE WOOD SPLIT PULLEY CO., TORONTO, ONT.

GENTLEMEN.—We take great pleasure in stating that we have a number of your wood split belt pulleys in our mills, and that they GIVE US EVERY SATISFACTION, and we CAN RECOMMEND THEM HEARTILY. Also, if any of our neighbors in this section would like to see them in operation, we should be PLEASED TO SHOW THEM AT ANY TIME.

Yours very truly, BUELL, HURDMAN & Co.

SEND FOR CATALOGUE AND DISCOUNTS.

Dodge Wood Split Pulley Co.

68 King St. West, Toronto.

Dauntless Shingle and Heading Machine

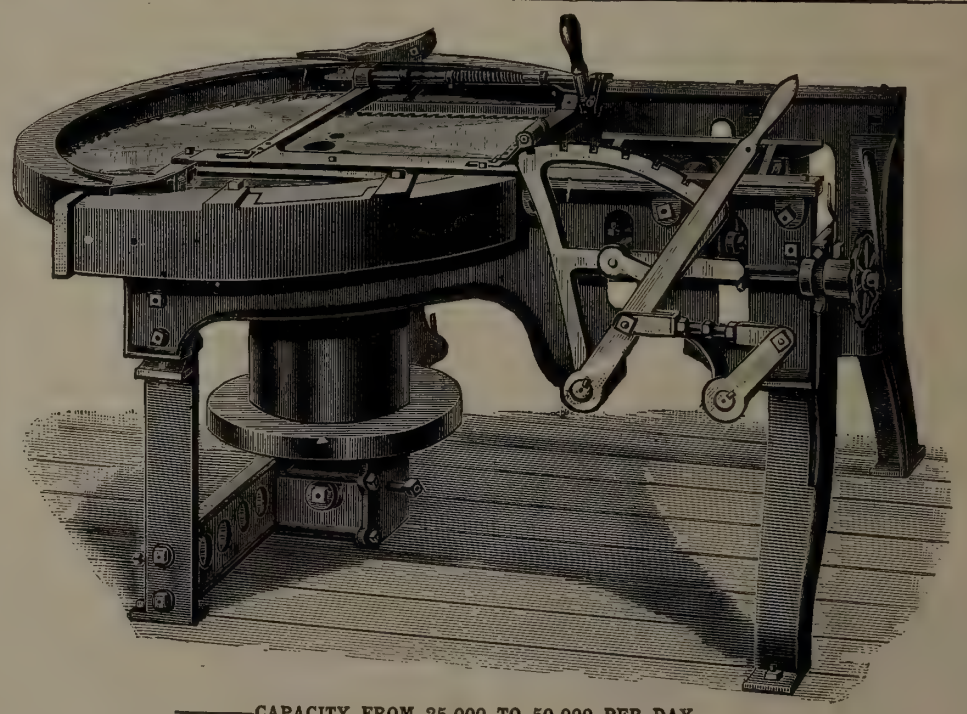
. . . WILL make more Shingles per day than any self-acting machine with vertical saw in existence, and more Shingles from the same quantity of timber.

THE FRAME

. . . Is of Iron throughout, very heavy and rigid, strongly bolted and braced.

THE CARRIAGE

. . . Is very light and strong, made of forged Cast Steel Plate, running on steel ways or tracks. Will take in a block 18 inches wide and 19 inches long, adjustable for 16-inch or 18-inch shingles.



CAPACITY FROM 25,000 TO 50,000 PER DAY

[COPY.]

HASTINGS, Dec. 3, 1894.

F. J. DRAKE, Esq., Belleville.

Dear Sir,—We have waited two years before giving you our idea of your machinery. This we did to thoroughly test it, and can now say we know what it can do.

Your Saw Mill is equal, or nearly equal, to any we have seen of much heavier make, and far in advance of any light rig in the market. The capacity per day is fully up to your guarantee, 40 M per day. We have tested with eight men.

The Shingle Mill cannot be beaten for any kind of timber. Ours being in a manner a custom mill, we have good, bad and indifferent timber, but for all it does the work satisfactorily.

You may use this in any way you please, or refer to us at any time.

Yours truly,

(Sgd.) W. J. & H. W. FOWLDS.

F. J. DRAKE

PATENTEE AND MANUFACTURER OF SAW, SHINGLE AND LATH MACHINERY

Care Canadian Locomotive & Engine Co., KINGSTON, ONT.

Kimball Bros., of Bryanston, Ont., have recently erected a saw mill at that place.

Davis & Crothers, of Upper Gagetown, N. B., contemplate erecting a saw mill at that place.

The Northern Lumber Co., with a capital of $20,000, has been incorporated. The promoters are: Alex. and Joseph de Lorimier, of Caughnawaga, S. A. and A. E. de Lorimier and E. H. Godin, of Montreal.

Messrs. Gemmill & May, Ottawa, solicitors, give notice of application at next session of the parliament of Canada, for an act to incorporate the Yukon and British Columbia Trading & Development Company of Canada, for the purpose of carrying on in Canada, the United States and elsewhere, the business of general merchants, lumberers, vessel owners and forwarders and miners.

Sole Canadian Agents :-: Prices Reduced.

WATEROUS, BRANTFORD, CANADA.

LUMBERMAN'S

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INSPECTION BOOK

Containing Rules for the Inspection and Measuring of Pine and Hardwood Lumber in the leading markets of Canada and the United States. Embracing also many useful tables and calculations of everyday service to lumbermen.

Prepared by the Editor of the "Canada Lumberman."

Toronto, Canada
C. H. MORTIMER, Publisher
1895

THE above is a fac simile of the title page of the latest and most complete Lumber Inspection Book published.

We shall be pleased to send you a copy on receipt of four 3 cent Canadian postage stamps . . . . . .

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THE CANADA LUMBERMAN,
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LUMBERMEN AND MILL MEN!

WHO WANT THE BEST

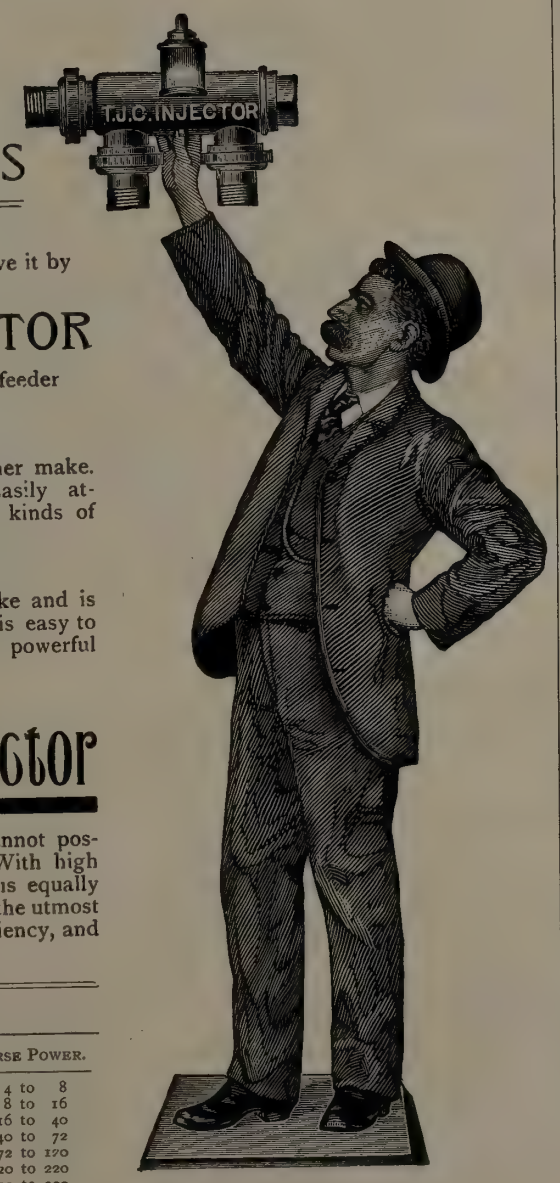
ASK FOR

Bain's Heavy Log Trucks

Furnished with Steel or Cast Skeins, 3¾, 4, or 4¼ arms. Any width tire. Are well built of thoroughly seasoned timber, heavily ironed and well finished. Built of any capacity required. Are STRONG, DURABLE, and LIGHT running. A trial order will be most convincing. Satisfaction guaranteed. Write us for further information. Address all orders or inquiries to

BAIN BROS. MFG. CO., Brantford, Ont.

Above all Competitors



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T. J. C. INJECTOR

the most economical boiler feeder in the world.

20 per cent. saved in coal over any other make. Absolutely automatic. Easily attached. Applicable to all kinds of boilers.

NOT EXPENSIVE

Will outwear any other make and is simple in construction. It is easy to operate, and is the most powerful feeder in the world.

The T. J. C. Injector

is the best because you cannot possibly go wrong with it. With high or low steam the result is equally satisfactory. It combines the utmost simplicity with perfect efficiency, and any boy can operate it.

PRICE LIST

No.	Price.	Horse Power.
7	$ 7 00	4 to 8
10	7 00	8 to 16
15	10 50	16 to 40
20	15 00	40 to 72
25	22 50	72 to 120
35	30 00	120 to 220
45	38 00	220 to 300

Hamilton Brass Mfg. Co.

(LIMITED)

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ARE YOU LOOKING

FOR A CHANCE IN LOCATION?

If you are not satisfied with your present site, or if you are not doing quite as well as you would like to, why not consider the advantages of a location on the Illinois Central R. R. or the Yazoo & Mississippi Valley R. R.? These roads run through South Dakota, Minnesota, Iowa, Wisconsin, Illinois, Indiana, Kentucky, Tennessee, Mississippi and Louisiana, and possess

FINE SITES FOR NEW MILLS
BEST OF FREIGHT FACILITIES
CLOSE PROXIMITY TO
COAL FIELDS AND DISTRIBUTING CENTERS
AND
INTELLIGENT HELP OF ALL KINDS
MANY KINDS OF RAW MATERIAL

For full information write to the undersigned for a copy of the pamphlet entitled

100 Cities and Towns WANTING INDUSTRIES

This will give you the population, city and county debt, death rate, assessed valuation of property, tax rate, annual shipments, raw materials, industries desired, etc.

To sound industries, which will bear investigation, substantial inducements will be given by many of the places on the lines of the Illinois Central R. R. which is the only road under one management running through from the North-Western States to the Gulf of Mexico GEO. C. POWER Industrial Commissioner I.C.R.R Co., 506 Central Station, Chicago.

. . . THE . . .

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FROM

Port Huron and Detroit

Is the Short Line to

SAGINAW AND BAY CITY

(Centres of the vast lumber interests of Michigan)

MT. PLEASANT, CLARE, REED CITY
BALDWIN, LUDINGTON, MANISTEE
AND
MILWAUKEE, WIS.

The last-named place reached by the Company's line of steamships across Lake Michigan.

The line thus formed is a short and direct route from

MONTREAL TORONTO
and all Canadian Territory
To ST. PAUL, DULUTH and Pacific Coast Points.

This road traverses a section of Michigan with unrivalled advantages to settlers. Cheap lands, thriving villages and towns, well watered with streams in all directions: a market for every product of Forest and Field.

The policy of the "F. & P. M." is known to all travellers and settlers.

A. PATRIARCHE, Traffic Manager.
GENERAL OFFICES: · SAGINAW, MICH.

J. W. MAITLAND—H. RIXON J. G. AINSILE—W. STODAR.

MAITLAND, RIXON & CO.

OWEN SOUND, ONT.

Saw Millers and Lumber Dealers

All kinds of Building Material kept in stock

WE MAKE A ... SPECIALTY OF LONG BILL STUFF IN ROCK ELM, PINE, CEDAR AND HEMLOCK

Quotations furnished on application

GALT MACHINE KNIFE WORKS

MACHINE KNIVES

OF EVERY DESCRIPTION FOR

Planing, Moulding and Stave Cutting

Send for Price List

PETER HAY, GALT, ONT.

THE DOMINION LEATHER BOARD COMPANY

MONTREAL

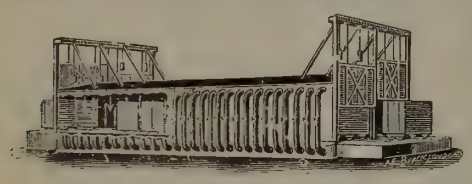
MANUFACTURERS OF

Friction Pulley Board

. . AND . .

ROOFING, SHEATHING AND FLOORING FELTS

THE PARMENTER PATENT DRY KILN.



The Latest, the Cheapest and Best

FOR DRYING

LUMBER, STAVES, HEADING, ETC.

Write for Particulars to

J. S. PARMENTER,

Box 512, Woodstock, Ont.

McEACHREN'S IMPROVED SYSTEM OF KILN DRYING.

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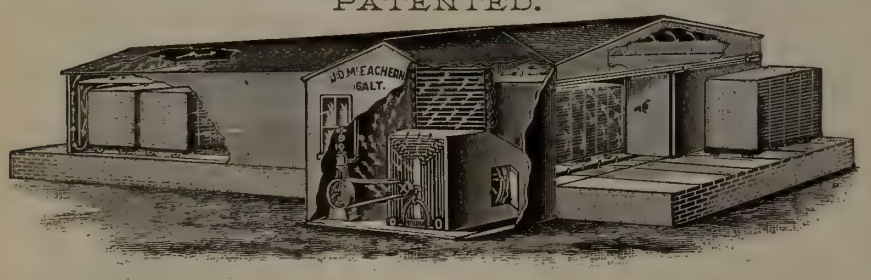

COST of erecting, running and maintaining the lowest and results the highest of any dry kiln and drying system in the market. Green Elm, Ash, Whitewood, &c., for furniture dried in six days; only exhaust steam 10 hours per day used.

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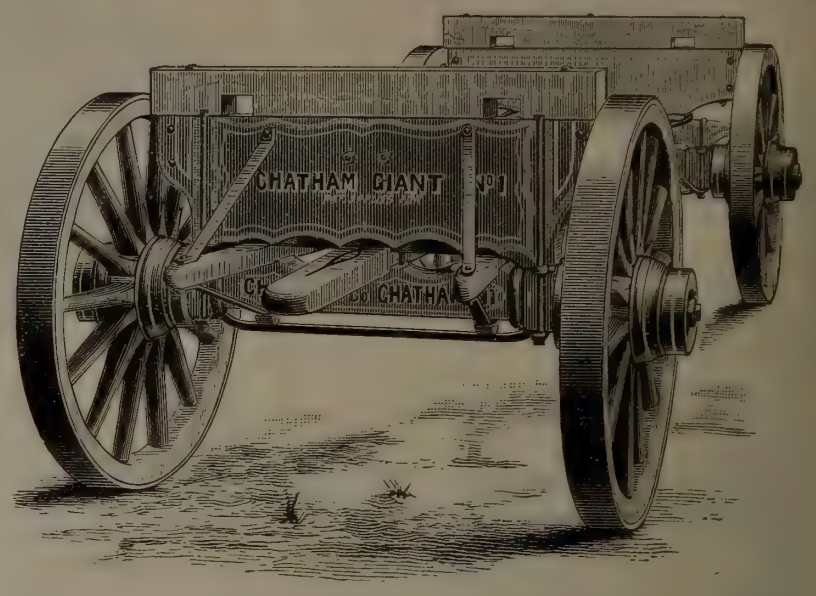
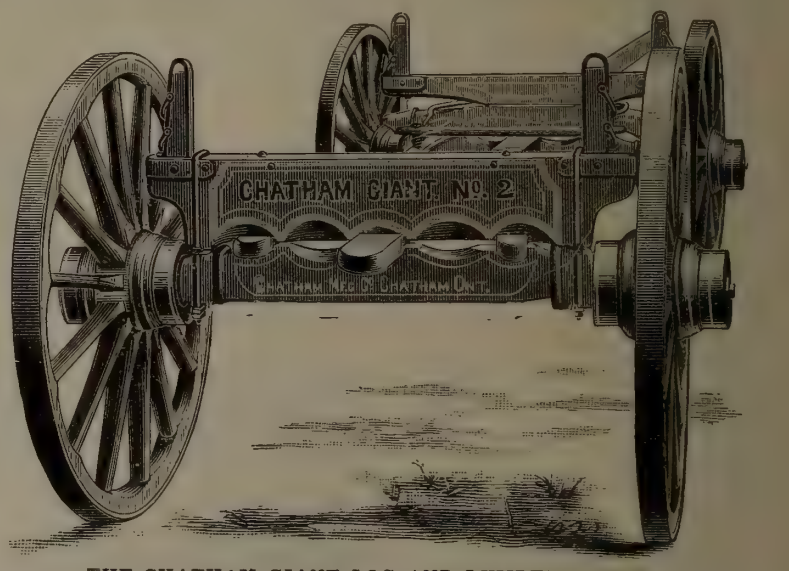
THE CHATHAM GIANT LOG TRUCK



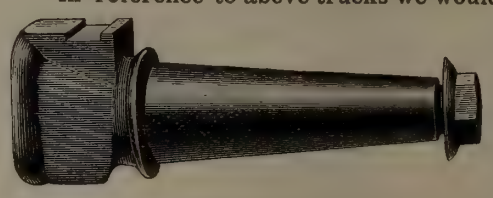
IT must be self-evident that our GIANT ARM LOG TRUCKS, of which the above is a faithful illustration, is the best log truck made; but if conclusive evidence of this is wanted we refer to every mill man and lumberman in the county of Essex, Ont., where millions upon millions of Elm logs are gotten out every year on them, and where these trucks sell readily, while those of other makes remain unsold at $5 to $10 less.



THE CHATHAM GIANT LOG AND LUMBER TRUCK

As seen above it is a Lumber Truck, but it is quickly converted into a Log Truck by bunks which are grooved at the ends to receive the stakes and slip down between them, and are perforated for side or lug poles. We build these trucks in all sizes from 2½ to 4 inch Malleable Giant Arms. Farmers all over are extensively adopting the lighter sizes as general purpose wagons.

In reference to above trucks we would call the attention of the reader to the accompanying illustration of VANALLEN'S PATENT GIANT ARM with which they are equipped.



It will be seen that the hind bolster and sand-board are formed to rest upon the flat top of this arm, and being securely clipped to the axles forms a complete and solid truss and render the axles unbreakable and inflexible.

Our Malleable Giant Arm farm and teaming Wagons have no equals on this continent, of which the judges on vehicles at the World's Fair, Chicago, gave us an unqualified certificate in the shape of a GOLD MEDAL AND DIPLOMA.

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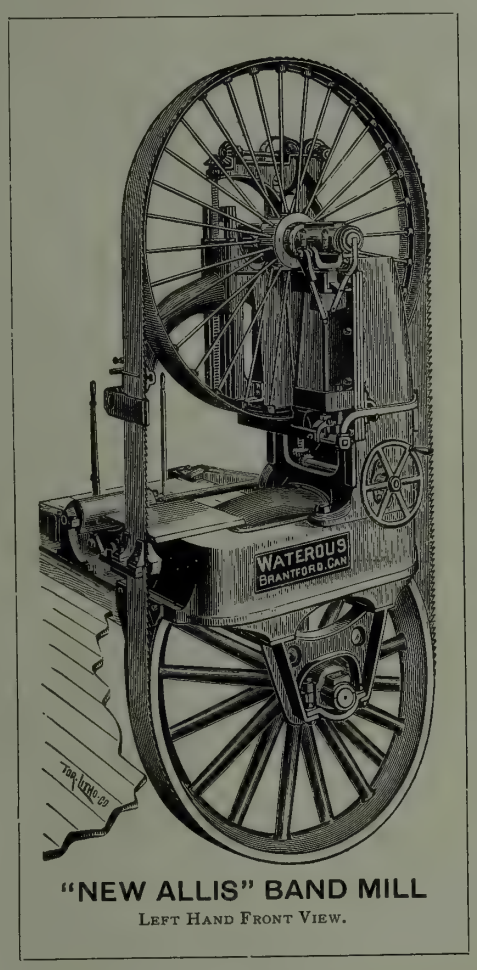
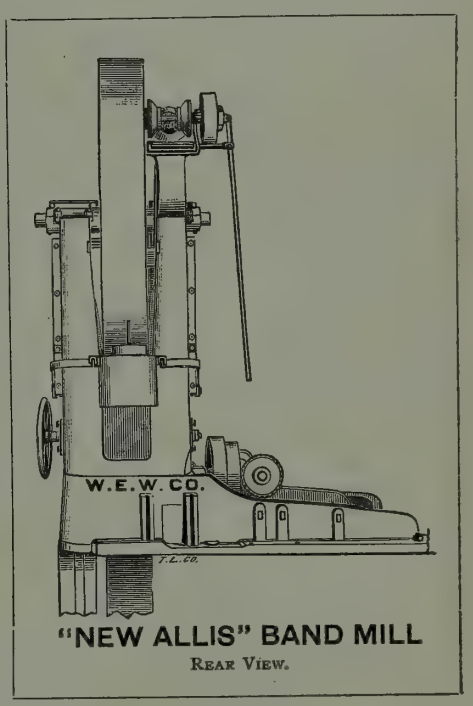
Is the "Milk in the Cocoanut."

The cocoanut is a hard nut to crack. If you don't crack it right you spill the milk. So with Business. Business done in an improvident, not-up-to-date, unbusinesslike way, will soon spill the profits. Open the cocoanut properly, you save the milk. Equip your business properly, you save the profits.

"NEW ALLIS" BAND MILL
RIGHT HAND FRONT VIEW.



"NEW ALLIS" BAND MILL
LEFT HAND FRONT VIEW.



"NEW ALLIS" BAND MILL
REAR VIEW.

The "New Allis" Band Mill will squeeze **profitable** returns from stocks which competition and antiquated machinery had apparently wrung out dry. The profit resulting from its use has been found by one lumberman to be actually 19%, and many have had a similar experience. Can **you** afford, in these days of slim profits, to waste this amount yearly?

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27 Allis Band Mills sold in Canada in the last 23 months.

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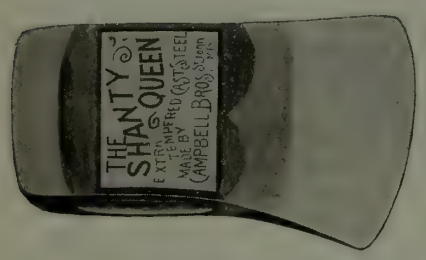

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CAMPBELL BROS.

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WITH FORGED SOFT STEEL SOCKET (as shown in cut).

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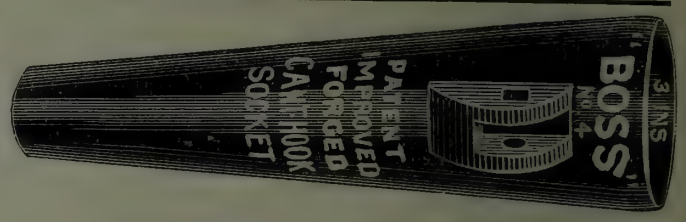
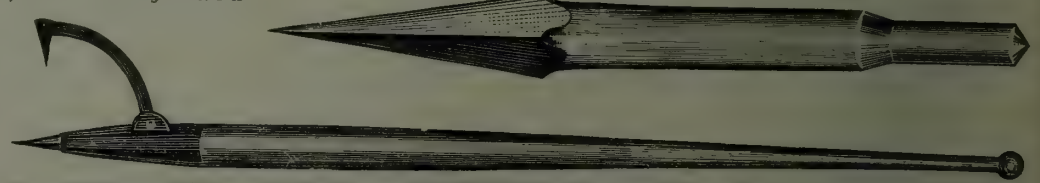
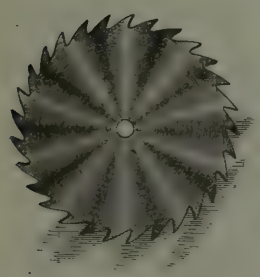
ST. MARYS, York Co., N. B.
Write for price and discounts.







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THE CANADA LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XVII. NUMBER 1. | TORONTO, ONT., JANUARY, 1896 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents

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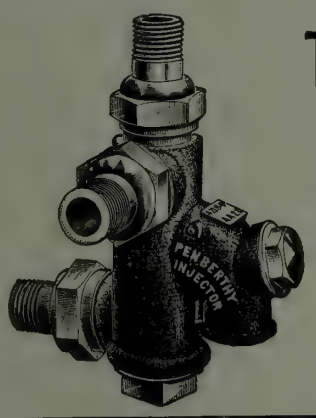

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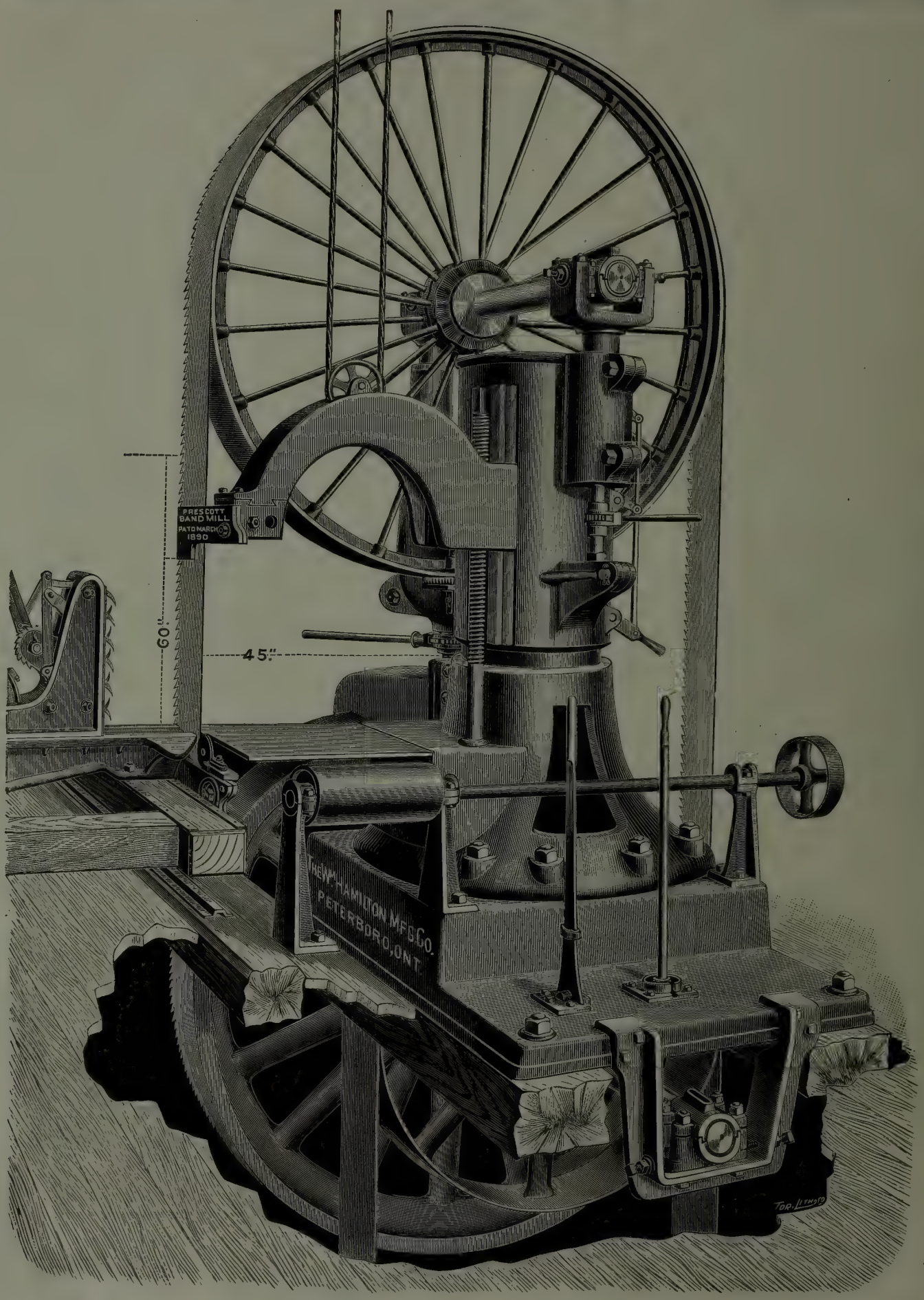
Band Saw Mill



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THE CANADA LUMBERMAN

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THE ST. JOHN RIVER (N. B.) IN RELATION TO THE MANUFACTURE OF CHEMICAL PULP.

[Special correspondence CANADA LUMBERMAN].

THE Saint John river, which is about 400 miles long, has held a high position as a spruce producing country, and the manufacture of spruce deals at its mouth dates back as far as 1819.

The black spruce (abies nigra) was formerly found in great abundance in the southern part of New Brunswick, but this section of that province has been greatly devastated as well by the axe of the lumberman as by wind and fire. There is yet, however, much small spruce left in various parts of this district, as the lumbermen have heretofore in general cut down only such trees as were large enough to make deal logs, leaving the small ones intact. The spruce which is found on the Saint John above the Grand Falls is usually of the white variety (abies alba). Its wood is white and soft and its specific gravity is less than that of the black spruce.

Fredericton, the capital of New Brunswick, is situated on the banks of the Saint John, about 80 miles by water above its mouth at the city of St. John, and about 66 miles by rail. The Canadian Pacific railway crosses the St. John at Fredericton by an iron bridge. The northern terminus of this road in New Brunswick is at Edmundston, 38 miles above the Grand Falls, close to which latter place the C. P. R. passes. The Canada Eastern railway, which connects Fredericton with the Intercolonial railway and the gulf ports, uses this same bridge to enter Fredericton. The distance from Fredericton to the Grand Falls by the Gibson branch of the C. P. R. is about 127 miles; in the spring rafts can be brought down the Saint John river readily from the Grand Falls to Fredericton, which city has thus both rail and water to depend upon for the transportation of pulp wood, which can be delivered there in great quantities at prices varying from $2 to $2.50 per cord. There is daily communication by steamer during the summer between Fredericton and St. John, as well as by two daily trains, and schooners load at the former place with cargoes of lumber for American ports. The river water at Fredericton is so pure that it is used altogether for drinking purposes.

The Grand Lake coal beds are 30 miles from Fredericton in a direct line. It is a good steam coal and is delivered in that city for $3 per chaldron of 3,000 pounds. A railway is now being surveyed, which when completed will bring these mines into direct communication with Fredericton, which will reduce the price of this fuel. Schooners can be loaded with limestone from the cliffs which are to be seen just above the harbor of Saint John. Some of this is so pure as to run 98 per cent. of carbonate of lime. There is thus wood, coal and limestone, all of which can be brought by water to Fredericton, and then there is the pure river water which is excellently well adapted for the manufacture of pulp.

Should the important changes which are pending in the chemical industry in connection with the electrolytic method of decomposition of common salt be successful, then the Grand Falls, with its vast undeveloped powers, will form a most important aid to the manufacture of chemical pulp on the Upper Saint John.

THE DRESSED LUMBER QUESTION ILLUSTRATED.

UNCLE SAM: "You see, neighbor, I'm now, technically speaking, "DRESSED," but if I subject myself to the further process of putting on my hat, why then I'm no longer "dressed"—I'm then—er—a "manufacture"—a FINISHED ARTICLE OF CUTENESS, you understand!"

A Tacoma man who has been in the east reports nothing but satisfaction with the cedar doors which the west coast manufacturers have been sending out.

HON. E. J. FLYNN,

COMMISSIONER OF CROWN LANDS FOR QUEBEC.

HON. EDMUND JAMES FLYNN, Q.C., L.L.D., Quebec, M.P.P. for Gaspe County, is a native of the county he has so ably represented for about seventeen years in the Quebec Legislative Assembly. He was born in Perce on the 16th of November, 1847. His father, the late James Flynn, who was of Irish descent, was during his lifetime a trader and farmer in Perce, the place of his birth. His grandfather, the late Edmund Flynn, was born a century ago, it is said, on the journey from Ireland, and settled down in Perce as a merchant, where he did an extensive business and filled also the position of preventive officer in H. M. customs. There are now four generations of this family in Canada, and they have become by marriage with French-Canadians, their education and social relations, thorough Canadian in the proper sense of the word. His mother, Elisabeth Tostevin, was also a native of Perce, though her father, the late Jacques Tostevin, was from the Island of Guernsey, and her mother, the late Anne Mauger, was a daughter of the late Elias Mauger and of Suzanne Dobson, of the island of Jersey, two of the English channel islands, where Mr. Flynn has many relatives on his mother's side. His mother's ancestors are from old Normandy and of French extraction.

The Hon. Mr. Flynn was educated at the Quebec Seminary and at the Laval University, Quebec, graduating with honors, having taken at Laval the degree of master-in-law in July, 1873. Laval again, in 1878, presented him with the degree of L.L.D. He adopted law as a profession, and in September, 1873, he was called to the bar of Quebec, and has ever since continued to practise as barrister, etc., in the ancient capital. Previous to this time he, from 1867 to 1869, held the positions of deputy-registrar, deputy-prothonotary, deputy-clerk for the Circuit Court of the Crown and of the Peace, for the county of Gaspe, conjointly with that of secretary-treasurer of Perce municipality. He has been a Professor of Roman Law in Laval University since 1874. From the 29th of October, 1879, to the 31st of July, 1882, he was Commissioner of Crown Lands for the Province of Quebec; commissioner of railways from the 11th of February, 1884, till July, 1885, and Solicitor

General from the 12th May, 1885, till the 20th of January, 1887.

When the honorable Mr. Taillon formed his Cabinet after the resignation of the Ross administration, the Hon. Mr. Flynn felt himself bound to decline a portfolio in Mr. Taillon's Cabinet, on the ground that he did not consider that the latter could command the confidence of the House, and it was not possible to expect another dissolution. Mr. Flynn had, on the same ground, declined, in 1879, a portfolio in the Joly government. He however, on the 21st December, 1891, entered the De Boucherville administration as Commissioner of Crown Lands, resuming thereby his old department, with which he had already thoroughly familiarized himself. The Hon. Mr. Flynn was made a Queen's Counsel in 1887. He has taken an active part in political affairs for the past twenty-two years and has been a candidate at twelve different elections, ten of which were in the county of Gaspe. The first was in 1874, when he presented himself as a candidate for a seat in the House of Commons at Ottawa, but afterwards withdrew from the field when he was made a professor in Laval University, it being considered incompatible by the University that he should hold both offices. He again stood in 1875 and 1877, for the Quebec Legislature, when he was defeated after severe contests, there being only small majorities against him, especially in 1877. The election of 1875 he had contested and unseated his opponent; and, after the election of 1877, he was elected by acclamation, on the 29th April 1878. On his entering the Chapleau Cabinet in the fall of 1879, as Commissioner of Crown Lands, he was again elected by acclamation. He had previously visited the county of Gaspe and consulted his electors as to the course he should follow. When he supported the motion which overthrew the Joly Cabinet, he had the authorization and approval of his electors. At the general election held in 1881, Mr. Flynn was once more elected by acclamation. On accepting office in the Ross Cabinet in 1884, which necessitated an appeal to his constituents, he was opposed by Major John Slous, but carried the county by a majority of 988 votes. At the general elections held in October, 1886, he once more presented himself for election, and was returned by acclamation by his old friends at Gaspe. After the formation of the Mercier Government, in January, 1887, Mr. Flynn went into opposition and fought the battle of the conservative party in and outside of the House, with all the energy and talents which even his most determined adversaries recognize in him, until the dissolution of Parliament and the general elections of 1890. In July of that year, after the crushing defeat of the conservative party, he had the courage to stand, almost alone, as candidate in his old constituency, against a great array of electioneering forces, but he was defeated by Mr. Achile Carrier, a young barrister of Quebec.

Hon. Mr. Flynn then resolved to remain quietly in the practise of his profession for some time, but in spite of his determination, when the Dominion elections took place in February and March, 1891, the electors of the county of Quebec, Sir Adolphe Caron's old division, after many entreaties induced Mr. Flynn to run for that county, which he did. The contest lasted 14 days and was conducted with great vigor. It resulted in the return of his adversary, Mr. Fremont. Mr. Flynn succumbed bravely, and again resumed, as if nothing had occurred to disturb the tranquility of his mind, the exercise of his profession. It may be said that never has there been a lawyer whose success has been greater than his during this year of active and constant attention to his business.

It is needless to say that Mr. Flynn's habits are those of the student and scholar, and the thought of resuming active political life by entering into the DeBoucherville government did violence to his feelings. His friends are aware in Quebec that he hesitated very much to accept office, and nothing else than an imperative sense of duty induced him to yield to their pressing invitation and commence anew the battle of active political life. He was returned for the counties of Gaspe and Matane on the 8th of March, 1892, and subsequently elected to sit for Gaspe. On the reconstruction of the government, he continued to hold the same position of Commissioner of Crown Lands in the Taillon administration.

Hon. Mr. Flynn has always been in principle a liberal-conservative. By his first struggles in

HON. E. J. FLYNN.

the county of Gaspe he succeeded in securing for the electors complete freedom and independence in the exercise of their franchise, which had been affected by the interference of certain large commercial firms. In the legislature the part played by the Hon. Mr. Flynn has been prominent, as regards constitutioanl questions in particular. He has won for himself the reputation of being a strong and energetic upholder of constitutional liberty,. In proof of this, it will suffice to refer to his defense of the liberty of the press in the case of the Nouvelliste, in 1885, and his eloquent speech on the question of Home Rule for Ireland, etc. His attention has been given to many other objects of importance, such as that of colonization, which he has always endeavored to promote. He is the author of a homestead law for the benefit of settlers. His administration of the Crown Lands has been marked by an increase in the revenue, increase in the value of timber limits and mineral lands, and by many useful rules and regulations, calculated to promote colonization and the welfare of the many persons in the province who are occupiers of Crown lands. Other important measures were framed and carried through the legislature by him, among them the Quebec general mining act of 1880, and the general mining act of 1892. He has taken a lively interest in the creation of national parks, and has already had two bills passed on this subject, namely, for the Trembling Mountain Park Sanatorium and the "Laurentides National Park." He is also the author of several other bills of importance, such as that on the land tenure of the Magdalen Islands, several acts concerning the Crown's lands, railways, the protection of forests, and encouragement of planting of trees. He has entirely reorganized the Crown Lands Department, which he has conducted on absolute business principles, doing justice to all alike, irrespective of party, nationality or creed. The revenue of the department will, for the current year, amount in round figures, to $1,000,000, which gives an increase of $300,000 under his administration, and the annual expenditure has been reduced by, in round figures, $100,000. He is now engaged in further studying the forest resources of the province with the view of securing a permanent source of revenue and a sufficient supply of timber for all years to come. During the last session a committee, presided over by him, took evidence and studied this question. During the present session the work will be continued. He has always taken a lively interest in the question of the construction of a railway from Matapedia, on the Intercolonial railway, to Paspebiac and Gaspe Basin. Grants in lands were secured in 1882 whilst he was Commissioner of Crown Lands, and the same were converted into money grants, under his auspices as commissioner of railways. He believes that in the construction of this line rests the future welfare of the population of the Gaspe peninsula. His travels have been always directed towards the acquisition of a complete knowledge of Canada.

Mr. Flynn was married on the 11th May, 1875, to Marie Mathilde Augustine, daughter of Augustin Cote, editor of "Le Journal de Quebec," and niece to the late Honorable Joseph Cauchon, formerly Lieutenant Governor of Manitoba. He has had eleven children, of whom nine are still living. He resides in the city of Quebec.

LOGGING BY STEAM—A NEW ERA IN LUMBERING.

THERE is no more important industry in Canada than that of lumbering. With an invested capital of about $100,000,000, an annual outlay for wages of more than $30,000,000, and an output to the value of nearly $110,000,000, anything which will tend to cheapen the cost of production, or facilitate operations, must commend itself to those engaged in the business.

There is now approaching completion at the Bertram Engine Works in Toronto, a machine which is likely to bring about a revolution in lumbering operations in the woods. It is called a steam logger, and is nothing more or less than a traction engine adapted for use on snow roads, in hauling out logs. Horses have been largely displaced by the bicycle and the trolley car, with the motocycle coming in the near future, and now they are to be supplanted by steam in the backwoods, where it might be supposed nothing else could be available for the class of work which has there to be performed.

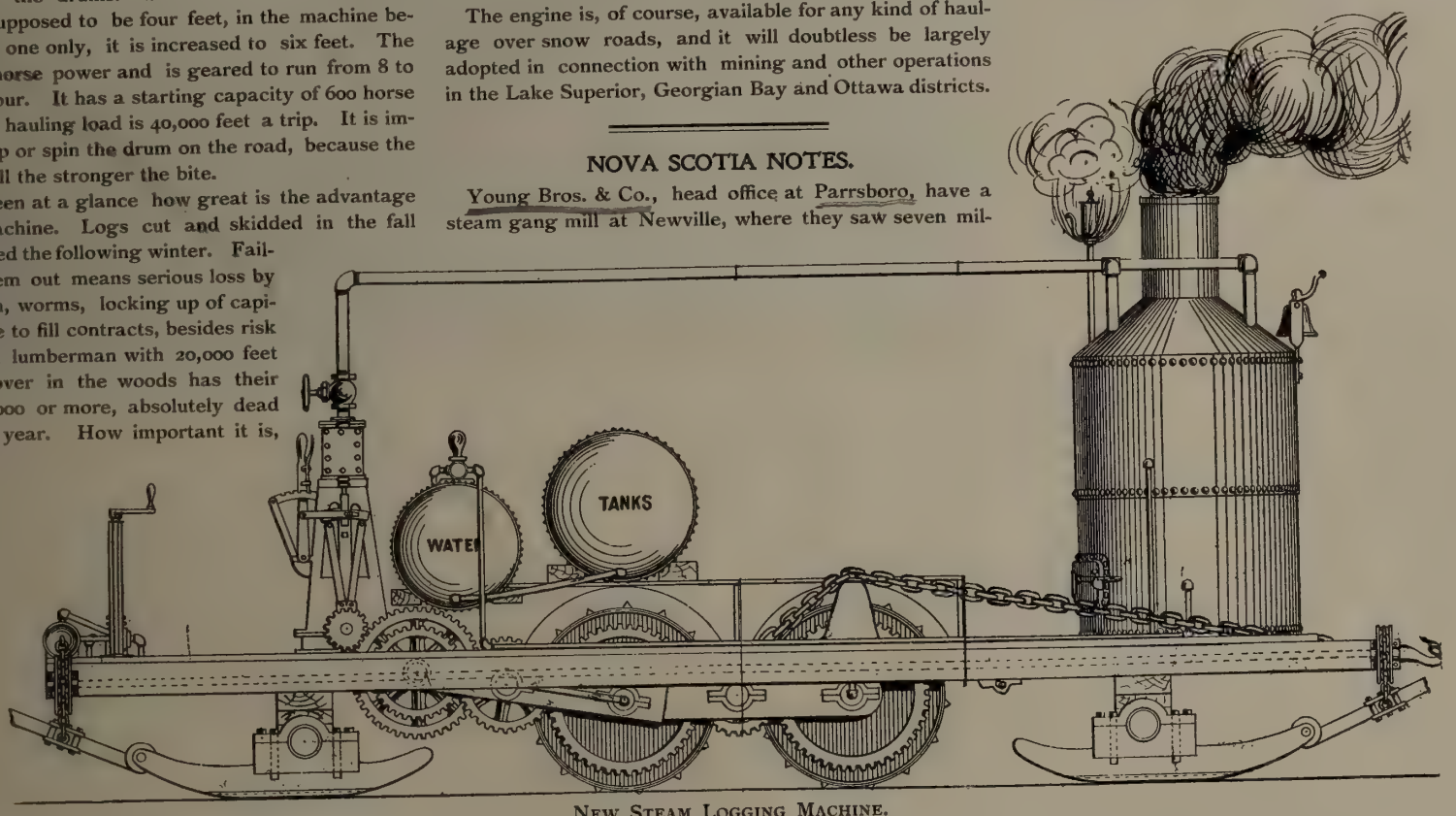
Our illustration will give a good idea of the construction of the machine. It consists of a heavy frame work of iron, mounted on sleds, with an engine and boiler, the engine giving motion to two hollow drums with projecting teeth, which revolve on the road, propelling it forward or backward. The logs are loaded on the ordinary lumber sleigh, a train of which is drawn by the logger, by means of chains, one of which can be seen in the cut. These chains are so arranged that the heavier the load the more do they press upon the arms on which the drums

revolve, causing them to bite more firmly upon the road. The steering is done by steam. The machine acts as its own sprinkler, and besides this, steam may be introduced into the drums, to moisten the surface of the road and enable them to take a better hold. As the drums are narrower than the full width of the road, the sleds are provided with grooves, through which steam may be passed to moisten the ruts where the runners go. By this means the machine makes its own road, firm and solid, and better than if separate sprinklers were used.

Everything is of the most substantial construction. The material used is soft steel so that the risk of breakage is reduced to a minimum. Although two drums are shown in the cut, that number is only required for heavy grades, and the machine now being built at the Bertram works has only one, with a horizontal engine of the compound type. But these are only differences of detail and do not affect the principle. When in use the machine is closed in to protect the men and machinery.

The logger is 30 feet long by 10 feet wide over all, the sleds being 6 feet 6 inches, and weighs 13 tons. Eight and a half tons of this rests on the sleds, the remainder on the drums. The diameter of the drums in the cut is supposed to be four feet, in the machine being built with one only, it is increased to six feet. The engine is 75 horse power and is geared to run from 8 to 10 miles an hour. It has a starting capacity of 600 horse power and its hauling load is 40,000 feet a trip. It is impossible to slip or spin the drum on the road, because the harder the pull the stronger the bite.

It will be seen at a glance how great is the advantage of such a machine. Logs cut and skidded in the fall must be banked the following winter. Failure to get them out means serious loss by discolouration, worms, locking up of capital and failure to fill contracts, besides risk from fire. A lumberman with 20,000 feet of logs left over in the woods has their value, $150,000 or more, absolutely dead capital for a year. How important it is, then, that they should reach water. By the use of the steam logger risks arising from the use of horses are avoided.



NEW STEAM LOGGING MACHINE.

It is found that at present prices it does not pay to haul logs with horses more than five miles. With the logger much longer hauls can be economically performed, for the longer the haul the cheaper is it per M per mile, and it hauls over roads that cost less than horse roads. Three men—engineer, fireman and pilot—on a five mile haul, will do the work of 40 double teams and their drivers. In case of emergency, by having two crews the engine can be worked at night as well as in the day, for it never tires. A large saving can be effected in the board of horses and men, besides avoiding depreciation in horses, which is estimated at 20 to 25 per cent each season. It costs nothing to keep the machine when it is not working, and when in use its only food is wood, obtained on the spot and costing nothing but the cutting. If it can do the work claimed its economy is so great that it must come into general use.

The steam logger is the result of experiments commenced some ten years ago in the lumber districts of Michigan. The necessity for something of the kind was felt, and a practical lumberman, named Glover, began experimenting. He associated with him Mr. Samuel Chandler, of Chicago, and the two worked out the idea, slowly and labouriously, and at an outlay of about $100,000 in experimenting, till they achieved success. At the close of the season of 1893, after being thoroughly tried under varying conditions of weather, roads and temperture, the machine was pronounced by competent engineers and practical lumbermen a mechanical and commercial success. It has since been in successful use in Michigan, and is now being introduced into Canada.

Mr. Chandler has formed a company called the Ontario Steam Logger Co., Limited, to build and operate the engines, in which he has associated with him a number of prominent business men, Alderman Jas. Scott, president of the North Shore Navigation Co., and vice-president of the Georgian Bay Lumber Co., being president, Mr. Geo. H. Bertram, treasurer, Mr. R. H. Bowes, secretary, and Messrs. Bertram, Wm. McKenzie, T. H. Dunnet, A. H. Campbell, T. R. Wood, S. Pearcy, of Toronto, Samuel Chandler and Geo. T. Glover, of Chicago, directors. Two engines will be built for use in Canada this winter. The one approaching completion is going to the limits on the Wahanapitae River, in the Nipissing district, to work for Wm. Irwin & Co., Peterboro', the other will be employed by Mr. Egan, of the Hawkesbury Lumber Co., in the Ottawa district. By next year the company will be prepared to furnish engines and crews anywhere in Canada, and will make contracts for hauling at a rate per M feet rather than sell or rent the engines. They assert that by its use the output can be doubled with reduced gangs of both horses and men.

The engine is, of course, available for any kind of haulage over snow roads, and it will doubtless be largely adopted in connection with mining and other operations in the Lake Superior, Georgian Bay and Ottawa districts.

NOVA SCOTIA NOTES.

Young Bros. & Co., head office at Parrsboro, have a steam gang mill at Newville, where they saw seven million feet, and a water power gang mill at River Hebert, in which they cut three million feet per year. The stock is English deals, which are shipped at West Bay and Grindstone. The boards and scantling go to South America and the United States. Their operations this year will be about the usual cut. Mr. B. F. Young, Parrsboro, is the manager, and Mr. D. P. Young superintends the Newville mill. They are both thorough in the lumber business, understand every detail from the stump to the rail of the ship, and are noted throughout the maritime provinces for their shrewdness and success. Mr. C. E. Young, president of the St. Croix Soap Co., St. Stephen, N. B., is the genial "company" of the concern.

Clarence Fullerton, Port Greville, has a large tract of timber at Fraserville, and has Joshua Welsh, with his steam portable saw mill, sawing for him. He expects to get out from a million to a million and a half of deals, which will be shipped from West Bay. Mr. Fullerton is a successful merchant as well as lumberman.

A. C. & C. W. Elderkin, Advocate Harbor, have a steam portable mill in which they cut a million feet of deals per year. Their operations this winter will be normal. They also ship-build when there is money to be made in the business. The Messrs. Elderkin are shrewd, clear-headed business men, and what they undertake they perform.

Huntley & Epps, Parrsboro. have a 30,000 feet capacity steam circular mill at Canaan, six miles from Parrsboro. One feature in this mill is that when the deals leave the trimming table they fall into a water sluice that delivers them to within 1½ miles of place of shipment. Their cut this year was three and a quarter million feet of deals and boards and two and a half million lath. They haul the lath to the wharf in Parrsboro in winter, where they are ready for early spring shipment when the market prices suit. Their deals are shipped from West Bay. The firm have also a planing mill in Parrsboro in which their boards and scantling are dressed ready for market. They also buy boards from mills up and down the bay, which they dress and market. D. F. Huntley and Henry Epps compose the firm.

H. Elderkin & Co., Port Greville, have a steam portable mill sawing for them, which will cut a million feet. They also have a water power circular mill which they use principally in sawing timber for the vessels they build, of which they keep from one to three on the stocks all the time. The firm also do a large mercantile business. Mr Hubert and Mr. Brenton Elderkin compose the firm.

Moses Hatfield, Fox River, has a steam portable mill in the woods on his land, which will saw 1,000,000 feet deals, a part of which is birch. He also has a water power circular mill which he runs in the spring, sawing about a million. His deals go to West Bay for shipment. Mr. Hatfield is a successful lumberman and at the same time superintends his farm, one of the most thrifty looking in Cumberland county.

F. R. & L. F. Eaton, Eatonville, have a large steam gang mill at Eatonville, on the shore of the Bay of Fundy. The mill is a model in the way of convenience and labor-saving devices. The firm log six to eight million feet yearly. Their cut this winter will be the usual amount. Deals are shipped to West Bay, boards and lath to Eastern States and South America. Mr. Ed. Henderson is the capable superintendent, and thoroughly understands the practical part of manufacturing lumber. The mill was built from his plans, which accounts for the completeness of its parts. Mr. L. F. Eaton directs his attention to every detail in a business way from the log to the vessel, and can tell at a glance the comparative cost of each part of the business from year to year. Mr. F. R. Eaton is located at Parrsboro, where he is building a barque for the Greenland trade, for New York parties. Mr. Eaton has built several vessels for the Arctic trade and thoroughly understands how to make them strong.

Edward Brownell, Moose River, is lumbering on lands owned by Hon. A. R. Dickey, member of the Federal Cabinet. He has a steam portable saw mill and the deals are run from the mill to the shipping point on Bay of Fundy in a water sluice, which in some places is built up 125 feet from the ground. At one place for a quarter of a mile, it is 75 feet above the ground. The quantity got out yearly is about one million feet. The deals are shipped from West Bay.

Fisher Bros., Southampton, will saw one million feet of deals, which are carried to Parrsboro by the Cumberland

Coal & R. R. Co., then lightered to West Bay for shipment abroad. The Messrs, Fisher had one steam mill burned, which they are having repaired for next season.

William Adkinson, Mapleton, has a steam portable saw mill in the woods sawing for Harris Hunter, who has the contract for supplying all the lumber and pit props for the Cumberland Coal & R. R. Co., Springhill, besides which he will get out in the neighborhood of one million feet of deals which are shipped from West Bay, via C. C. & R. R. Co. to Parrsboro.

Joseph Lodge, Mapleton, has a water power circular saw mill, but does not intend operating this winter. The mill is for sale. Mr. Lodge intends devoting his time to farming.

Wm. Brown, Mapleton, has a water power gang mill in which he saws yearly from three-quartess to a million feet of deals. He intends adding a rotary for next year, and will increase his output somewhat. His deals also go via C. C. & R. R. Co., and are shipped from West Bay.

D. Harkness, Joggins Mines, has two portable saw mills in operation, in which he will saw two million feet of deals, which will be shipped from Joggins in schooners to Grindstone, where large vessels load for any foreign port. Mr. Harkness finds ready sale for his boards in the rapidly growing mining town, and he also furnishes lumber and pit props to the Canada Coal and R. R. Co., who operate the Joggins Mines. From his long experience in portable saw milling Mr. Harkness knows just how to run a mill for profit.

PILING GROUND OF THE ONTARIO AND WESTERN LUMBER CO. AT RAT PORTAGE.

LUMBERING AT RAT PORTAGE.

AMONG the growing industries of Rat Portage, Ont., is that of lumbering. The history of this industry may be said to date from the building of the Canadian Pacific Railway, though operations were previously carried on to a limited extent. That road, however, made an outlet, and opened a market in Manitoba and the Northwest Territories, which promised great results, and for a time lots of money was made in the business, but as usual under such circumstances, too many embarked in it, it became overdone, the country did not fill up as anticipated, and prices went down. A succession of bad crops made matters still worse, and only a big crop, in 1887, saved many of the lumbermen from bankruptcy. Things were again prosperous till 1892, when keen competition had so extended credits and reduced prices that the lumbermen of the district resolved to amalgamate, limit the output, keep down expenses and economize in every possible way. That is how the Ontario and Western Lumber Co., Ltd., came to be formed.

"The Combine," by which the new company came to be known, embraced the following companies which were then doing business at Rat Portage: The Western Lumber Co., the Minnesota and Ontario Lumber Co., the Safety Bay Lumber Co., Cameron & Kennedy, and Ross, Hall & Brown. The amalgamated concern found itself with a stock of 100,000 feet of lumber and logs. They suspended all operations in the woods during the winter of 1893-94, and endeavoured to work off their stock, but met with keen opposition from the Minnesota lumbermen, and the result has been that much of the stock taken over by the amalgamated company was sold at an actual loss. Last winter was also an off year, so far as logging operations in the woods are concerned, but this season, though lumber is sold cheaper than ever in the Northwest, the company is encouraged to send men into the woods, and now have five camps in operation. Though prices are low, possessing the very best of appliances they are enabled to do business at a profit, and can look forward hopefully to the future.

ONE OF THE ONTARIO AND WESTERN LUMBER CO.'S MILLS AT RAT PORTAGE.

The company operates the five saw mills at Rat Portage, and in addition manufacture mouldings, brackets, balusters, sashes, doors and all kinds of building material, from kiln-kried lumber. They have just completed a well equipped sash and door factory, and have a very complete box factory, where all kinds of packing cases are turned out. One of the most interesting machines in the latter is for printing, by means of which any kind of matter may be printed on the boxes. They also deal in railway ties, telegraph poles, cedar posts, etc. The company owns vast limits in the Rainy Lake district, and gives employment to about 500 men. They also purchase

logs from jobbers in northern Minnesota, which are towed through the Lake of the Woods to their mills.

We give illustrations of one of the company's mills and their piling ground, also a portrait of Mr. D. C. Cameron, the president and general manager.

At the adjoining town of Keewatin there are two large saw mills, one of which has not been operated for three seasons on account of dullness in trade. The other is operated by water power, has a capacity of 15,000,000 feet per annum, and belongs to the Keewatin Lumber Co., of which

D. C. CAMERON,

President and General Manager Ontario and Western Lumber Co.

Mr. John Mather, one of the pioneers of the lumber trade on Lake of the Woods, is vice-president, and his son, Mr. R. A. Mather, manager. It gives employment to 150 men.

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

A VERY valuable contribution to the Central Experimental Farm Arboretum has been received from Prof. C. S. Sargent, director of the Arnold Arboretum, near Boston, in the form of 179 varieties of trees and shrubs, and cuttings of 24 species of willows. When planted in the spring this will make over one thousand varieties of trees and shrubs at the farm under test. The results of the experiments made will be very valuable in relation to forestry matters.

The early sale of next season's cut of deals by some of our large producers gives a good send off to the lumber trade and promises certain employment for a large number of men. The purchase so far in advance indicates a satisfactory state of affairs in the English lumber market.

The mills have all shut down for the season and most of the men have gone to the woods. Operations promise to be active, although large stocks are held over, but it is expected a good deal of what is now in the piling grounds will move out during the winter. The mill men are simply carrying the stock instead of the wholesalers in the United States. The season opened favorably for operations in the woods, but the recent mild spell has rather retarded work.

OTTAWA, Can., Dec. 24, 1895.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE great lumber combination is an assured fact and all our lumber concerns have gone into it. We anticipate that lumbering on the Pacific coast will now become a profitable business, and that consumers will not suffer from any great advance in prices. The worst feature for us is that it is controlled from San Francisco, but the interests of British Columbia lumbermen are, we think, pretty well guarded. Messrs. Bibb and Holt, of San Francisco, are president and secretary respectively. The combination represents $50,000,000 and includes 50 or 60 mills. The exact capacity of every mill has been ascertained, and according to their capacity they receive so much stock. Each mill supplies lumber to the order of the central office, at a scale of prices for all mills agreed upon as cost. Three times each month a dividend will be declared according to the stock held by each mill company, even if they do not ship a stick of timber to the order of the central office. The supply and demand will be nicely adjusted at San Francisco. Should a retailer refuse to come in he has no place to buy his lumber; should a wholesaler refuse to come in he has no Pacific market to sell his lumber in.

Shipping men say that the demand for tonnage for immediate loading to transport lumber to Central and South America, oriental and coastwise points, is better than any time since the palmy days of 1889. The saying has always prevailed that when the lumber business was good on Puget Sound general trade was sure to be away up. With a fair living price for the product and with the existing demand we shall soon see prosperous times.

Advices from Sydney, Australia, state that there is more inquiry for all lines in connection with the building trade and a brisker business is reported in timber generally. The new treaty with New Zealand which comes into force on 1st January will help the timber trade considerably.

In connection with the recent charter of the bark Crown Prince, which loaded at the Hastings mill, Vancouver, it is interesting to note that while for some time past Douglas fir has been steadily supplanting Baltic pine in the markets of South Africa, and many valuable cargoes have been shipped to the Cape from the large cargo mills on both Burrard Inlet, B. C., and Puget Sound, shipping a cargo of Douglas fir right into the heart of the Baltic pine regions is a new departure, stranger even than shipping coals to Newcastle.

An order for over a million feet is reported to have been received recently by a Vancouver mill for Los Angeles. It is a wonder the order did not go to a United States mill.

P. Genelle & Co. will build a saw mill at the head of Arrow lake next spring with a capacity of 70,000 feet per day.

NEW WESTMINSTER, B. C., Dec. 20, 1895.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE news as to the state of the English market is very encouraging to Maritime province lumbermen, small stocks and advancing prices speak well, and operations will be on a larger scale than usual this winter, both for the supply of the English and United States markets. Stocks of spruce in London on Oct. 31st were only 407,481 pieces, compared with 678,405 in 1894 and 1,221,630 in 1890, and there was great reduction in Baltic goods. American prices are a dollar a thousand by the car better than in the summer.

It is satisfactory to know that some 30,000,000 ft. of last winter's cut, which were hung up by low water, have been got down and are in the booms ready for next season. The booms at St. John now contain a good supply of logs.

Three St. John mills, those of Messrs. Cushing, Purvis and Hamilton, were destroyed by fire last year. Two others, those of Stitson, Cutler & Co. and Messrs. King, were closed nearly all the season for want of logs, and others for shorter periods. The importance of the mills to St. John is shown by the fact that the big mills pay out about $1,500 a week for wages.

The making of St. John the winter port of the Beaver line of steamships will be of great benefit to the lumber trade, which will be able to ship deals and boards to England all the season. Already a great deal of space is arranged for.

A number of mill properties have changed hands recently and this class of investment is looked upon with favor. It is satisfactory to see outside capital coming into the country, and to know that our own capitalists feel encouraged to put their money into business enterprises.

A lot of logs made their appearance in the St. John river at Woodstock the end of the month, which turned out to be from the Aroostook woods. They belonged to Mr. Geo. Dunn, of Houlton, and there were between 1,500,000 and 2,000,000 in the boom at the falls, half of which broke away. His loss was heavy.

The largest single owner of spruce lands, and hemlock as well, in New Brunswick, on the St John waters, is the old New Brunswick railway, which has been leased to the Canadian Pacific. Years ago there were large amounts of hemlock cut on these lands for the bark, and at one time there were lying along that road, in the woods, 40,000,000 feet of hemlock logs from which the bark had been peeled, and for which logs there was no market, although they were offered as low as 25 cents per thousand feet in the woods. This slaughter has not occurred since, as the hemlock lumber has met with a better market. This same slaughter occurred even on a larger scale in the Province of Quebec, eastern townships and points now on the Quebec Central Railroad. Now that railroads have been built in various directions and have reduced their rates of freight, these hemlock boards find a market, especially as there is no duty on them.

ST. JOHN, N. B., Dec. 21, 1895.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE Saginaw lumbermen say that the season just closing has been one of the most unsatisfactory in the history of lumbering operations here in recent years, at least since the war. Not only has the movement been depressed, but prices have been so low that owners of stocks declare lumber barely brings enough to meet the cost of production. Shipments by lake have been the smallest for 30 years, and the rail movement has also fallen short of expectations. There are large stocks on hand, with light demand and great uncertainty as to the future. The outlook for next season can hardly be judged, and therefore buying in the wholesale market has stopped. Our mill men feel rather blue over the situation.

The annual meeting of the Northern Michigan Hardwood Manufacturers was held at Traverse City, Mich., on December 4th, and largely attended. There was a yearly cut of 75,000,000 feet represented. The chief subject discussed was that of the restriction of the annual output of hardwood. The exact action of the association is not made public, but it is known that the report of the committee appointed at the special meeting in November to canvass the manufacturers was very favorable to the plan to reduce the annual output fifty or sixty per cent., and the sentiment of the meeting was that the association take definite steps to carry it out. The subject of inspection also came up for consideration. The desirability of a more uniform grade was discussed, and it is probable such will be adopted in the near future. The following officers were elected: President, George W. Hopkins, Bear Lake; first vice-president, D. H. Day, Glen Haven; second vice-president, W. P. Porter, East Jordan; third vice-president, Martin Crane, Frankfort; secretary and treasurer, Loin Roberts, Traverse City.

It is estimated by the Menominee Enterprise that the twin cities manufactured during the past season with their twenty mills 418,707,987 feet of lumber valued at $5,025,496 in addition to the shingle and lath cut. The Boom company assorted 374,643,625 feet of logs during the season, and but a few comparatively were hung up. Forty-two concerns are now operating in the woods.

The constitutionality of the knot saw law is on trial in a Grand Rapids court. The suit is that of Charles R. Wiley against the American Lumber Company to recover $6,700 penalty for not having a knot saw guarded by a metallic guard for sixty-seven days. The defense demurs on the ground that the penalty is excessive, that the statute was not intended to be punitive, but remedial, and that the clause providing that a knot saw shall be guarded by a metallic guard is class legislation.

The legal complications in connection with the Mosher & Sons failure in Bay City are increasing day by day. The lawyers will get the cream and the creditors only the skim milk.

The lumbermen of the Saginaw Valley will not take out more than one-half or two-thirds the quantity of logs they did last year.

There seems to be a scarcity of labor for the woods, and wages are better in consequence. Men are being sent from the Saginaw Valley to upper Michigan and Canada.

The Saginaw Valley men and the railroads leading to the south-west are at loggerheads over rates. Freights to the south-west part of the state have been advanced 1 and 2 cents per 100 lbs. The railways say the action was prompted by Detroit and western Michigan lumbermen. An investigation is proposed.

SAGINAW, Mich., Dec. 24, 1895.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

MONTHLY AND WEEKLY EDITIONS

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ADVERTISING RATES FURNISHED ON APPLICATION

THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

1896

AT the portal of the New Year, THE CANADA LUMBERMAN, becomingly attired in a new "dress" of type, greets its numerous readers with the Compliments of the Season. May 1896 bring to all in ample measure happiness and prosperity.

A retrospective glance at 1895 shows it to have been a year in which improved conditions prevailed to some extent. The indications point to continued improvement during 1896. This improvement seems likely to be of the slow but constant kind, which after all is the most satisfactory, regarded from the standpoint of ultimate results.

Important changes are taking place in methods of manufacturing, selling and buying timber products. It therefore behooves Canadian lumbermen to keep fully informed regarding every phase of the business, and to exert themselves to keep abreast of the progressive age in which they live. Only those who recognize the fact that conditions have changed and are constantly changing, and adapt their methods to the new order of things, can hope to make profits in business in the future. Those who persistently adhere to the methods of their forefathers are foredoomed to failure.

The CANADA LUMBERMAN has now been connected with the lumber and wood-working interests of Canada for the period of sixteen years. It has tried to be progressive and to keep its readers well informed on all questions affecting their interests. With increased age and wisdom and the aid of a weekly as well as a monthly edition, it will endeavor to do still more efficient service in the future.

Several new features, including a monthly cartoon by Mr. J. W. Bengough, bearing on some phase of the lumber situation, are introduced with the present number. It is hoped these will give additional life and interest to the journal. THE LUMBERMAN WEEKLY EDITION has completed its first year. It has proved to be a success, and is every week growing in favor with readers and advertisers. Our thanks are tendered to both these classes for the support they have given us. In proportion as you, esteemed reader, co-operate with us by sending us your opinions and the news of your locality, and by introducing THE LUMBERMAN to your neighbors, will the publisher be enabled to produce a better paper than he has yet given you. Here's to 1896.

SHARP PRACTISE BY BUYERS.

BITTER complaints reach us of the manner in which Canadian shippers of lumber are sometimes treated by dealers in the United States. A car load or more is shipped to fill an order, and when it arrives it is graded down to such an extent that when the proceeds are returned there is little for the shipper. We had heard so many complaints of this character that we were led to make enquiries, and we find that while there may be, and doubtless are Canadian shippers who try to pass off inferior lumber, there is too much ground for the complaints which we have heard, and there seems to be a great deal of sharp practise indulged in, for the purpose of defrauding shippers out of their just rights. An instance will illustrate this. A couple of car loads of hardwood were sent from Toronto to Buffalo, but the dealer there declared it was little better than culls. The shipper went over to see about it, and resorted to a little subterfuge. Going to the office of the dealer, he professed to be anxious to buy a quantity of first class lumber of the kind he had shipped, and was referred to his own lumber as being the very thing he wanted. After giving ample opportunity for the dealer and his inspector to praise the lumber as being a superior lot, he revealed his identity, to the chagrin of the men who had declared it to be little better than culls.

This is only one of several such instances which have come under our notice, and while we would be very sorry to pronounce dealers on the other side a lot of frauds, we fear there is too much tendency to indulge in what is sometimes known as Yankee sharpness, but which verges very closely upon, if it does not actually amount to dishonesty. There are many honourable men in the lumber business in the United States, as there are dishonest people in Canada, and the only way for our shippers is to find out those over there who are guilty of sharp practises, and avoid them.

It would naturally appear as if the way to avoid such tricks is to have lumber inspected at the mill before it is shipped. This is, however, not always practicable, and in these days of keen competition, and over-anxiety to do business, the conditions of buyers have to be met, even if at times they appear unreasonable. Friction will arise between buyers and sellers in any business, and often it happens that there are faults on both sides. If people would try and live up to the principle of the golden rule, to do to others as they would be done by, there would be fewer complaints of sharp or dishonourable practice in business transactions.

The complaints come principally from dealers in hardwood, although we have heard some grumbling with reference to shipments of pine. Some of our dealers have had so much difficulty that they treat enquiries from certain quarters with silent contempt. Certain buyers, therefore, instead of dealing through wholesalers here, send their men out among the smaller mill men to purchase direct, subject to inspection on delivery. It would not do for us to mention names, but we would advise manufacturers throughout the country to be on their guard lest they should be imposed upon in the manner indicated. When any one is discovered in dishonest tricks it might be well to pass their names round.

THE WOOD PULP BUSINESS.

THE enormous consumption of paper, which promises to go on increasing at a rapid rate, is causing a demand for spruce wood for pulp, which threatens to deplete the forests of the world in the not distant future. As a single instance of the enormous demand which exists for paper, we may state that the Petit Journal, published in Paris, which has a circulation of over a million copies a day, and is printed on wood pulp paper, consumes in a year 120,000 trees of an average height of 66 feet. This is equivalent to the annual thinning of 25,000 acres of forest. This enormous amount is required for a single paper. In Sweden, Austria and Germany, the great sources of supply for wood pulp, the question is becoming a serious one, and already those interested are looking about to see where their material is to come from when the forests now available are exhausted.

There is a good deal of spruce in the United States, but Canada probably possesses more than any country in the world, though much of it grows in places so inaccessible as to be practically worthless. There are, however, large quantities of spruce in Quebec and the maritime provinces, and the pulp industry there is beginning to assume considerable proportions, while the mills in the United States are looking in that direction for their raw material. It is a question worth consideration whether Canada should not impose an export duty on spruce wood, for if she does not, large quantities of logs will be taken to the United States to be ground into pulp. Perhaps it would be better to adopt a policy which would bring the mills to the wood rather than have the wood taken to the mills outside the country.

Canadian pulp has already established its reputation in England, having been proved superior to the Scandinavian article. England imports annually nearly 300,000 tons, of which nearly one-half goes from Norway, one-fourth from Sweden, and the balance from other countries. Canada should be able to secure a large part of this trade, and we would rather see the pulp made here and sent to England than have our spruce go to the United States to be ground up there. The pulp might also be made into paper here.

An immense pulp mill has just been set in operation at Sault Ste Marie on the Canada side, by an enterprising United States firm, and it is soid it is to be followed up by a paper mill. New pulp

mills are also projected in New Brunswick, Newfoundland, British Columbia and other points in Canada. To show how rapidly this industry has grown we may state that in 1881 the total output on this continent was about 750 tons a day, while last year it had run up to 7,500 tons daily. It is entirely the growth of the past forty years, about which time it was suggested by the hornet, which made its nest from paper manufactured from wood. The utilization of that hornet's wisdom has had scarcely less influence on the art of printing than the introduction of movable types, for without wood pulp it would be impossible to supply the world's demand for paper.

But the use of pulp is not confined to paper making. It is already applied to a great variety of purposes, and the number is rapidly increasing. Among its applications may be mentioned the manufacture of pencil casings, fruit cans, shoe heels, pinions for machinery, house linings, car wheels, hats, thread, etc., etc., and the familiar fibre chamois, so extensively advertised, is a preparation of wood pulp, costing two cents a pound and sold at thirty-five cents a yard, equivalent to a dollar an ounce. The applications of wood pulp will in a short time be legion, though the manufacture of paper will always be one of its chief uses.

The moral of all this is that we should not be wasteful of our spruce forests, but carefully husband them as a valuable source of wealth in the near future.

EDITORIAL NOTES.

WHY do not the transcontinental railways build their cars on the Pacific coast? Lumber is being shipped from the west to the east to build cars to be sent west to carry lumber to build more cars. A car built on the coast will almost pay for itself on its first trip.

ONE party in Maine filled an order this year for seven car loads of young firs for Christmas trees. We would be sorry to deprive young people of their Xmas tree, but the destruction of so much young growth is a serious matter in the eyes of those who are interested in forestry.

OWNERS of forest land who lease it with the privilege of cutting the wood should restrict the size of the trees cut. Operators who buy the wood practically cut it with a scythe. They would pay about as much if bound to preserve the small trees, and the owner of the land would be considerably better off.

IT is prophesied that the U. S. Congress will re-impose the duty on lumber. The wish is doubtless father to the thought with many of the prophets, and while the party in the majority may feel disposed to take such a step, we question whether public opinion throughout the country would sanction such a foolish move.

LATH is low in price, and one reason is that large quantities are manufactured out of slabs, which would otherwise become waste material. But spruce slabs and edgings are likely to become valuable, and many of the mills in the east are already selling them to the pulp mills. Spruce laths are likely to disappear before long, and prices will advance. We can, however, always fall back on wire lathing.

MR. JACK'S letter in another column calls attention to an important trade development which can be effected in New Brunswick. It will doubtless cause surprise to be told that the wharf facilities at Moncton are so poor, but the government has been trying to make a good financial showing on the Intercolonial Railway, and to bring the expenditure within measureable distance of the receipts. In order to accomplish this, economy has had to be practised, and it may be that it has been carried too far. We have no doubt that when trade demands it better shipping facilities will be provided.

IT is not often that Canadian enterprise comes in for credit from our neighbors in the United States, who usually regard themselves as the most go-ahead nation on the face of the earth. The North Eastern Lumberman gives Canada credit, however, for putting in quiet but effective work in the development of trade with Buenos Ayres, to which we send a good deal of lumber. Our trade with that republic has increased from $200,000, which it was ten years ago, to more than $4,000,000 a year. The paper referred to puts the United States on the scent, and suggests that it could furnish many of the goods more cheaply and thus capture the trade. Canadians must be careful lest this market should be snatched from their grasp.

THE Timberman does not think the recent decision on the dressed lumber question will have much effect, for the reason that so little confidence is felt in the permanency of any tariff legislation that few Canadian mills had provided themselves with machinery for jointing or tongueing and grooving lumber for the United States market. Probably one of the worst to suffer is a United States firm who recently built a large mill in Canada. They look upon the decision as unjust and unbusinesslike, and regard it as contrary to the intention of the framers of the law, inasmuch as it is made 25 per cent. ad valorem, instead of so much per M feet. They think Canada should retaliate by imposing an export duty on logs. The decision may, however, be reversed on appeal. The uncertainty as to tariff policy, and as to the interpretation to be put on the various clauses of the act, are very disturbing to business.

A REPORT of the Crown Lands Department at Quebec, just issued, contains a map and explanations which pretty effectually dispose of the wonderful "Nile of the North," said to have been discovered by Dr. Bell of the geological survey. The New York Herald has had a great deal to say about this wonderful river and the country through which it flows, much of which turns out to be pure imagination, though it may have helped to sell the paper. The "Nile" is no other than the Mekiskan, which takes it rise near the head waters of the Gatineau, flowing to Lake Metakami, and thence to James Bay under the name of the Nottoway. It is in reality a western branch of the Nottoway, the two uniting in Lake Metakami. It has been known for years, though a few miles of its course had not been explored till the past summer. There is much good timber in the country through which it flows, and it may in course of time become a lumbering stream.

I DO not wonder that the Pacific coast lumbermen have organized a combine. When giants of the forest 100 to 125 feet long and 8 to 10 feet in diameter, cut by expensive modern mills, only bring $7 to $9 per thousand feet for timber such as we do not often see in the east, I can hardly blame the lumbermen there for joining to bring the price up to a reasonable figure. It may be selfish, but it is human nature.

* * *

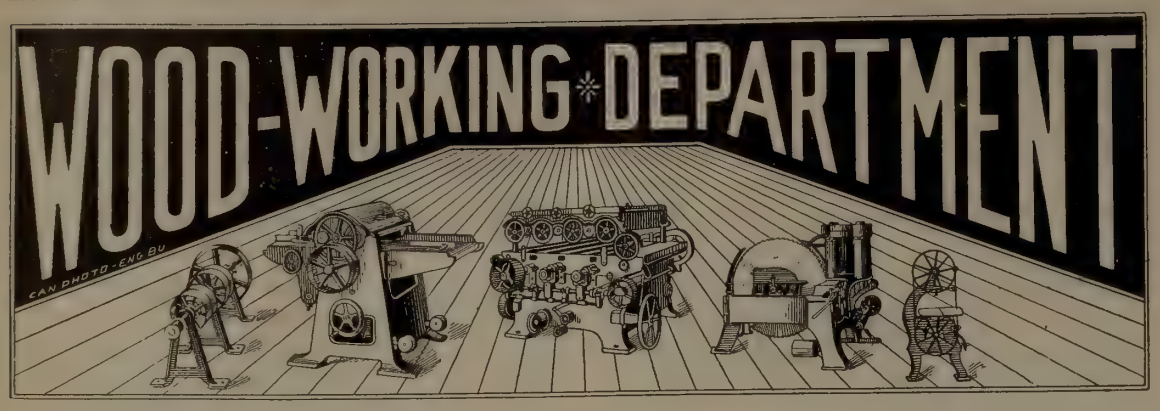
I SEE Prince Ansah, of Ashanti, was defendant in a timber limit suit brought in the English courts recently, by a merchant in the West India trade, for commission on the purchase of a timber concession on the river Panni, in Ashanti. The plaintiff got judgment, but it seemed to me he would be beaten on the execution, till I learned that the dusky prince had money in the hands of one of the witnesses, which could be garnisheed. It is not everyone who has the honor of suing princes. But the Ashanti ruler has more serious work on his hands, in meeting the military expedition which England is sending out to settle an account of a different character.

* * *

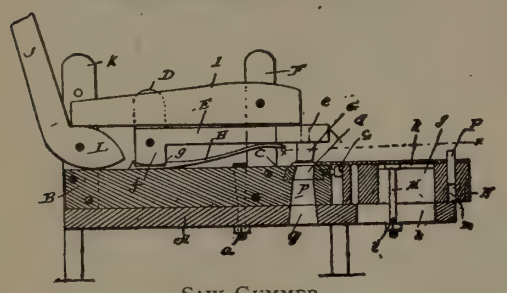
ALL of us who drink chocolate can claim some interest in a sale which has just been made of the Island of Anticosti, at the moutb of the St. Lawrence river, to M. Menier, who paid 1,000,000 francs, which, if I understand French currency, is equal to about $200,000, which we put into his pocket in the shape of profits on his Chocolate Menier. The island is 140 miles long and 30 broad, and was formerly in the possession of the Forsyth family of Quebec. It was sold some years ago to an English syndicate, represented in this country by Mr. Stockwell, but they did not do much with it. I am told there is dense wood on it, covering a million and a half of acres, much of which is good pine, spruce and birch; but its chief value is in its fisheries. It is said M. Menier is going to colonise it.

* * *

A RATHER amusing story was told me the other day by a gentleman who owns a piece of hardwood timber land in western Ontario, which he is desirous of selling, owing to being compelled, by ill-health, to go out of the lumber business. Every time he has made an effort to sell the property he has run up against an obstacle in the shape of a man who owns a saw mill a few miles distant from his land. This man has been looking with greedy eyes for some time past upon the hardwood timber limit. Being unwilling to pay a fair price for it, he has adopted the method of intercepting persons who might visit the locality with the view of becoming purchasers, and crying down the property to such an extent as to discourage them from going to see it. He evidenrly expects that by and by the owner will also become discouraged and sell to him on his own terms. As hardwood timber is every year becoming more valuable, and as the property in question is favorably situated, it does not seem probable that his expectations will be realized.



NEW CANADIAN PATENTS.



SAW GUMMER.

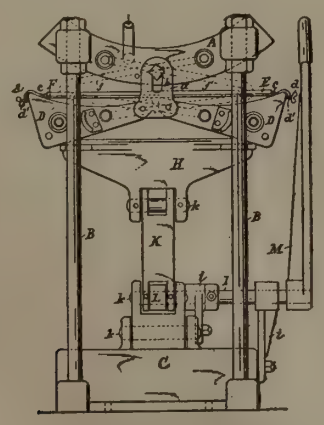
Patentee: William McLean and Edward Davies, both of Tie Siding, Wyoming, U. S. A., 1st October, 1895; 6 years.

Claim.—In the saw gummer described, the combination of a bed, uprights D rising from the bed, the arm E pivoted between said uprights, and having the depending portion f at its connected end, a punch carried by the free end of said arm, uprights F arranged in advance of the uprights D, the lever I fulcrumed adjacent to its forward end between the uprights F, above the arm E, and having its rear end extending to the rear of said arm, uprights K arranged in rear of the uprights D, the hand lever J fulcrumed between the uprights K, below the rear end of the lever I, and having the cam portion L, adapted to engage the under side of said lever I, and the spring H, having the recess g, receiving the depending portion f, of the arm E, and interposed between said depending portion and the bed, said spring bearing at its forward end against the under side of the arm E, adjacent to the free end thereof, all substantially as specified.

CARVED SHINGLE CLAPBOARD.

Patentee: Levi H. Montross, Harry A. Montross and Fred L. Montross, all of Camden, New Jersey.

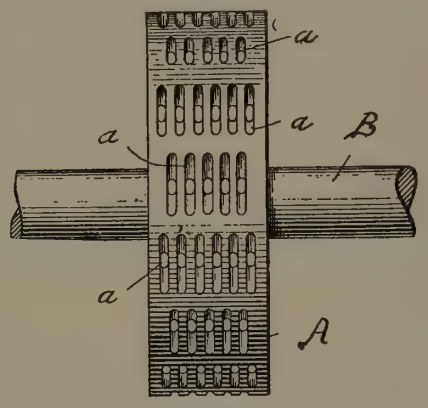
This is a patent granted for a method of carving clapboards to represent shingles, giving the side of a clapboarded house the appearance of being shingled. It does not appear to be possessed of any special merit.



WOOD BENDING MACHINE.

Patentee: Gustave Stickley, Syracuse, New York, U. S. A., 2nd October, 1895; 6 years.

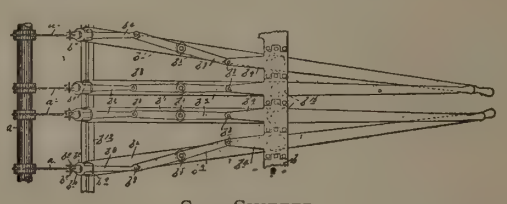
Claim.—1st. The combination in a wood bending machine, of a convex die, a concave die divided centrally in two parts, said parts being pivoted together, each part being connected to the convex die and adapted to swing relatively to each other, and suitable means to move the said dies relatively to each other, as set forth, etc.



PULLEY.

Patentee: Darius Ephraim Newell, New York, State of New York, U.S.A., 7th October, 1895; 6 years.

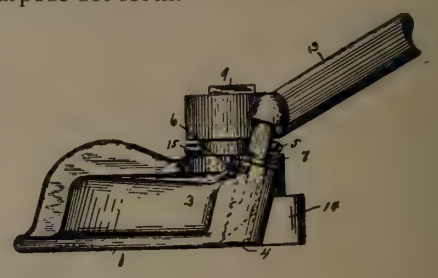
Claim.—1st. A pulley having a rim provided with a number of centrally tapering recesses or pockets positioned circumferentially and arranged in groups over its outer surface, the edges of the recesses or pockets on all sides being formed within the peripheral surface of the pulley, and the recesses or pockets being provided midway with holes or openings at their bottoms extending through the inner surface of the rim, the areas of these holes or openings at their inner surfaces being less than the area of the recesses or pockets at the outer surface of the pulley, and the recesses in the several groups being relatively staggered, substantially as specified. 2nd. A pulley having a rim provided with a number of centrally tapering recesses or pockets positioned circumferentially and arranged in groups over its outer surface, the edges of the recesses or pockets on all sides being formed within the peripheral surface of the pulley, substantially as specified.



SAW SHIFTER.

Patentee: Charles F. Nyberg and Joseph A. Gillard, both of Minneapolis, Minnesota, U.S.A., 8th October, 1895; 6 years.

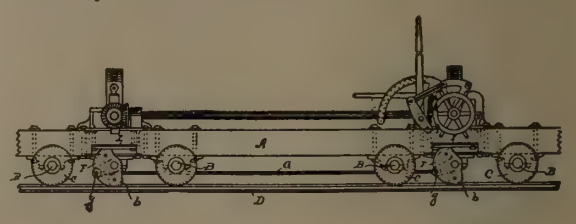
Claim.—1st. A saw shifter, comprising a saw engaging lever and a pair of controlling levers connected to said saw engaging lever at points off-set from each other and arranged to move said saw engaging lever and to hold the same always parallel with the saw, substantially as described. 2nd. A saw shifter, comprising a primary lever, a saw engaging lever pivoted on and carried by the primary lever. and a compensating lever centrally pivoted to said primary lever and having one end pivotally connected to said saw engaging lever, and having the other end pivotally connected to a fixed arm or body, with the said fixed arm and the arm of the saw engaging lever connected thereto, all of the same length, substantially as and for the purpose set forth. 3rd. The combination with the cross-bar b, of the primary lever b^1, pivoted to said cross-bar, and provided with the pintle b^6, of the saw engaging lever b^2, having the sprocket b^7, engaging said pintle and provided with the pivoted jaw-head or yoke b^9, the lever b^3, pivoted to the lever b^1, and having one end connected by slot and pin to the lever b^2, and its other end connected by slot and pin to the fixed arm b^4, all constructed and operating substantially as and for the purpose set forth.



FLOORING CLAMP.

Patentee: John W. Smith and Franklin J. Perkins, both of Woburn, Massachusetts, U. S. A., 21st October, 1895; 6 years

Claim.—1st. The improved flooring clamp comprising the frame or casing 1, containing the bearing 8, and sockets on opposite sides of said bearing, and provided with pins or studs loosely fitted to said sockets and adapted to be driven into the supports of the clamp for retaining it in position, the horizontal cam 10 having the pin or journal 9 fitted to the said bearing and provided at its edge with a face for acting against the edge of a flooring board, the said face having the straight portion 141, and the curved portion 142 formed as a volute and with a gradually increasing curve, and the handle or operating lever, substantially as described, etc.



AUTOMATIC OFF-SET MECHANISM FOR SAW MILL CARRIAGES.

Patentee: Charles Elvidge, Oakland, California, U.S.A., 21st October, 1895; 6 years.

Claim.—1st. An offsetting mechanism for saw mill carriages consisting of a cam or segment F mounted on the carriage, and power transmitting connections E, e, a, from said cam or segment to effect the offset and return of the carriage at the beginning of the gigging and feeding movements respectively, etc.

A car load of redwood has been shipped from California to Germany for making lead pencils. Red cedar is giving out in Europe and redwood from the east slope of the Sierras is said to be the only wood with sufficiently straight grain to be suitable for pencils.

CANADA LUMBERMAN

WEEKLY EDITION

The Lumberman Monthly Edition, 20 pages } $1.00 PER YEAR { The Lumberman Weekly Edition, every Wednesday

THIS PAPER REACHES REGULARLY THE PRINCIPAL LUMBER MANUFACTURERS AND DEALERS THROUGHOUT CANADA, AND WHOLESALE BUYERS IN THE AMERICAN AND FOREIGN MARKETS.

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Weekly Lumberman, published every Wednesday. Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

Lumberman, Monthly. A 20-page journal, discussing fully and impartially subjects pertinent to the lumber and wood-working industries. Contains interviews with prominent members of the trade, and character sketches and portraits of leading lumbermen. Its special articles on technical and mechanical subjects are especially valuable to saw mill and planing mill men and manufacturers of lumber products.

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Toronto, Canada
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Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue.

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ATTENTION LUMBERMEN!

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SHIPPING MATTERS.

Ship Island is chartered from St. John to Liverpool, with sawn timber, hewn, at 27s.

Barkentine Primrose has loaded 300,000 ft. of lumber at Meteghan and St. John for Buenos Ayres.

Sch. Wild Rose, from St. John for Yarmouth with sleepers, is aahore at Tiverton, and will probably be a total wreck.

The Algoma, from St. John, which arrived at Newport Dec. 6th, lost 50 standards of deals, deck cargo, on her way across. The St. Petersburg, Quebec to Cardiff, also lost some of her deck load.

CURRENT TRADE CONDITIONS.

ONTARIO.

DULLNESS is the most marked feature of the lumber trade this week, the holiday season not being favorable for business in that line. There is absolutely nothing doing, nor will there be till after the new year. The weather is also against business. The roads are bad, and where lumber has to be drawn in waggons to the point of shipment it cannot be done at present with economy. We hear of some small lots to go forward, the shipment of which has been delayed from this cause. Operations in the woods are being retarded too by the mild weather. The war cloud is a fruitful subject of conversation among business men everywhere. A war between Great Britain and the United States would be disasterous to our lumber trade, which depends so much upon the latter country for its market. The universal hope is that we may be spared such a disaster.

QUEBEC AND NEW BRUNSWICK.

The possibility of war, remote though it may be, is having an effect at present in deterring capitalists in the United States from operating in Quebec and New Brunswick. The possibility of a duty on lumber being re-imposed is also having its effect, though not in a marked degree so far as this season's operations are concerned. A feeling is growing in favour of an export duty on spruce, for every cord of pulp wood, costing $5, which we export, is converted into $15 or $20 worth of pulp, and this into $40 worth of paper. If this could be made in the country so much the better. There have been great improvements made in the mills this season, and next year more lumber will be produced and at a cheaper rate. Prices are stiffening. Spruce deals which a few months ago were selling at $9 in St. John are now worth $10.50. Shingles are now very firm, rainy weather having caused a large demand for renewing leaky roofs. Freights by schooner from St. John to New York are up to $2.75 and to other ports in proportion, an advance of 50 cents. Ocean freights are also higher, three recent charters by steamship to British ports being 45s. 42s 6d and 47s 6d. The general feeling (the war scare aside) is hopeful.

BRITISH COLUMBIA.

Business is still quiet in view of the coming into force of the combination on 1st January. There are five British Columbia mills in the combine. After the new year a great impetus to the trade is expected, not so much in the way of increased output as in more profitable business. The Prince Victoria has just completed a cargo of 800,000 feet for Callao. There are 8 vessels now loading at B. C. ports for foreign. Prices are unchanged.

UNITED STATES.

December has been an unusually dull month. Lumbermen are closing up their accounts for the year, and making plans for 1896. The unpleasantness with Great Britain makes the future uncertain to a degree, and for a time dealers will not know what is wise for them to do. Should peace prevail there is no reason to doubt that a period of prosperity is ahead, as long it is to be hoped as the depression through which the country has been passing. The trade on the west coast is down to a cargo trade, no shipments of any extent being made east by rail. The white pine men of the Upper Mississippi are having their usual quiet after the closing of the mills. At the head of the lakes and in Michigan the piles on the docks prove that more lumber was sawed than could be sold, and it lies there awaiting future shipment. The yellow pine men of the south are well organized, and have resolved to curtail the cut and insist on fair prices for what they sell. In the eastern spruce market there is a little more doing, and prices are firm at $14.50. At other points trade is about the usual for this season, which is expressed by the word quiet.

FOREIGN.

Till after the holidays no business of any consequence can be expected in the British market. Anything that is being done is with reference to next season, and it is rather early for matters to have assumed definite shape. Notes for Baltic stocks for next year are, in some cases, in agents hands, but prices are not yet definitely decided upon. White Sea agents are soliciting offers. At the last auction sale prices were a little lower, but the goods sold were mostly remnant lots. Canadian pine, both square and waney, is in fair request, and present stocks promise to be inadequate to meet the winter's demand. Oak and elm are also very firm, the former is scarce. Confidence is increasing, and improved conditions give a cheerful aspect to the close of a somewhat chequered year in the trade. There are only four cargoes from New Brunswick and two from the St. Lawrence reported afloat for United Kingdom ports. Cheering news comes from Australia. The demand for Pacific coast fir is increasing. Six ships were discharging at the same

time at Sydney, and all they carried was wanted and would go into consumption at once. After a long period of depression things have taken a decided turn for the better, and building operations promise to be brisk. From the Argentine Republic also comes a promise of increased demand.

STOCKS AND PRICES.

Tenders are asked for the right to cut timber on berth 713, Dominion lands, Province of Assiniboia.

The lumber camps about Thessalon, Ont., are all running full blast, with large gangs of men, and the winter's cut is progressing rapidly.

The saw mill at Linwood, Ont., is being put in order for winter sawing. Mr. Fish has secured the services of Mr. Chas. Hawke, of Listowel, to run it.

The property of the Stewart Lumber Company, at Bathurst, N. B., has been purchased by the Sumner Company, of Moncton, and operations will begin in the spring. The sum paid was $10,000.

Messrs. Stevens & Godard and E. P. Eastman are operating quite largely this season on Pollet River, N. S. Alex. Geldart and others will ship birch. The Messrs. Graves are getting a large quantity of birch in New Ireland, which they will ship to St. John next spring.

Mr. T. G. McMullen's new band saw mill at Ellerhouse Station, N. B., has been tested and works very satisfactorily, It is operated by water power, a little Giant wheel of 200 horse power being used. It will employ more men and turn out more lumber than the old one.

An Alma, N. B., letter says the lumbermen have all gone into the woods. Point Wolfe River will put in about 5,000,000 feet, F. O. Talbot about 4,000,000, and on the Salmon River, Albert E. Smy about 400,000 feet of logs and 3,000 railway ties. and 100 cords of hardwood by Albert Luther.

Australian advices state that present stocks of Pacific coast lumber are ill-sorted and insufficient for requirements. Half of the cargo of the bark Nonantrim, which arrived at Melbourne from Port Blakeley on Oct. 2nd, was sold prior to her arrival at £7 to £7 10s per 1,000 feet super. At the same time about 200,000 feet of old stock was placed privately at £6 10s ex-store.

The Midway, B. C., saw mill is shut down, although there is a great demand for lumber. This is in consequence of the boom breaking last spring and letting the logs float down the river. What few were left, together with the small stock of lumber on hand, are now exhausted, and building operations have come to a standstill. The nearest point at which lumber can be procured is at Grand Forks, 30 miles away, or at Okanagan Falls, some 60 miles distant.

Mr. John Wells, of ths lumbering firm with which John Charlton, M.P., is connected, says that lumbermen in the section tributary to the head of Lake Huron are not satisfied with the turn the weather has taken. It hinders large logging operations. Two weeks ago there was just enough snow and the ground was frozen hard enough to make the conditions favorable in the woods. Should mild weather prevail between now and February it will be expensive to the logging contractors, as they will be obliged to keep a large force of workmen waiting for colder weather. The only work which can be done now is felling trees. The firm has 75 men at work and about 45,000 logs on the skids.

BUFFALO,

If the reports of the unusual firmness of the English lumber market continue, there is likely to be considerable indifference in Canadian lumber circles over the condition of the market on this side, and as to the proposed new tariff of from $1 to $2 on all imported lumber, it will merely catch the Americans who are in control of stumpage in Canada.

It is to be hoped that there is a good effect felt in Canada over the prospect of a steady demand from abroad, for there is considerable lack of such a feeling here, though there has been some selling both to South America and South Africa within the past week or two. At home, the demand is slack enough. It is nothing out of the way, however, for this month to develop a slow trade, for the last lake cargoes are coming in, and there is a disposition to unload them slowly and make most of the chance given for a careful grading of everything as it comes from the boat.

After everything is in the yard there is another delay for the annual inventory, and dealers rather welcome than otherwise the orders that come in now for delivery next month. There is rather more than the usual amount of good pine in the last receipts, and dealers are inclined to hold it firmer than they have their summer stocks, for what goes now cannot be replaced till spring. Cheap grades cannot be very firm in the nature of the case. There is too much indifferent lumber left in the lurch at the mill docks that was to have been sold last summer. What that will bring next spring it is hard to say, but no one looks for it to sell for what was asked for it when it was sawed out.

Buffalo will have the average amount of pine in stock this winter, and Tonawanda will have more than for a long time. There is no appearance of a shortage in any high grades yet, and it may be that the experience of last winter is not going to be repeated. It is a long time since the grades were in such bad shape.

There is a large lot of lumber well filled with Canadian sand on sale here. Pfohl & Son have bought and shipped here by rail more than 100,000 feet that went ashore at Sarnia from a tow bound here, and 40,000 feet came off the schooner Hattie Wells, and went ashore above Port Colborne.

The shipments here of basswood, birch and other hardwoods from Georgian Bay continued unusually late this fall and the amount was comparatively large, though it has been sometime since so little pine has come in from there. Fred. M. Sullivan has been bringing quite large quantities of mostly elm from the Georgian Bay district by rail, and finds a ready supply of it. Scatcherd & Son have not sent their Canadian man back there since he was withdrawn some months ago, but may do so later.

There is a rather uneven market for hardwood at present. There is no difference of opinion as to the demand everywhere for oak, both red and white, but other hardwoods are not very steady, and there is no very uniform price. With this condition of things there is not the generally good feeling in hardwoods that has prevailed for some time. Stocks are somewhat broken as regards single yards, but there is plenty of most sorts here somewhere. If the reports of wide variation in price are correct there should be some speedy understanding arrived at, so that this market can stand up as a whole, and not be at work at cross purposes.

The latest report of the Holmes situation is that the planing mill that was bought in the name of George Rung, will soon be running by Rung Brothers and Julius Dietz, of the Holmes firm, the co-operative idea having been laid aside, and that the lumber yard and lumber, which was bought by Nelson Holland for $100,800, will be used by Holland, Graves & Montgomery for a town yard. The casket works is doing very little, but the maple flooring plant is being run by the preferred creditors of the firm at full capacity.

The demand for southern woods is again quiet. The mills that are working large amounts of cypress and some poplar are well stocked, and the receipts of southern pine are not large, though the prices are without change.

Donogh & Oliver leased a part of their dock at Black Rock to T. N. Willcox for his late receipts of Michigan pine and hardwood. He has two or three large cargoes there, one that will not be unloaded till well into the winter, as his Louisiana street yard is full of available stock.

There is complaint of the low price that builders are willing to take work at in order to keep from lying idle. Early in the spring there was an army of builders from Canada, most of them with very little money, ready to take this work almost at any price, but the mill men would not carry them to any great extent, and not much is heard of them now, but the home builders seem to have gone into the same style of business, and are taking houses to build at prices that will hardly cover the actual cost.

The Goodyears appear to be the only hemlock dealers that are able to report business at all brisk. It moved very late in the fall and ought to have opened the way for the use of an unusual amount of pine.

CANADIAN WOODS IN ENGLAND.

In Farnworth & Jardine's Liverpool circular of 1st Dec. we find the following relating to Canadian woods :

The import has consisted of one steamer cargo, the bulk of which will probably go direct into consumption. For waney there is a fair enquiry, and prices are firm. Square is difficult to move even at low rates, the stock of both is moderate. Red pine has not been imported ; there is no change in value to report, and the stock is light. Oak.—The import has been ample, still 1st class wood is in fair request and maintains its value ; the stock is sufficient. Elm has been imported moderately ; there is a good demand and prices are firmer. Ash has come forward too freely ; the deliveries have been good, but the stock is too heavy. Pine deals have moved off fairly well, and values have slightly advanced ; the stock is ample.

NEW BRUNSWICK AND NOVA SCOTIA SPRUCE AND PINE DEALS.

Of sprucethe import has again been moderate, viz., 8,159 standards, against 13,830 standards in the corresponding month last year, and 8,430 standards in the previous year. The deliveries, although less than last year, have kept pace with the arrivals, and the present stock is moderate; values generally have ruled steady ; latest sales showing a still further slight advance. Of pine deals there are no sales to report.

BRITISH COLUMBIA AND OREGON PINE.

There have been no arrivals ; there is little improvement in the demand to record and no change in value ; the stock is too heavy.

WOODSTOCK NOTES.

The Woodstock Lumber Co. said to our representative that business the past year had been fairly good but had fallen off to great extent this fall. Bill stuff was in good demand. No. 1 culls sold for $10, No. 1 cull stocks $12, No. 1 stock boards $18. Bill lumber, pine $15. They do a good business in shingles, and handle a lot of British Columbia cedar shingles. XX pine and cedar shingles sell at $1.50 ; xxx $2.40. Prospects for spring do no look promising.

Leishman, Maundrell & Co., wholesalers and retailers, report wholesale trade not so good the past year, but the retail trade has been very good. The spring trade does not promise much. Their shingle trade has been good, and they say that home cedar will soon supplant British Columbia cedar. They have supplied the new market sheds, the cold storage building, and the large addition to the Anderson Furniture Co.'s buildings. Prices are cut low and the margins are small. Barn boards sell at $14, general pine bill stuff at $15, hemlock at $10.50, xxx pine and cedar shingles, at $2.40; xx at $1.50; British Columbia cedar at $2.60 and lath at $2. They do a large rough lumber business and dress very little. Their wholesale trade extends from Hamilton to London. Branch offices at Galt and Stratford report trade good.

BUSINESS CHANGES.

Mr. Playfair having decided to devote all of his time and energy to his lumbering interests at Midland, has sold his hardware stock at Collingwood.

The valuable mills and timber property at Point Wolfe, N. B., owned by Geo. J. Vaughan has, been sold to Chas. T. White, of Apple River for, it is said, in the vicinity of $70,000.

The Wood flour and saw mills at Smith's Falls, Ont., have, it is rumoured, been leased for a term of years to Mr. Wm. Robinson, of New Boyne, and Mr. Fred Crate, of Smith's Falls. The former is a wealthy farmer and cheese man, the latter has for years been a foreman in the mills.

LUMBER FREIGHT RATES.

Lumber freight rates on the Canada Atlantic Railway are as follows: Ottawa to Toronto, 10 cents per 100 lbs.; Ottawa to Oswego, $1.90 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Montreal, $1.25 per M ft., (3,000 lbs. and under per M ft.); Arnprior to Montreal, $1.75 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Quebec, $2.25 per M ft.; Arnprior to Quebec, $2.75 per M ft.; Ottawa to Buffalo, 12 cents per 100 lbs.; Ottawa to Port Huron and Detroit, 14 cents per 100 lbs. Ottawa to New York, 15 cents track delivery 17 cents per 100 lbs lightered ; Arnprior to New York 17 cents track delivery 19 cents lightered ; Ottawa to Boston, Portland and common points, local 15 cents ; exports 13c. per 100 lbs.; Arnprior to Boston, Portland and common points, local 17 cents ; export 15 cents per 100 lbs.; Ottawa to Burlington, 6 cents per 100 lbs.; Ottawa to Albany, 10 cents per 100 lbs.,

Arnprior to Albany, 12 cents per 100 lbs.; Ottawa to St. John, N. B. and common points, 20 cents per 100 lbs.; Ottawa to Halifax, N. S. and common points, 22½ cents per 100 lbs. Minimum carload weight for shipment of lumber, lath, shingles, etc., is 30,000 lbs., and rates quoted above are in cents per 100 lbs., except when quoted per M ft. the minimum carload charged is 10 M ft., lumber not exceeding 300 lbs. to the M feet. Ottawa rates apply on shipments from Rockland and Hawkesbury.

LUMBER freight rates for pine on the Grand Trunk Railway have been made a fixture, as below. Of any intended change due notice will be given lumbermen.

General instructions in shipping by Grand Trunk are embodied in these words in the tariff schedule: On lumber in carloads, minimum weight, 30,000 lbs. per car, unless the marked capacity of the car be less, in which case the marked capacity (but not less than 24,000 lbs.) will be charged, and must not be exceeded. Should it be impracticable to load certain descriptions of light lumber up to 30,000 lbs. to the car, then the actual weight only will be charged for, but not less than 24,000 lbs. The rates on lumber in the tariff will not be higher from an intermediate point on the straight run than from the first named point beyond, to the same destination. For instance, the rates from Tara or Hepworth to Guelph, Brampton, Weston or Toronto, would not be higher than the specific rates named from Wiarton to the same points. The rates from Cargill and Southampton to points east of Listowel and south and west of Stratford will be the same as from Kincardine, but in no case are higher rates to be charged than as per mileage table published on page 9 of tariff.

Rates from leading lumber points on pine and other softwood lumber, shingles, etc., are as follows: From Glencairn, Creemore, Aurora, Barrie and other points in group B to Toronto, 6½c.; Collingwood, Penetang, Coldwater, Waubaushene, Sturgeon Bay, Victoria Harbor, Midland, Fenelon Falls, Longford, Gravenhurst and other points in group C, to Toronto, 6½c.; Brace, bridge to Toronto 7c.; Utterson, Huntsville, Navor-Emsdale, Katrine to Toronto, 7½c.; Burk's Falls, Berriedale and Sundridge, to Toronto, 8c.; South River, Powassen and Callender to Toronto, 9c.; Nipissing Junction and North Bay, 10c. Rate from Goderich, Kincardine and Wiarton to Toronto, 6½c. These rates are per 100 lbs. Rates from Toronto east to Belleville are 7½c. per 100 lbs.; to Deseronto, 9c.; to Brockville and Prescott, 10c.; to Montreal and Ottawa, 11c. The rates on hardwoods average about from 1c. to 2c. per 100 lbs. higher than on softwoods. For rates on railway ties, mahogany, rosewood, walnut, cherry, and other valuable woods, application must be made to the district freight agent.

On the Canadian Pacific the rates on pine and soft woods may be illustrated as follows: Cache Bay, North Bay, Sturgeon Falls and Warren, to Toronto, 10c.; Algoma, Cook's Mills, Massey, Spanish River and Whitefish to Toronto, 13c.; Ottawa to Toronto, 10c From Ottawa, Hull, Aylmer and Duchesne Mills to station on the Lake Erie and Detroit River, Erie and Huron, Toronto, Hamilton and Buffalo, and Michigan Central Railways, the rate is 14½c. per 100 lbs. Regulations apply as to minimum size of carload of 30,000 lbs., and an advanced rate is charged for hardwoods.

MODIFICATION OF HARDWOOD RATES.

THE Grand Trunk Railway and Canadian Pacific have made the rates on hardwoods from certain points to Toronto and Hamilton as follows. The regulations are over the signature of Mr. John Earls, W.D.F.A., of the G. T. R., and given in reply to a letter from Toronto hardwood men:

"After careful consideration we have come to the conclusion that, on and after Jan. 1st, 1895, a modification will be made in the present arrangements for hardwood lumber, to the effect that the rate will be 7½c. per 100 lbs. from our Northern and Northwestern branches to Toronto and Hamilton. This rate, however, will not apply from main line points and the straight run between Toronto, Sarnia and Windsor; also that so far as rates on common lumber to points like Guelph, Galt, London, Woodstock, Ingersoll, etc., from all lumber shipping stations the rate will be the same on hardwood as on pine." On the old principle, we suppose, that half the loaf is better than none, hardwood men have something, possibly, to be thankful for, though there is no good reason why the rates generally on hardwood should not be as low as on pine. It is understood that the C. P. R. rate will be made uniform at 7½c. from same points.

FOR SALE.

DRY HEMLOCK, ROCK AND SOFT ELM slabs for sale at 75 cents per cord on cars. No edgings.

J. E. MURPHY, Hepworth Station, Ont.

MILLS

Having Brown Ash 12, 14 and 16 ft. firsts and seconds, inch Bass firsts and seconds 12 feet, or any other Hardwood Lumber, can sell same for cash by addressing

H. D. WIGGIN,
No 89 State St., BOSTON, MASS.
Inspection at mill.

CANADIAN EXPORTERS AND WHOLESALERS

ROBERT THOMSON & CO.
....MANUFACTURERS OF....
LUMBER PINE and HARDWOOD TIMBER
—— AND ——
TORONTO OFFICE:
London Canadian Chambers, 103 Bay Street, TORONTO.

WHOLESALE LUMBER
OFFICE:
20 Aberdeen Chambers
Jas. G. GANE & Co.
HARDWOOD a Specialty
TORONTO

DONOGH & OLIVER
Wholesale Dealers in Lumber, Lath and Shingles
TORONTO: 204-205 Board of Trade Building. -:- BUFFALO: Dock foot of Hertel Avenue.

JAS. PLAYFAIR & CO.
Manufacturers and Wholesale Dealers
LUMBER • LATH • SHINGLES
Contractors for Railway Supplies
BILL TIMBER a Specialty . . .
MIDLAND, ONT.

Huntsville Lumber Co., Ltd.
—: HUNTSVILLE, ONT. :—
MANUFACTURERS OF LUMBER LATH AND SHINGLES
WE are open to cut White Pine and Hemlock Bill Stuff. Have for Sale a Quantity of Dry Mill Stocks and Sidings, also 16 in. Pine Shingles and 4 ft. Lath 1½ in. wide.
CORRESPONDENCE SOLICITED

Geo. Cormack
Wholesale Dealer in all kinds of
LUMBER, LATH AND SHINGLES
Bills cut to order.
Lumber shipped to all parts by rail or vessel.
Excellent quality of 18 inch Pine Shingles for sale.
WHITBY, ONTARIO

THE PEMBROKE LUMBER CO. LTD.
MANUFACTURERS AND WHOLESALE DEALERS IN
DIMENSION TIMBER OF ALL SIZES AND KINDS, JOISTS, CAR DECKING, CAR SILLS, SHIP DECKING, AND ALL KINDS OF ROUGH AND DRESSED LUMBER.
Write us for Quotations on all Bills
PEMBROKE, ONT.

The Georgian Bay Lumber Co.
MANUFACTURERS OF
LUMBER AND LATH
Mills at Waubaushene and Port Severn • WAUBAUSHENE, ONT.

FOR SALE
Red Pine Dimension Logs, can be any length up to 50 feet to suit purchaser, and would contract for two to three million for next summer delivery at Spanish River. Special long lengths could be loaded on cars at Rayside, C. P. R. Will have five to six million feet of WHITE PINE, first cut on limit at Spanish River. And have about five million feet at mouth French River which could be delivered at opening of navigation . . . . . .
ADDRESS
BOOTH & GORDON - Sudbury, Ont.

Ottawa Lumber Co. Ottawa Canada
WHOLESALE LUMBER, LATH, SHINGLES, ETC.
Write for Stock List

KILN-DRIED BIRCH FLOORING SHEETING .. and .. CEILING $20.00 SAMPLES BY MAIL KNIGHT BROS. Burk's Falls, Ont.

FOREIGN EXPORTERS AND IMPORTERS

WE want to buy FOR CASH the following kinds of Lumber : : : : :
1¼, 1½, 2, 2½, 3, 4in. White Ash
1 1¼ 1½ 2 2½ 3 in. Soft Elm
Write us promptly, stating what you have to offer in each kind and quantity of each thickness, also dryness, etc., with lowest prices.
Empire Lumber Co. - Buffalo, N. Y.

Ottawa & New York Lumber Line
- - - BONDED LINE BETWEEN - - -
CANADIAN POINTS, NEW YORK CITY AND ALL POINTS REACHED BY WATER FROM ALBANY
CANADA ATLANTIC RAILWAY. DELAWARE & HUDSON CANAL CO. WILLIAMS' LINE. } J. H. Williams Agent { 15 Lumber District, ALBANY, N.Y. NEW YORK OFFICE, 93 Wall Street. Telephone 531 Broad.

ALWAYS IN THE MARKET FOR HIGH GRADE LUMBER.
L. G. MULLER
MAPLE FLOORING, N. C. PINE, CYPRESS REDWOOD.
Lumber and Logs for Export
NO. 1 BROADWAY - NEW YORK.
POPLAR, PINE, and HARDWOOD LUMBER

YOUNG & KEELER COMPANY
WHOLESALE DEALERS AND MANUFACTURERS
Elm, Basswood, Birch and Maple
Canadian mill men invited to offer stocks. -:- 54 South Street, NEW YORK.

POOLE & HOTCHKISS
Wholesale Dealers in
PINE AND HARDWOOD LUMBER
Shingles and Lath
Correspondence invited 270 West Genesee St. BUFFALO, N. Y.

SCATCHERD & SON 1053 Seneca Street, BUFFALO, N.Y...
:— WANT —:
ROCK ELM
COMMUNICATE AT ONCE. 7, 8, 14 and 16 feet, firsts and seconds

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Lumber Truck Wheels, Montreal Car Wheel Co.
Lumbering Tools, Thos. Pink, Pembroke, Ont.
Magnolia Metal Co., New York.
Machine Knives, Peter Hay, Galt, Ont.
Rails, John Garlshore, Toronto.
Silver Solder, P. W. Ellis & Co., Toronto.

PRICES CURRENT.

TORONTO, ONT.

TORONTO, Dec. 25, 1895.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
11-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		2 30
XX shingles 16 inch		1 40
Lath, No. 1		1 70
Lath No. 2		1 40

HARDWOODS—PER M. FEET CAR LOTS.

Quality, 1s and 2s unless otherwise specified.

Ash, white, 1 to 2 in.	$26 00	$28 00	Cherry	1	" 1½	50 00	60 00
" " 2½ to 4	30 00	32 00	"	2	" 4	60 00	65 00
Ash, black, 1sts and 2nds, 1 to 1½ in.	21 00	23 00	Elm, soft	1	to 1½	$14 00	$15 00
Ash, black, 1sts and 2nds, 2 to 4 in.	23 00	25 00	" "	2	" 3	15 00	16 00
"sh, M. R., 2	" 1½	18 00	20 00	" rock	1	" 1¼	16 00
" 1	" 4	20 00	24 00	" "	1½	" 3	20 00
Birch, 2	" 1½	22 00	24 00	Hickory	1½	" 2	28 00
" " 4	24 00	26 00	Maple	1	" 1½	16 00	18 00
" sqrs. 4x4	" 8x8	24 00	26 00	"	2	" 4	18 00
Basswood 1	" 1¼	16 00	18 00	Oak, red, p'n	1	" 1½	28 00
" 1½	" 2	19 00	20 00	" "	2	" 4	30 00
" m. r. 1	" 1¼	14 00	16 00	" white	1	" 1½	28 00
Butternut 1	" 1½	23 00	25 00	" "	2	" 4	30 00
" 2	" 3	25 00	28 00	" quart'd	1	" 2	48 00
Chestnut 1	" 3	24 00	2 600	Walnut	1	" 3	85 00
				Whitewood	1	" 2	32 00

OTTAWA, ONT.

OTTAWA, Dec. 25, 1895.

Pine, good sidings, per M feet, b.m.	$30 00	35 00
Pine, good strips, " " "	26 00	30 00
Pine, good shorts, " " "	18 00	25 00
Pine, No. 1 dressing sidings, per M feet, b.m.	18 00	22 00
Pine, " " strips, " " "	15 00	18 00
Pine, " " shorts, " " "	13 00	14 00
Pine, 10 s.c. and better stock, " " "	14 50	16 00
Pine, 8 s.c. " " " "	12 00	13 00
Pine, " sidings " " "	13 00	15 00
Pine, " strips " " "	10 00	12 00
Pine, " shorts " " "	8 50	10 00
Pine, box culls " " "	9 00	11 00
Pine mill culls " " "	8 00	10 00
Lath per M	1 20	1 50

QUEBEC, QUE.

QUEBEC, Dec. 25, 1895.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	16 @	22
For fair average quality, according to average, etc., measured off.	20	26
For good and good fair average " " " " "	25	30
For superior " " " " "	32	40
In shipping order " " " " "	36	42
Waney board, 18 to 19 inch " " " "	36	42
Waney board, 19 to 21 inch " " " "	38	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	40	49

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	22	30

BIRCH.

16 inch average, according to average and quality	21	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $40 to $43 for 3rd quality.
Bright spruce, according to mill specification, $40 $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality. F.O.B. batteau.

SAGINAW, MICH.

SAGINAW, Mich., Dec. 25, 1895.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$45 00	Selects, 1 in., 8 in. and up wide	$38 00
1¼, 1½ and 2 in.	45 00	1¼, 1½ and 2 in.	40 00
2½ and 3 in.	50 00	2½ and 3 in.	45 00
4 in.	55 00	4 in.	50 00

FINE COMMON.

1 in., 8 in. and up wide	33 50	2½ and 3 in., 8 in. and up wide	40 00
1¼, 1½ and 2 in.	35 00	4 in.	45 00

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	25 00	2½ and 3 in., 7 in. and up wide	35 00
1¼, 1½ and 2 in.	30 00	4 in.	38 00

STRIPS. A AND B (CLEAR AND SELECTS).

1¼ in., 4, 5 and 7 in. wide	34 00	1 in., 4, 5 and 7 in. wide	32 00
6 in. wide	36 00	6 in. wide	36 00

FINE COMMON OR C.

1¼ in., 4, 5, 6 in. wide	30 00	1 in., 6 in. wide	30 00
1 in., 4, 5 in. wide	28 00		

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24 00	1 in., 4, 5, 6 in. wide	23 00

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in	17 00	1 in., 4, 5 and 7 in.	17 00
1 in., 6 in.	18 00	1 in., 6 in.	18 00

NO. 2 FENCING OR NO. 4 FLOORING.

1 in., 4, 5 and 7 in.	14 00	1¼ in., 4 to n.	14 00
1 in., 6 in.	14 50	No. 3 fencing, 1 in., 6 in.	13 00

SHELVING.

No. 1, 1 in., 10 in. stocks	25 00	No. 2, 1 in., 7 and 8 in. stocks	19 00
1 in., 10 in. and up wide	26 00	1 in., 10 in. stocks	21 00
1 in., 12 in. stocks	29 00	1 in., 12 in. stocks	23 00
1 in., 12 in. and up wide	30 00	1 in., 10 in. and up wide	23 00
1¼ in. 1½ and 2 in., 8 in. and up wide	29 00	1 in., 13 in. and up wide	25 00

BARN BOARDS OR STOCKS.

No. 1, 12 in.	20 00	No. 2, 9 in.	14 00
10 in.	17 50	8 and 7 in.	14 00
9 in.	17 50	No. 3, 12 in.	13 00
8 and 7 in.	17 50	10 in.	12 00
No. 2, 12 in.	16 00	9 in.	12 00
10 in.	14 00	8 in.	12 00

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$10 00	1 in., 13 in. and up wide	$12 00
1 in., 6 in. wide	11 00	1¼, 1½ and 2 in., 7 in. and up wide	12 00
1 in., 7 in. wide and up	11 00		

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9 in. wide	17 00	1 in., 10 in. and up wide	17 00
1 in., 6 in. wide	17 00	1¼, 1½ and 2 in., 8 in. and up wide	17 00

COFFIN BOARDS.

No. 1, 1 in., 13 in. and up	20 00	No. 1, mill culls	9 00
No. 2	17 00	No. 2, or red horse	7 00

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23 00	No. 2	19 00
No. 1 (nearly clear)	21 50	No. 3	15 50

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16 ft.	$ 8 50	Hemlock, 2x4 to 10, 12 to 16 feet	8 00
18 ft.	10 50	2x12	8 50
20 ft.	11 50	Add $1 to each additional 2ft. in length.	
22 and 24 ft.	12 50		

SHINGLES, 18-IN.

Fancy brands, XXXX	3 20	Standard brands. river made, XXXX	2 85
Clear Butts	2 00	Clear Butts	1 85

WHITE PINE LATH.

No. 1	1 75	No. 2	1 35
		Hemlock	1 25

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA N. Y., Dec 25, 1895.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in.	$45 00	47 00	No. 3, 1¼ to 2 in.	15 00	17 00
2½ and 3 in.	50 00	53 00	Shelving, No. 1, 13 in and up, 1 in.	30 00@31 00
4 in.	54 00	56 00	Dressing 1¼ in.	24 00	25 00
Selects, 1 in.	39 00	40 00	1¼ x10 and 1	26 00
1¼ to 2 in.	39 00	40 00	1½ in.	24 00	25 00
2½ and 3 in.	47 00	50 00	2 in.	25 00	26 00
4 in.		52 00	Mold st'ps, 1 to 2 in.	31 00	33 00
Fine common, 1 in.	35 00	37 00	Barn, No. 1, 10 and 12 in.	19 00	21 00
1¼ and 1½ in.	34 00	36 00	6 and 8 in.	18 50	20 00
2 in.	34 00	36 00	No. 2, 10 and 12 in.	15 00	16 00
3 in.		45 00	No. 3, 10 and 12 in.	13 00	14 00
4 in.		45 00	6 and 8 in.	12 50	13 50
Cut'g up, No. 1, 1 in.	26 00	28 00	Common, 1 in.	15 00	16 00
1¼ to 2 in.	32 00	34 00	1¼ and 1½ in.	17 00	18 00
No. 2, 1 in.	15 00	17 00	2 in.	18 00	20 00
No. 2, 1¼ to 2 in.	22 00	23 00			

WHITE ASH.

1st & 2nd, 1 inch,	26 00		2½ to 4 in.	28 00	30 00
1¼ to 2 in.	27 00	28 00	Strips	17 00	18 00
			Culls	9 00	10 00

BLACK AND BROWN ASH.

1st & 2nd, 8 inch up,	20 00	22 00	Com. & good culls 8 00 10 00

BIRCH.

1st & 2nd, 6 inch & up, red	25 00	28 00	1st & 2nd, white, 6 in. & up,	18 00
			Com & good culls	8 00	10 00

ELM.

1st & 2d, rock, 8in. & up,	18 00	22 00	1st & 2d, soft, 8 in. & up,	16 00	18 00

MAPLE.

1st & 2d, hard, 6in. & up	16 00	18 00	1st & 2d, soft, 6in. & up,	14 00	16 00

WHITE OAK.

1st & 2nd, plain, 8 in & up	26 00	28 00	Clear squares, 5x5 to x8		30 00
Good common	13 00	15 00	1st & 2nd quartered, 6 in. up	40 00	45 00
Good culls	9 00	10 00	No. 2 quartered	20 00	25 00

NEW YORK CITY.

NEW YORK, N. Y., Dec. 25, 1895.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$28 00 @ 40 00	Building orders	$27 00 @ 37 00
Decking	44 00 50 00		

SPRUCE.

6 to 9 in.	13 00	14 00	10 to 12 in.	16 00	17 00
6 to 12 in.	14 50	15 20	Lath	1 85	1 90
9 to 12 in.	15 50	16 00			

HARDWOOD.

4/4 and thicker, No. 1 and 2	Black Ash, 10 to 16				23 00
" " "	Soft Elm, "				17 00
" " "	Hard Maple, "				21 00
" " "	Basswood, "				20 00
" " "	Birch, "				23 00
" "	Black Ash, Com. and Shipping Cull, M.C.O.				14 00
" "	Soft Elm, "	"	"		12 00
" "	Hard Maple, "	"	"		14 00
" "	Basswood, "	"	"		12 00
" "	Birch, "	"	"		14 00

ALBANY, N.Y.

ALBANY, N. Y., Dec. 25, 1895.

PINE.

Uppers, 3 in. up	$50	$52	Dressing boards, narrow	$19	$21
2½ in.	50	52	West India shipping boards.	16	17
1 to 2 in.	45	48	Box boards	12	14
4 inch uppers	50	52	10-in. dressing and better	26	30
Selects, 2½ in. up	40	42	10-in. common	14	15
1 to 2 in.	36	40	12-in. dressing and better	26	32
Fine common, 2½ in. and up	38	40	Common, 1x12	14	16
1 to 2 in.	34	38	No. 1 barn, 1x12		20
No. 1 cut, 1 to 2 inch	25	35	1x10	18	21
No. 2	18	25	1x8	16	18
No. 3	17	20	No. 2 barn, 1x12	17	19
No. 1 molding, 1 to 2 in.	33	36	1x10	17	19
No. 2 molding, 1 to 2 in.	25	28	1x8	17	19
Stained saps		20	Shaky or star clear, 1 to 2 in.	19	21
Bracket plank	30	35	Dressing	16	18
Shelving boards, 12-in. up	28	30	Common	11	15

LATH.

Pine	$2 25	Spruce	$2 00

SHINGLES.

Sawed Pine, ex. XXXX	$4 25	$4 30	Bound butts, 6 x 18	$6 00	$6 15
Clear butts	3 25	3 35	Hemlock	2 15	2 30
Smooth, 6 x 18	5 40	5 50	Spruce	2 20	2 30

OSWEGO, N.Y.

OSWEGO, N. Y., Dec. 25, 1895.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch					$45 00@46 00
Pickings, " "					36 00 38 00
No. 1, cutting up, " "					31 00 33 00
No. 2, cutting up, " "					24 00 25 00
In strips, 4 to 8 wide, selected for moulding trips, 14 to 16 ft.					30 00 32 00

SIDING.

1in siding, cutting up ricks and uppers	32 00	@39 00	1¼ in selected	38 00	@43 00
1in dressing	19 00	21 00	1¼ in dressing	20 00	22 00
1in No. 1 culls	14 00	15 00	1¼ in No. 1 culls	15 00	17 00
1in No. 2 culls	13 00	14 00	1¼ in No. 2 culls	14 00	15 00
			1 in. No 3 culls	11 00	12 00

1X12 INCH.

12 and 16 feet, mill run	21 00	24 00
12 and 16 feet, No. 1 and 2, barn boards	19 00	20 00
12 and 16 feet, dressing and better	27 00	31 00
12 and 16 feet, No. 2 culls	15 00	16 00

1¼X10 INCHES.

Mill run, mill culls out.	$22 00@25 00	No. 1 culls	17 00 18 00
Dressing and better	27 00 35 00	No. 2 culls	14 00 15 00

1X4 INCHES.

Mill run, mill culls out	17 00	21 00	No. 1 culls	14 00	15 00
Dressing and better	24 00	30 00	No. 2 culls	12 00	13 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20 00	25 00	6, 7 or 8, No. 1 culls	16 00	17 00
6, 7 or 8, drsg and better	25 00	30 00	6, 7 or 8, No. 2 culls	14 00	15 00

BOSTON, MASS.

BOSTON, Dec. 25, 1895.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$11 50	12 00	¾ inch	$ 9 25	9 75
Coarse No. 5	15 00	16 00	11-16 inch	8 50	9 00
Refuse	13 00	13 25	⅝ inch	8 00	8 50
Outs	9 00		Clapboards, sap ext.	46 00	47 00
Boxboards, 1 inch	10 75	11 00	Sap clear	42 00	44 00
⅞ inch	9 75	10 00	Sap, 2nd clear	35 00	30 00
			No. 1	23 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in.	$50 00@52 00		Fine com., 3 and 4 in	46 00	50 00
1¼, 1½ and 2 in.	52 00	53 00	No. 2, 1 in. Fine com.	28 00	30 00
3 and 4 in.	57 00	62 00	1¼, 1½ and 2 in.	29 00	31 00
Selects, 1 in.	44 00	45 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in.	45 00	47 00	No. 2	36 00	37 00
3 and 4 in.	52 00	55 00	No. 3	28 00	30 00
Moulding boards, 7 to 11 in. clear	37 00	39 00	Cut ups, 1 to 2 in.	24 00	32 00
60 per cent. clear	32 00	34 00	Coffin boards	19 00	21 00
Fine common, 1 in.	40 00	41 00	Common all widths	22 00	26 00
1¼, 1½ and 2 in.	40 00	41 00	Shipping culls, 1 in.	15 00	15 50
			do 1¼ in.	15 50	16 50

SHINGLES.

Spruce	1 30	1 50	Second Clear	1 75	2 00
Cedar, extra	2 50	2 75	Extra No. 1	1 25	1 50
Clear	2 35	2 50			

HEMLOCK.

Boards, rough	10 00@11 00		No. 2	7 00@	9 00
Planed	11 50	12 00			

LATH.

Spruce		By cargo	1 80@ 1 90
By car	1 80@ 2 00		

CORRESPONDENCE

Letters are invited from our readers on matters of practical and timely interest to the lumber trades. To secure insertion all communications must be accompanied with name and address of writer, not necessarily for publication. The publisher will not hold himself responsible for opinions of correspondents.

THE INTERCOLONIAL R. R. AS A MEANS FOR THE TRANSPORTATION OF LUMBER.

IT has been said that the portion of the Intercolonial railway which extends from Campbellton to Moncton, a distance of 185 miles, does not pay. If this be true the following statement of facts will show that it can be made to pay, if by nothing else than by the transportation of timber from the vast forests which can be made tributary to it.

In order to give some idea as to what could be done in the way of lumber business over this road within the country above named, I will call attention to the districts. One of them extends from Bathurst to Campbellton (not including the Nepisiquit river) ; the other embraces the southwest Mirimachi and its branches. In the first district there is a crown land territory of about 1,000 square miles of forest land, which is nearly all green. It is intersected by about fourteen small rivers and streams, which can be easily driven ; these are crossed by the Intercolonial at their mouths. The timber in this country consists largely of hard woods, such as white birch of large size, yellow birch, etc., as well as of spruce (Abies alba), cedar and fir. Cedar is particularly abundant and of good quality. The spruce has been much cut among, for deal logs, but there is very much timber, chiefly of smaller size, yet left, which would be suitable for the American market and for domestic uses. There is also on some of these streams much small pine which could be sawn at their mouths for the same market.

At the Moncton sugar refinery 3000 cords of hard and soft wood are annually sawn into staves and heading for barrels. These streams will yield from 20,000 to 30,000 cords of such wood per year for many years. The waters of these rivers are also very pure, and there is no place that I know of where pulp wood can be more cheaply produced than at some of their mouths. The south west Miramichi river, by the aid of the Canada Eastern Railway, can be made a most important feeder to the Intercolonial.

Forty per cent. of all the stumpage on spruce and pine which is received by the Province of New Brunswick, from its crown lands, is derived from timber cut on this river and its branches. There are now on the south west Miramichi and its branches between Boiestown and the Intercolonial railway, more than 200 million feet B. M. of hemlock logs. Many of these logs have been peeled for the bark and have been left in the woods. The timber of much of this is yet fit to be manufactured into boards.

This is the first year in which hemlock boards have been manufactured to any extent on this river. Mr. A. Gibson erected a mill this spring for that purpose, on the line of the Canada Eastern railway at the mouth of Bartholemeus river ; this mill has done a large business this season.

An experienced Miramichi woodsman estimates that 8 million feet of hemlock logs B. M. can be delivered alongside of the Canada Eastern at Blackville, on the s. w. Miramichi, for many years, at from $2.50 to $2.75 per M. feet B. M. Blackville is about 24 miles from Chatham Junction, on the I. C. R., which itself is about 72 miles from Moncton. The same party says that a very large quantity of spruce logs, too small to be used in the manufacture of English deal, can be delivered annually at the same point at Blackville, for $4 per M feet B. M. This lumber would make good pulp wood, and the water of the Miramichi there is of great purity.

Cedar also is abundant on the s. w. Miramichi, not much of it having been yet cut on that stream. This, as well as birch, of which there are yet some hundreds of million feet B. M. for stave making, could also be delivered at the above point, the latter at $2.50 per cord.

In connection with this matter of trade development, at the request of some of the leading citizens of Moncton, I visited that port not long since, in order to examine the terminal facilities which Moncton could afford for a large increase in the timber trade over the Intercolonial. To my astonishment I found that the I. C. R. wharf there was built of round logs and was of the dimension of 110 by 120 feet, and that only one vessel could be loaded at a time at it. Thus until something is done by the I. C. R. to improve this state of things there can be no great increase of trade in lumber over this road. On the other hand let shipping facilities be properly provided at Moncton, then, and not until then, a vast increase of business can be created on the I. C. R. from the timber on the lands mentioned, and its trade with foreign ports, (the U. S. and others), will assume great dimensions. Moncton once was a great ship building place and a leading citizen of the town told me that many large ships had formerly been built there, some of them of 1400 tons burden.

EDWARD JACK.

FREDERICTON, N. B.

THE HARDWOOD LUMBER TRADE.

To the Editor of the CANADA LUMBERMAN :

SIR,—Through the medium of your ably edited and influential journal I would be pleased to see the matter of Canadian hardwoods considered by your readers, and I presume upon your time and space to draw attention to a few points, briefly, with that object.

Many of your readers are doubtless of the opinion that Great Britain would, and I believe does now, consume considerable quantities of maple, birch, soft elm, basswood and ash timber, planks and other lumber. The greater part of these kinds of wood goods now goes from the United States.

Can we not have this trade? We should have more of it and I think we should try to get it.

Although the hardwood mill men are not usually wealthy, nor large operators, when the aggregate of their investments and product are considered, the hardwood business is after all not so much inferior to the pine interests of the country.

Then again, the hardwood mill man deals largely with the farmers and settlers who stay permanently in the country, and do not disappear with the forests as the pine operatives so largely do. We find the Ontario Government spending thousands of dollars annually on pine properties, but nothing to further the interests of the hardwood lumber trade. Possibly the Hon. Commissioner of Crown Lands has never had the matter under his consideration. I think if the matter be brought to his attention, and the commissioners be sent to England to gather all obtainable information as to the needs of the trade, the kinds, lengths, widths, thicknesses, uses to which put and amounts needed for the usual requirements of the trade, the selling of 1 and 2 maple, basswood, ash and elm at $11 or $12 per 1,000 feet would probably cease.

Do you ask why do not the hardwood men send their representatives over at their own expense? I would ask, where is there a hardwood mill man, who has laid by enough money from such prices during the last five years or more to defray such expense? And yet the hardwood mills give probably as much or more employment than the pine trade, furnish more farmers and laborers with small properties and homes, with (small sums though they may be) money for taxes, store bills and family necessaries, realizing therefor the munificent sums of three to five dollars per 1,000 feet delivered at the mills for their logs, which should be worth double that figure to the farmers, and leave a better margin and more ready sale to the mill men for their product. I should like to see a discussion from the hardwood lumbermen as well as your editorial views upon the matter crudely set forth herein.

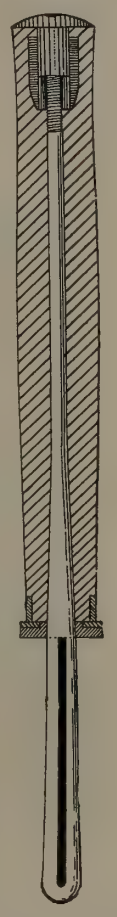
Yours respectfully,

J. T. SCHELL.

Alexandria, Dec. 9th, 1895.

"BURNS" CROSS-CUT SAW HANDLE.

WE illustrate here with a sectional view the "Burns" patent crosscut saw handle, pronounced



by the many who use it as being the strongest and most easily adjusted handle ever invented. A spindle extends through the wooden handle into a long nut at the top, where there is practically no strain, and the spindle is solid and strongest at that part where the strain is the greatest. Usually the loop is fastened in the bottom of the handle near the back of saw, thus having a hinge action or being weak at a point were most strain is exerted. The adjustment of this handle is claimed to be perfect and does not work loose. If necessary, the spindle may be screwed up through the nut, allowing a narrower saw than usual to be firmly tightened to the loop. This handle was patented June 26, 1893, and is made only by the E. R. Burns Saw Co., of Toronto.

FEED WATER DATA.

IN buying a feed water heater never take the work of the seller, unless he can place before you data that means something. He may tell you that it is of so many horse power ; take very little stock in that assertion. In order to find out what the heater can do, let him give you in plain figures :

(1) Square feet of heating surface.
(2) Amount of water contained in heater.
(3) Time for a given volume to pass.
(4) Amount of feed raised a certain number of degrees by a certain amount of steam passing at a given pressure.

With these data you can calculate just what the heater can do, also just what it will not do.

LEISHMAN, MAUNDRELL & CO., WOODSTOCK, STRATFORD AND GALT.

AMONG the enterprising lumber firms of Canada can be rated that of Leishman, Maundrell & Co., whose head office is in Woodstock, and who have contributed a great share to making that town a busy place.

Eight years ago the founder of the present firm did business to the extent of a few piles of

MR. ALEX. LEISHMAN.

lumber per year, but by push and vim the firm has enlarged its business to such an extent that it has three large mills going, and salesmen on the road all the time. The firm consists of Alex. Leishman, Frank Maundrell, W. Thompson, Geo. Thompson and R. E. Butler. Mr. Leishman has charge of the Galt branch, which was established in 1892. Mr. R. E. Butler was placed in charge of the Stratford branch at its inception in 1889. The Woodstock saw mill, built in 1894, of which we show a cut, is well equipped, and in connection with it is their planing and chopping mills. The logs for the several mills are bought from the farmers in the surrounding districts, and what surprises us is that there should be so much timber still to be had in this country. The firm handles rough lumber and a little dressed stuff, and cuts in the three mills 10,000,000 feet per annum.

Their wholesale trade extends from Hamilton to London, and they have had a successful season, and will carry very little stock over the winter. Their retail trade has been all that could be wished, and they supplied most of the rough lumber for several large buildings put up in Woodstock this year, namely, the cold storage, new market sheds, T. L. Wilson's residence, Anderson Furniture Co.'s new addition and Mr. Maundrell's own residence, which is one of the prettiest in Woodstock.

The leading members of the firm, Messrs. Leishman and Maundrill, are young men of good business character, and with such men at its head the firm is bound to have increasing success.

A Toronto firm use annually in the manufacture of washboards 60 carloads of selected basswood, and import 80,000 bbs. of V. M. zinc from the makers in Belgium.

THE NEWS.

—Mr. Richardson is building a saw mill at Alma, N. B.

—Chestnut is said to be the coming wood for interior decoration.

—Messrs. Gagne & Lord, Cap St. Ignace, Que., are building a saw mill.

—A new boiler and engine will be put into Borden's mills at Canning, N. S.

—Mr. Woodruff, of Sydenham, Ont., will put new machinery in his saw mill.

—The shipment of lumber from Duluth this year amounted to 240,000,000 feet.

—Messrs. Murney & Co., of Sarnia, Ont., will erect a saw mill of 10,000 feet capacity.

—Mr. John E Kay, of Salisbury, Ont., is building a new steam saw mill near that place.

—Mr. Wm. Ross is making extensive improvements in his saw-mill at Bennington, N.B.

—Mr. Boivin, of St. Ambroise, Que., has purchased an engine and boiler for his saw mill.

—A syndicate on the Island of Orleans, Que., have purchased the machinery for a new saw mill.

—Mr. Alexander Smith had his arm broken in Mr. Peter's saw mill at Parry Sound, the other day.

—The new steel lumber steamer, Simon S. Murphy, on the great lakes, carries 1,400,000 feet of lumber.

It is expected that the new Purvis saw-mill at Carleton, N.B., will be ready to saw in a couple of months.

—Mr. John Mackay, Petrolea, Ont., has purchased the Kincardine Planing Mill and Sash and Door Factory.

—Mr. E. Charbonneaux, of L'Ange Gardian, was killed in the woods near Georgian Bay, by a log rolling over him.

—Very little mahogany has been arriving at English ports for some time, and the demand has become quite brisk.

—17,000,000 acres of arid lands are now included in the forest reserves of the United States so as to control the water supply.

—A floating sawmill is being built for use on the Escambia river, Florida. It will obtain its logs from the

LEISHMAN, MAUNDRELL & CO.'S MILL AND YARD.

bottom of the stream, where it is estimated $5,000,000 worth of logs are lying.

—Messrs. Lemieux & Tanquay, of Buckland, Que., have purchased the engine, boiler and machinery for a new saw mill.

—Messrs. Howry & Sons, of Fenelon Falls, Ont., have paid the third instalment of $100,000 on the purchase of the Hazlitt limits.

—Diphtheria has appeared in a lumber camp in the township of Hardy, on the French river. A supply of anti-toxine has been sent.

—Mr. H. Macdowall has purchased Captain Moore's interest in the mills and limits of Moore & Macdowall on the Saskatchewan, N. W. T.

—The United States government has appropriated $50,000 for the improvement of the reservoirs on the upper Mississippi for the benefit of the lumbermen.

—Messrs. Church, Mitchell & Fee, of Mitchell Station, Que., have sent to St. Johns 20,000 cords of pulp wood, which was transhipped to boat for the United States.

—Australian Kauri pine is to be tested in New York as a paving material. Its wearing qualities are said to equal

MR. F. MAUNDRELL.

iron and it is noiseless. If successful it will be tried in Chicago, St. Louis and other cities.

—Messrs. Davis & Gothers, a new lumber firm at Upper Georgetown, N. B., are replacing the water mill there with steam, and putting in a new rotary saw mill.

—The saw mill in Cookshire, recently acquired by Mr. Allard, of Coaticook, from Mr. C. W. Taylor, has been purchased by the Cookshire Mill Company, which will extend its business.

—Geo. Williscroft, saw mill owner, at Georgetown, near Port Simpson, B. C., committed suicide by poison a few days ago. He was formerly in business in Toronto and the county of Bruce.

—Mr. John Leggett, foreman of the chair department of the Knechtel Manufacturing Co., Hanover, is trying to arrange to start a chair factory at Walkerton, with a capital of $10,000, to employ 40 hands.

—Howry & Co.'s mills at Fenelon Falls, Ont., closed for the season on the 7th of Dec. During the summer nearly 200 men were employed in and about the mill, though during the fall the number had been reduced.

—J. W. Heron, an Aberdeen, Wash., logger, recently cut a fir tree which made five 24-foot logs, the largest being 97 inches in diameter, and the smallest 50 inches in diameter at the small end. The five logs scaled about 48,000 feet.

—British Columbia alder has been used for partitions in dividing some of the cars on the Vancouver and New Westminster electric railway, and is said to bear a strong resemblance to eastern cherry.

—The largest pile of sawdust in the world is said to be at Cheboygan, Mich., in the center of the city. It is nearly 800 feet long, about 600 feet in width, from 20 to 60 feet in height, and contains about 30,000,000 cubic feet.

—Messrs. Howry & Sons, and the Gilmour Co., will use in their lumber camps this winter 2,000 beef animals, besides vast quantities of pork and some venison. A drove of 500 cattle have been sent to Gilmour's camp from Ottawa.

—The Charlottetown Patriot says:—James E. Macdonald's new brig at Cardigan is the only ship at present building in the maritime provinces under Lloyd's inspection. Shipbuilding has gone down to so low a level in our Atlantic provinces that beside this ship the only vessels under construction at present are three or four smal

crafts. Cardigan seems to be the only place on the island where the once leading industry, shipbuilding, is still carried on.

—There is an immense jam of logs in the Hudson river near Saratoga. It extends for a mile, and is piled eight or ten feet high.

—Most of the timber structures on the C. P. R. have been replaced by iron bridges, and Sir William Van Horne says the few remaining ones will be changed within the next three years. Many of the new structures are arranged for double tracks.

—Mr. William Hartle, of Minden, has been appointed crown land agent instead of Mr. Fielding, who has been appointed police magistrate for Haliburton, and Mr. A. E. Annis, crown land agent for the townships of Wainwright and Van Horne in the Rainy River district.

—The official return shows that during the month of November manufactures of wood were imported into Canada for consumption to the value of $60,969, on which duty was paid to the amount of $13,863.45. Wood, cabinetmakers, etc., which comes in free was imported to the value of $62,753.

—Cowan & Co., of Galt, are filling a large number of orders for wood-working machinery at present. They are sending a 45 h.p. engine and boiler and eight wood-working machines to Nova Scotia, and another order as large to Quebec; also two large sand-papering machines, one to Newmarket and one to Rat Portage.

—Hon. Mr. Packard, ex-state land agent of Maine, predicts the ruin of the forests in that state, by the pulp industry, unless the cutting of timber is regulated. Hon. Mr. Spragge, ex-governor Davis, and Senator Hale think the same, and some of them, who have limits, will not sell trees less than eight inches in diameter twenty feet from the butt.

—"The Young Boss," a story of the lumbering district of the Upper Ottawa, has been running in the Montreal Star for some time. It is written by Mr. E. W. Thomson, at one time on the editorial staff of the Toronto Globe, now with the Youth's Companion, Boston. Mr. Thomson is winning fame as a writer of Canadian stories.

—The largest oak board ever sawed in America was recently cut from a tree 27 feet in circumference, which grew near Scottsburg, Indiana. It was 35 feet long, 10 inches thick and 5 ft. 2½ in. wide at the butt and 5 ft. at the top. It took 2 yoke of oxen and 8 horses a day to move it from the saw mill to the station, on a broad tread waggon. The tree was sold to a New York lumber dealer for $75.

WOODSTOCK NOTES.

The Anderson Furniture Co. cut all their own lumber from logs, getting them from the farmers. They say that prices have been high but the stock very good. They will build in the spring a large band mill with a daily capacity of 60,000 feet.

Clarkson Bros., who do a wholesale and retail lumber business and are contractors as well, report one of the best seasons that they have ever had. Their planing mill has been very busy filling their sash and door orders. Lumber prices have been good, but competition in contracting left very little margin. Among their large contracts was the supplying of T. L. Wilson, of acetylene gas fame, with sashes, doors, etc., for his residence. They had a $10,000 contract for building a school at Norwich.

WORTH DOUBLE ITS PRICE.

Mr. Eldoras Todd, of Brantford, in renewing his subscription to THE LUMBERMAN writes: "I have taken THE LUMBERMAN for six years, and it is worth double its price to any one in the lumber trade."

A statistician has figured that 500,000,000 cubic feet of lumber are used annually for railroad ties.

—A factory in Grand Rapids, Mich., turns out 300 pairs of wooden shoes a week. They are made of basswood. It is said the sale of them is increasing.

PEMBROKE, ONT.
OTTAWA ENG CO

Lumbermen's Supplies

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H. P. Eckardt & Co.
WHOLESALE GROCERS - TORONTO.

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Being extensive operators in the lumber business, as well as Wholesale Grocers, we are exceptionally well qualified to fill orders for Lumbermen's Supplies.

MAIL ORDERS GIVEN PROMPT ATTENTION.

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Pumps & HYDRAULIC MACHINERY

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The Northey Mfg. Co. Ltd.
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THE LAURIE ENGINE CO. - MONTREAL
SOLE AGENTS FOR PROVINCE OF QUEBEC.

SPOOL WOOD AT MATANE, P. Q.

It is not generally known that a large quantity of spool wood is manufactured yearly on the Lower St. Lawrence, in and around Matane. It is seventeen years since this industry started there, and several million feet are exported to Great Britain yearly. Last year more than 4,000,000 feet were shipped. It has been of much benefit to the people in a country where agricultural returns are small and fishing has gone down to almost a minimum.

But a small quantity of spool wood will be made here this winter, as the spool centers are placing most of their orders in Maine, where there are greater facilities for shipping and disposal of waste, which is great.

However, as white birch becomes scarcer in Maine, the thread makers must look for their supplies elsewhere, as long as they use spools for thread, which will likely be for some years yet.

Spoolbars should be sawn in the winter before the frost leaves the wood, which will then retain its white, fresh appearance, also, it must be protected from rain and weather as much as possible, while drying.

MATANE, 14th Dec., 1895.

INDIANAPOLIS will try red cedar blocks for pavements. Does this not seem extravagant, when they are looking about in Europe for a substitute for red cedar in making lead pencils? It seems wasteful too for such a beautiful cabinet wood to be so trampled upon.

IT is said that spruce pulp wood receives injury from worms and decay very rapidly if piled with the bark on. If held over for some time it should be peeled.

PERSONAL.

Mr. H. H. Cook, the well known lumberman of Toronto, is going to California for the winter.

Mr. R. R. Dobell, timber merchant, has been elected president of the Quebec Board of Trade. He held the office 25 years ago.

Alderman Oliver, of Toronto, member of the firm of Donogh & Oliver, lumbermen, will not be a candidate for the City Council for 1896.

Mr. J. E. Jansson, Canadian and United States representative of Messrs. Denny, Mott & Dickson, London, England, has recovered from his illness and is again at work.

Alphonse Renaud, a lumberman, who lived at Wendover, and has lately been working in the shanties for the W. C. Edwards Company, died on the train while on his way to Ottawa.

E. Rochon is petitioning to have Mayor Villeneuve, of Montreal, unseated because of his connection with a lumber firm, which, the petitioner alleges, is supplying lumber to the city.

Mr. Charles Ball has gone to take charge of the Southern States agency and stave yards of the Sutherland-Innes Co., Ltd., at whose Canadian headquarters at Chatham he has been a faithful and valued employee.

Mr. John Charlton, M. P., lumber dealer, was badly injured at Tonawanda, N. Y., recently while alighting from a train, being knocked down on the frozen ground and seriously bruised. He will be laid up for some time.

Mr. W. M. Dobell, eldest son of Mr. R. A. Dobell, the well-known timber merchant of Quebec, and a member of his father's firm, was recently married to Miss Constance Sewell, second daughter of Dr. Colin Sewell, of the same city. The marriage was one of the most brilliant social events witnessed in the ancient capital for some time.

Mr. E. H. Eagles, of St. John, N. B., has been appointed by Mr. T. S. McDonnell, the extensive New York timber dealer, to superintend the forwarding of the cargoes for South America being loaded in the barks Olive Maunt, Barbadian and Eva Lynch. He will afterwards go to New York, where it is expected he will have a permanent position as inspector with Mr. McDonnell, who is an extensive shipper of New Brunswick lumber to the River Platte.

NEW BRUNSWICK NOTES.

The Todd property at Margarets Bay, not far from Halifax, consisting of a steam mill and about 60,000 acres of timber land, was sold lately to the Messrs. Young, of Parrsborough, for about $98,000. The growth on this consists very largely of hemlock. The quality of the wood is good, but it is a difficult matter to cure the bark owing to the humidity of the air there.

Mr. Ernest Hutchinson, who lately bought from St. Stephens bank and others the Todd land on the South West Miramichi, paid $1.75 per acre for the same, $10,000 in cash, balance on time. We are informed that Mr. Hutchinson paid in cash for the small portion of the three tracts sold, containing about 26,000 acres in all, which was held by others than the bank.

Mr. Alexander Gibson will probably cut on his Nashnaak land during the coming winter, more spruce saw logs than will be cut on the Middle Saint Croix at St. Stephen. Mr. Gibson's stream, which is only about 60 miles long, and a large part of which had been heavily cut for deal logs for a number of years before he bought the mills at its mouth, has already yielded him more than 600 million feet B. M. of spruce logs. He bought the mills and 7,000 acres of prime spruce land in the first instance for $28,000. The parties selling were Robert Rankin & Co. The 7000 acres alone were worth much more than the price paid by him for the whole property.

BY a recent judgment of the Supreme Court at Ottawa, the province of Ontario is declared to be the absolute owner of certain Indian lands, free of all lien or charge, which the Dominion Government contended should be held subject to certain annuities. The judgment reverses the decision of Chancellor Boyd, Sir N. Casault and Judge Burbridge, arbitrators in the matter, and involves a financial advantage to Ontario of nearly half a million dollars. The lands lie north of Lakes Huron and Superior.

TRADE NOTES.

P. Payette & Co., of Penetanguishene, are supplying the machinery for alterations to W. M. Peter's mill at Parry Harbor. They are also making a new circular saw mill for A. R. Williams Machinery Co., Toronto.

It is the intention of P. Payette & Co., of Penetanguishene, to erect a large extension to their works in the spring. A new lathe and Radial drilling machine is now being put in.

The Waterous Engine Works Co., of Brantford, have just completed a new band saw mill for T. G. McMullen, of Ellerhouse Station, N.B., to be operated by water power.

The E. B. Eddy Co. has shipped from its factories at Hull, Que., during the past four months, 362 car loads of its goods, consisting of paper, paper bags, matches and woodenware.

The governments of Canada and New Zealand have agreed on reciprocal tariff regulations, which if ratified by the parliaments of the two countries will result in free trade in certain articles, including lumber and timber, planks, boards and dimension stuffs, rough or manufactured, including doors, sash and blinds.

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NEW TERM BEGINS MONDAY, JAN. 6, 1896.

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WHY BAND SAWS BREAK

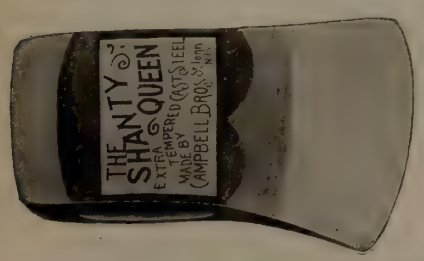
SIXTEEN REASONS, AND HOW TO AVOID THEM

Being instructions to filers on the care of large band saw blades used in the manufacture of lumber.

A book filled with valuable information on the care of band saws. Giving the reasons for breaking; analyzing each reason; giving instructions to dispense with the causes as laid down in each reason; and full details on filing and brazing. The proper styles of hammers to use are illustrated and described, and views of blades showing the blows of the different styles of hammers form an important part of the illustrations. Improper and unequal tension are then treated, and the manner o properly setting irregular teeth is described. In connection with the treatise is a his tory of the invention, manufacture and use of the saw from its origin to the present time. The work in whole makes an accumulation of information such as has never before been published.

The book is printed on fine paper, good clear type, and is handsomely and substantially bound in cloth. It will be sent to any address on receipt of the price, ONE DOLLAR.

Address— CANADA LUMBERMAN, Toronto, Ont.



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PATENT IMPROVED CANT DOGS

WITH FORGED SOFT STEEL SOCKET (as shown in cut).

AN ENTIRELY NEW INVENTION—the result of years of hard study and a large expenditure of money. The aim has been to make a cant dog light enough to be easily handled, yet strong enough to meet the required strain. This, I am pleased to say, has been obtained in THE BOSS CANT DOG. It is forged of the best quality of material, manufactured with the latest improved machinery, and I invite an intelligent inspection of its merits and workmanship, guaranteeing it to be all that is epresented. Made in three sizes, No. 1, No. 2 and No. 3. No. 1 is 2⅜ in., No. 2 is 2⅝ in., and No. 3 is 2⅞ in. diameter. Any length handle, from 2 to 6 feet, and suitable for the different grades of work, from handling the smallest to the largest logs. Manufactured only by

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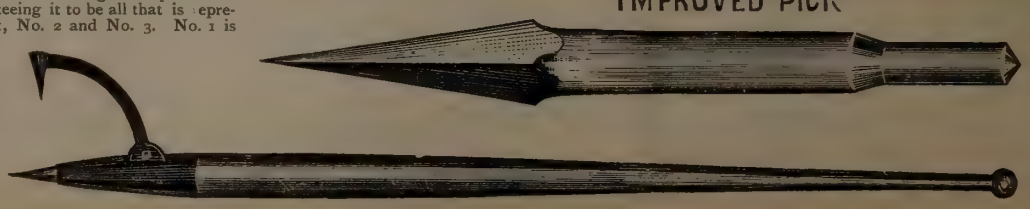

AN EXTRAORDINARY LITIGANT.

THE case of The People v. Shanks will probably make a little history—legal history, but still, history. It is pretty difficult to conceive of a man who, without any possible interest himself, will sue a large corporation, go on his own bond in filing an attachment, knowing all the while that he had not a cent in the world, and could not satisfy judgments of many years' standing against him. Yet this is what was developed in the case of The People v. Shanks. Shanks brought an action last spring against the Magnolia Metal Company on an assigned claim by discharged employees for $7,000. As the Magnolia Metal Company was a foreign corporation, some one had to qualify as surety in bringing an attachment suit. As a matter of fact, Shanks acted both as plaintiff and bondsman. More extraordinary still, he did so on the advice of counsel, who knew his financial condition, and, to add to the incongruity of the situation, his counsel stated that Shanks had no pecuniary interest in the assigned claim in question.

Colonel Alexander S. Bacon, of No. 34 Wall street, did the probing; Mr. Linus A. Gould and S. Victor Constant, of Constant & Coghill, assumed the responsibilities for the action of his client, Shanks, and Police Judge Kudlich heard the case and couldn't see any particular merit in the plea that the alleged perjury was advised by counsel. Colonel Bacon, the attorney for the Magnolia Metal Company, has for years been attending litigation growing out of suits brought by dummies in the interest of large corporations inimical to the Magnolia Metal Company.

The petty annoyances have grown to be intolerable, and the company is invoking the law and bringing these irresponsible offenders to justice. It is an open question whether a trust is not forming in the anti-friction metal business, and the fact that the Magnolia people have the standard metal which, for about the same price, gives three times the same service, has undoubtedly excited the cupidity of competitors who wish to take over the company's assets and good-will without paying for them.

In spite of considerable persecution, the Magnolia Metal Company has thrived to such an extent that its very metal is now in use in most of the navies and railroads of the world, as well as in all classes of mechanical industry.

However, the adoption of such methods as are disclosed in the Shanks case and the countenance of them by the members of the Bar is a serious menace to all honestly conducted enterprises.

IT has been established that forests constitute an important barrier against the approach of epidemics and infectious diseases. The Roman Campagna and the Tuscan marshes, where luxuriant forests are now growing, have almost lost their traditional unhealthfulness.

ROBIN, SADLER & HAWORTH

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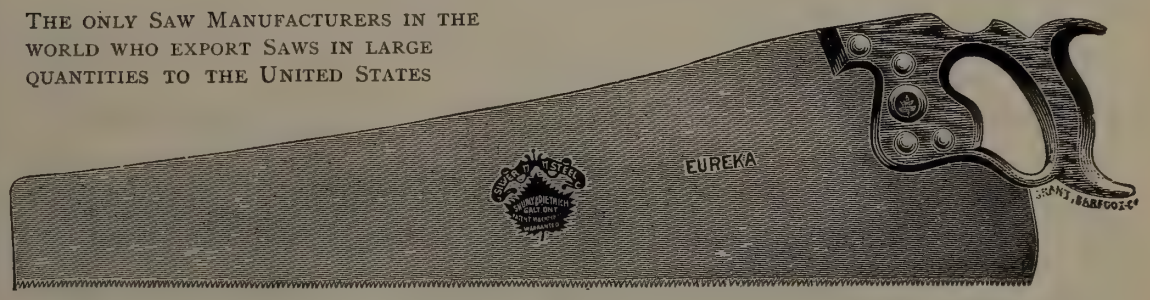

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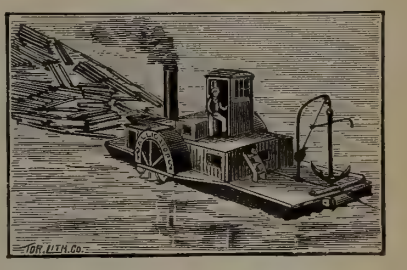

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CHIPS.

—As substitutes for rock elm, hickory or maple in the manufacture of bicycle rims, it is claimed that pecan and persimmon could be used to best advantage. Either of these latter varieties are found in abundance at many points in the south.

—A concern in Grand Rapids, Mich., will make this year 288,000 base ball bats, which is more than was ever made by them in one year except in 1889, when 316,800 were manufactured. The best bats are made of good white oak, ordinary ones of common white ash. Boys bats are made of poplar, maple and basswood.

—The construction of the Nicaragua Canal will require many million feet of cypress and yellow pine timber. The Pacific Coast lumber mills expect to furnish fir and cedar for part of the work, but the fact that the southern mills are 2,000 miles nearer the canal than the saw mills of Washington and Oregon will enable the former to make the cheaper delivery.

—The spool wood industry, which is yet in its infancy in New Brunswick, makes a good showing this year, when 3,749,374 sup. ft. were shipped to Great Britain. Of this amount Clark, Skilling & Co. sent 2,577,137 sup. ft.; W. M. McKay, 653,146 sup. ft., and James Alton 519,693 sup. ft. The palings shipped amounted to 322,610 pieces, and all but 14,250 pieces went to Great Britain and Ireland.

—Beech, it is said, will make excellent flooring, if free from sap, and will wear well. The wood is subject to dry rot in the growth, but good sound beech will make a good flooring, particularly for factory purposes. Maple flooring did not attain any great popularity until the innovation of roller skating, when maple floors were considered the only thing suitable for a rink. Beech will need to be worked up in some such manner.

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VEST-POCKET
INSPECTION BOOK

Containing Rules for the Inspection and Measuring of Pine and Hardwood Lumber in the leading markets of Canada and the United States. Embracing also many useful tables and calculations of everyday service to lumbermen.

Prepared by the Editor of the "Canada Lumberman."

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C. H. MORTIMER, Publisher
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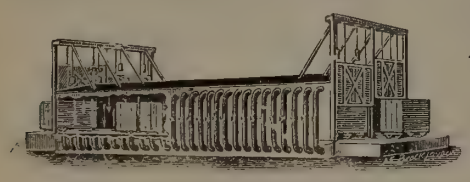

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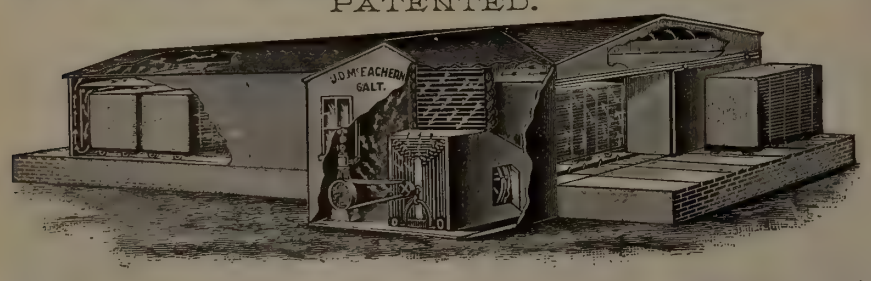

COST of erecting, running and maintaining the lowest and results the highest of any dry kiln and drying system in the market. Green Elm, Ash, Whitewood, &c., for furniture dried in six days; only exhaust steam 10 hours per day used.
NO CHECKING, WARPING OR CASE-HARDENING.
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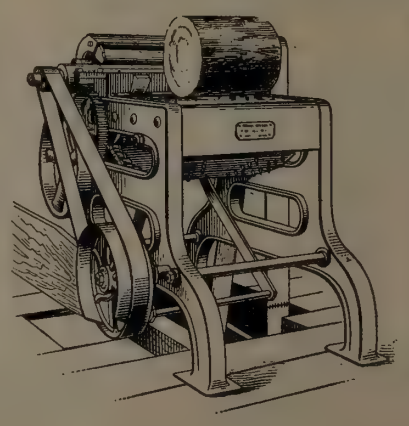
Patent Rossing Machine



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It will peel dirty blocks without taking the edge off the knives as they cut from the clean bark or block out.
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It requires less power than a face wheel.
All iron and steel, very simple and durable.
It will ross knotty and uneven timber without waste.
It occupies about the same space as an ordinary planer.
You can have a chance to try a machine before buying it.

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∴ WILL make more Shingles per day than any self-acting machine with vertical saw in existence, and more Shingles from the same quantity of timber.

THE FRAME

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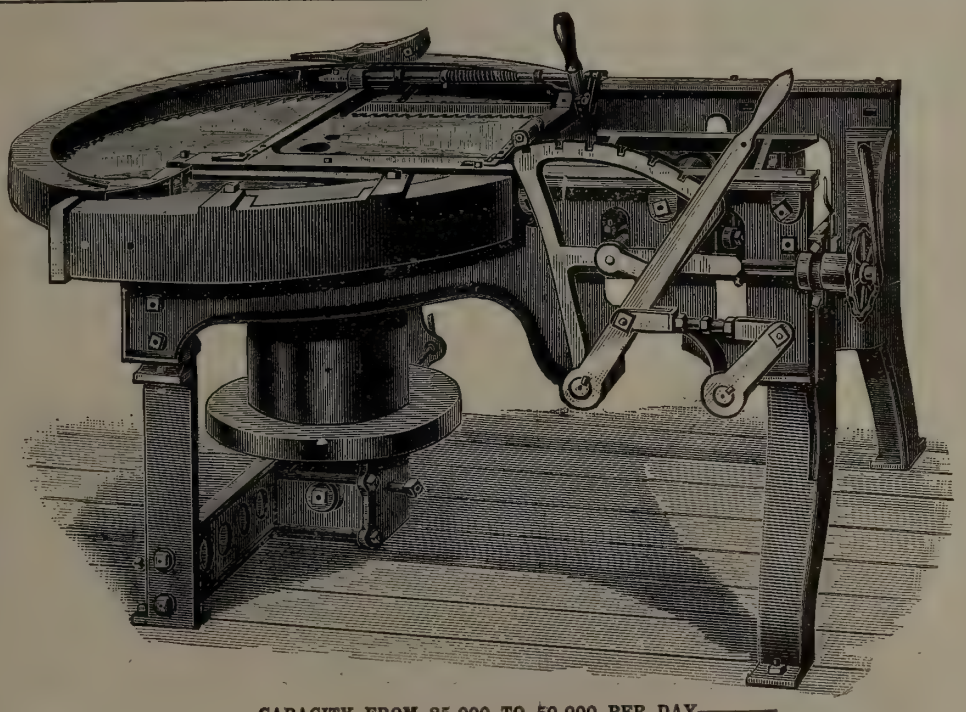

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Your Saw Mill is equal, or nearly equal, to any we have seen of much heavier make, and far in advance of any light rig in the market. The capacity per day is fully up to your guarantee, 40 M per day. We have tested with eight men.

The Shingle Mill cannot be beaten for any kind of timber. Ours being in a manner a custom mill, we have good, bad and indifferent timber, but for all it does the work satisfactorily.

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Yours truly,

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Furnished with Steel or Cast Skeins, 3¾, 4, or 4¼ arms. Any width tire. Are well built of thoroughly seasoned timber, heavily ironed and well finished. Built of any capacity required. Are STRONG, DURABLE, and LIGHT running. A trial order will be most convincing. Satisfaction guaranteed. Write us for further information. Address all orders or inquiries to

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FOR MODERN SAW-MILLS

See What the Big Fellows say

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Yours very truly, BUELL, HURDMAN & Co.

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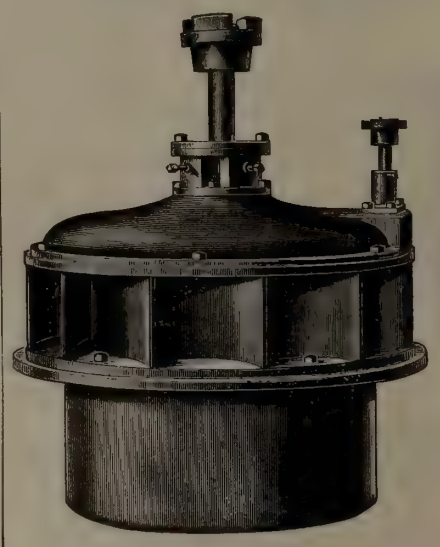

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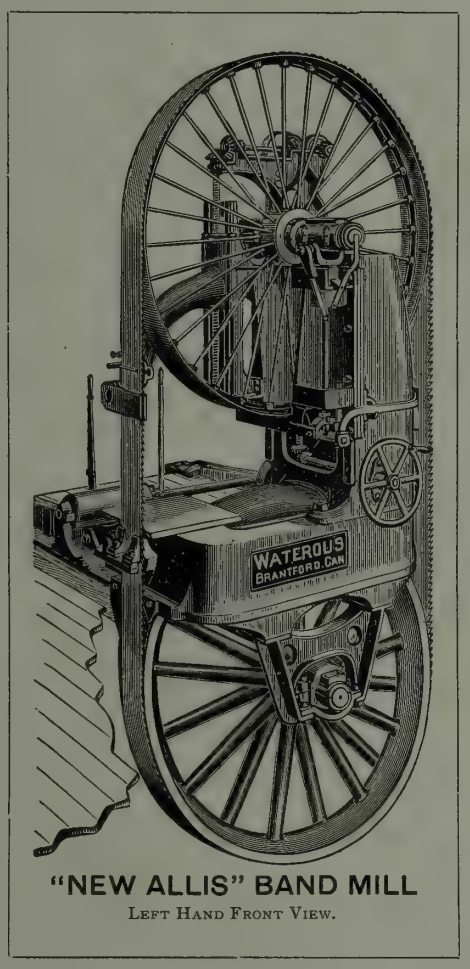
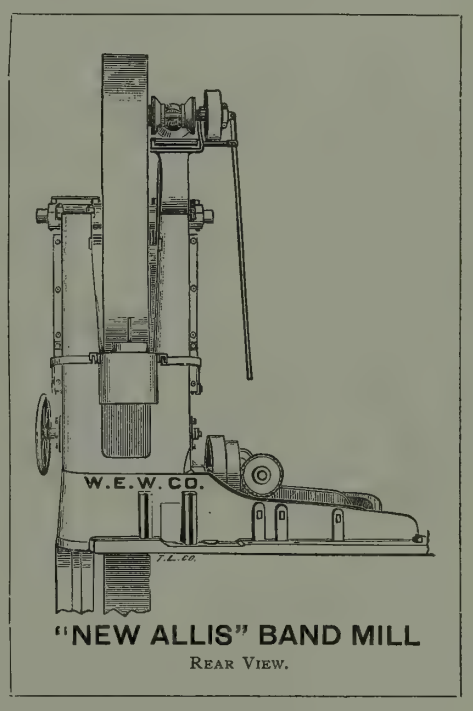


"NEW ALLIS" BAND MILL
LEFT HAND FRONT VIEW.



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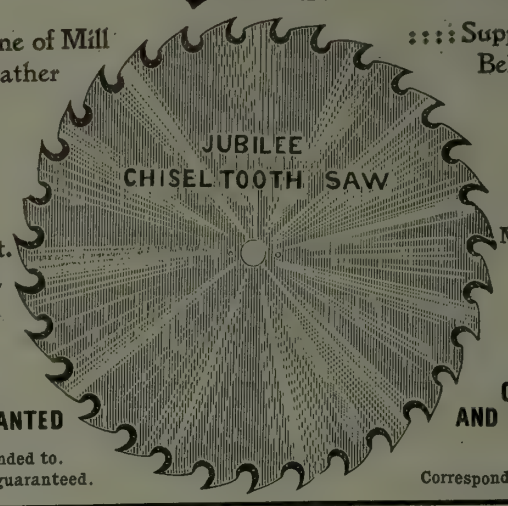

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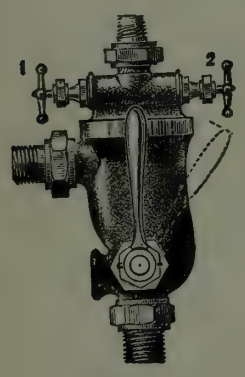

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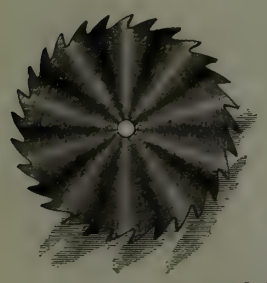

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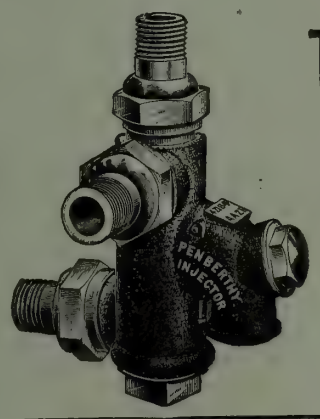

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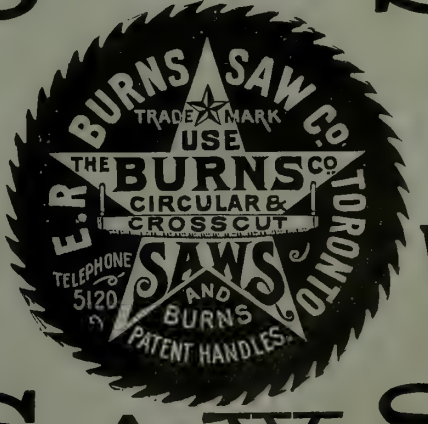

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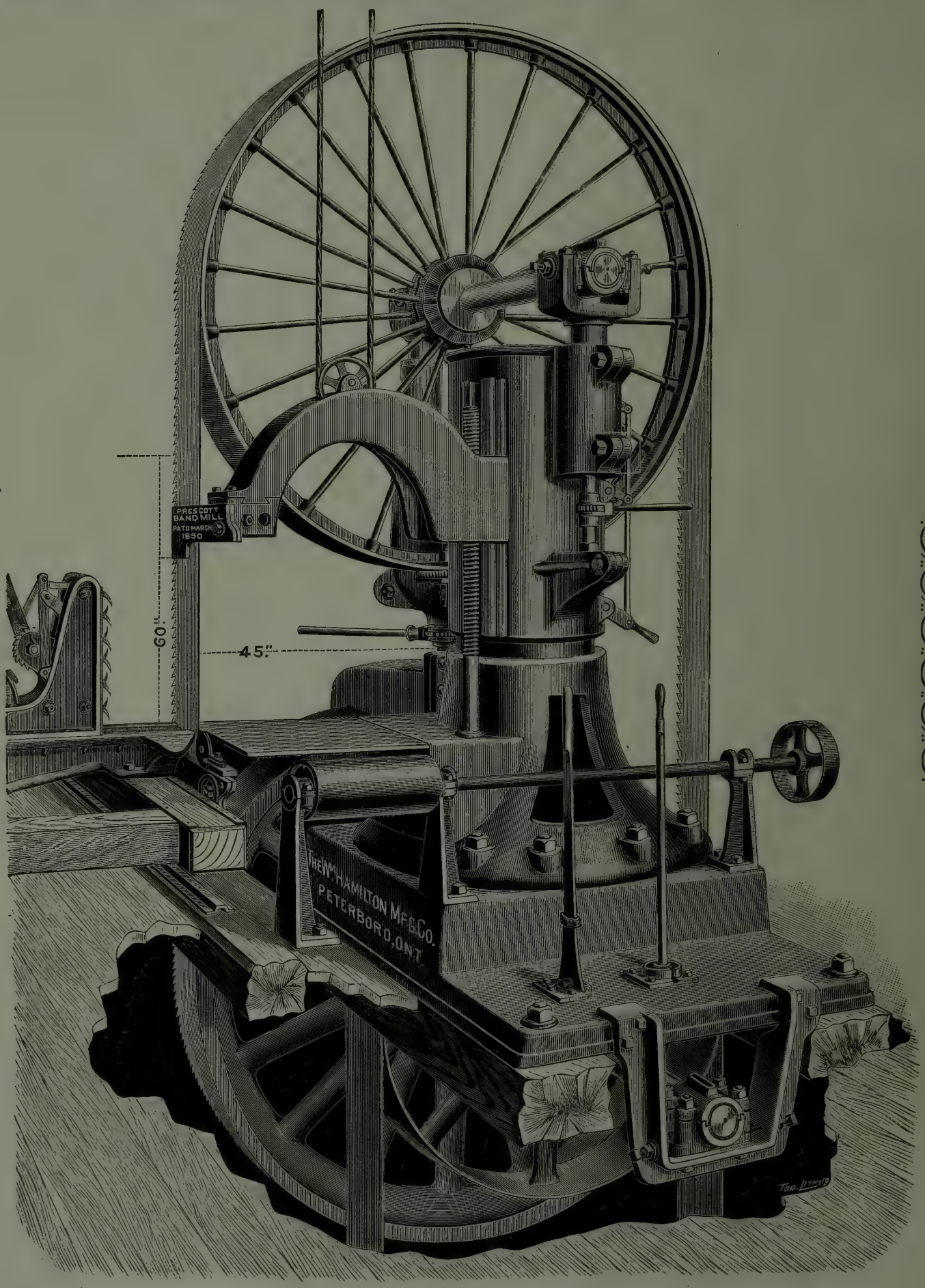

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A PLEA FOR ECONOMY.

By "HERMIT."

I.—WASTE OF MATERIAL.

I HAVE been much interested in articles upon forestry, woodworking and kindred economics in late numbers of THE LUMBERMAN. I seem to see a gradual evolution from the wasteful square timber business, waney or board timber, saw logs, box factory, shingle mill, match factory and pulp mill, to the latest uses of sawdust at Deseronto. Progressing further, I would call attention to remaining wastes, and sources of profit, in hope of seeing still greater improvements. Even if Mowat does not go, the consumer must, and the heterogeneous contents be all utilized. As a first suggestion, might not a lime kiln or brick yard be attached to each saw mill, and its contents sold to builders at the same time?

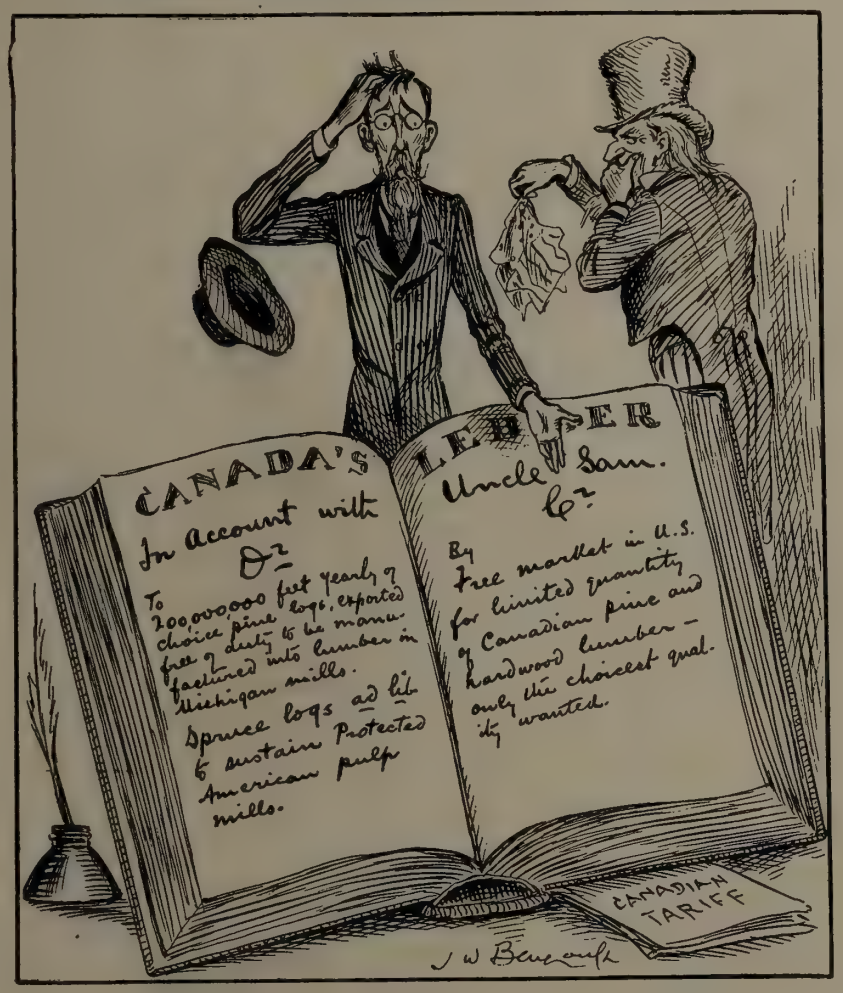
There is too much hurry in lumbering operations to realize the best results. From ¼ to 1/10 more wood can be cut out of each tree in the woods and sawlog in the mill by using judgment and "making haste slowly." Enough to pay the time and secure a better class of log-cutters, as well as increase the aggregate wealth of the country, might thus be saved. Then, too, if slabs, edgings and trimmings were ground to pulp, saturated with fire and water proof chemicals, and pressed into roofing and sheeting, a great industry would spring up in Canada, and also economize much lumber now used for that purpose.

Hemlock might be milled more extensively to save the pine were it not for a mill man's prejudice against it. Cedar as cut and culled at present is another source of waste. If every dealer were compelled to buy all the cut of a swamp, instead of some one line of poles, posts or ties, and culling that to death, it would be better for the seller, buyer and the country at large. But unless the farmers combine, and have their own culler, or the government authorize a public culler and rules for cutting and selling, I suppose the present waste will continue till cedar will be in the same category with walnut and cherry—worth any money, but "can't be had."

The bark, with the best and most lasting fibre we have, is not only a dead loss, but a perpetual nuisance—it will neither rot, float or bury in the mud. Properly dressed it ought to be the best and most beautiful floor covering in the world.

Then our vast burnt lands, or brule, could be used to save the older timber, by trimming the valuable shoots, pulping the inferior brush, and replanting the bare spots. The marsh hay, silk-weed and other "annuals" would yield a coarse, but very tough fibre, which could be used in a thousand ways. In short, Canada will never realize the wealth of our back country till she has mills on our splendid water powers, utilizing the surplus growth of our forests, the waste of log cutting, and the power now running idle save to carry the logs to foreign mills and factories, at a fearful waste. To recognize our loss and to acknowledge our duty is a necessary prelude to retrieving the one and performing the other.

CANADA'S BOOK-KEEPER TAKING STOCK.



DOES IT PAY?

II.—WASTE OF POWER.

The sawmill of to-day is a giant compared with the upright saws of the older time—a giant that devours alike the money of its builders, the fingers, and often bodies of its attendant slaves, the logs it "tears" into commercial form, and frequently the town reared in its shadow. It bolts a fearful premium to get insured, and makes a yawning cavern in the company's profits when it "combusts." Such mills are crushing the life out of the business, developing monopolies, and degrading the workmen. How many intelligent owners of local mills are now ruined, or have become employees of the capitalists, who crush every little man who comes within reach? How many men of family, who 20 years ago had steady employment in a local mill, are now toiling at lower wages, far from their families, and liable to be sacked at an hour's notice, to pay their way home at a time when local employment is impossible? But more of this anon! I am now dissecting the monster to discover the source and possible cure of its voracity. Concentration overdone is destruction—in government, in mechanics, in study—in anything. It means one master with one interest, and many slaves, whose interests are all absorbed into his.

Now, I assert that a number of small mills, at the timber, cutting both logs and lumber to best advantage, seasoning and even planing it before hauling and shipping, will produce better lumber, train more intelligent operatives, and evolve more labor-saving inventions than the present cyclopean system. "But portable mills are a failure!" exclaim 1000 practical lumbermen. Well, so were velocipedes for at least 150 years. Steam carriages were also failures for 40 years after the first run from Glasgow to Edinburgh. The reaping machine was a failure in Britain till its true value was proven in Illinois. Friar Bacon's speaking head was doubtless the father of the phonograph and telephone. The locomotive grew in power till its 80 tons with a speed of 70 miles per hour became a menace to humanity—when presto! every lane, turnpike, country road, and even the river and ocean wave sparkle with tourists, each on a locomotive propelled and controlled by his own will, free from the bondage, dust and roar of the railway train. A locomotive of 80 tons with cars weighing 12 to 16 tons each may have to start or stop for one man, and may crush the life out of a hundred in a few seconds. A mill with 300 h. p. and 100 men may have to stop to replace a nut or tighten a bolt. A blade weighing 5 lbs. will cut off a board from a log by applying it properly, as well as all that machinery can. How to apply it properly and profitably, will be the next advance in mill improvement. A circular or even a gang need several times as much energy to cut off a board as the old whip saw did. Then what power is needed to carry the log twice its own length for every cut taken by the saw! The power which lifts the whip or

mulay saw is returned on the downward cut, but the energy which tears the circular through, against the grain of the log, seems to me lost forever. A saw cutting upwards would remove the sawdust more easily than the present arrangement of circulars; but a single blade or a gang with light but rigid frame, applied along the side of a log on a solid platform, seems to be the simplest form of sawing. A band saw placed in a horizontal frame and moved along the top of the log, is another possibility worthy of consideration. An electric motor attached directly to the cutting tool, with slack conducting wires, offers many advantages, but it would have to be fed from a waterfall or adjacent steam engine. I merely suggest the problem for some practical mechanic to solve, and hope yet to see the solution successful.

III.—WASTE OF MEN.

I have lightly touched upon the fact that the present mode of lumbering does not tend to raise the status of the workmen or attract intelligent men to choose the employment. The day when a pushing young man might aspire to a license and run a business of his own, may be regarded as gone by. The great majority look no further than to have "a good time" in the nearest hotel as often as they have a month's "time" free from the van or tailor's claim. Not one in ten young men save anything at camp, drive or mill; they only wear out their constitutions by hardship and dissipation alternately, break down early in life and become "hangers-on," wherever they have compassionate friends. The establishment of licensed cullers by the Ontario Department of Crown Lands opens one avenue to advancement for young men of some education, and is eagerly sought after. A further advance, in the line of fire inspectors, might, I hope, be tried with a fair prospect of success. At present they are nominated by the owner of the berth, and almost invariably are employees of the firm who live at the camp, are fed from the stores left in his care, and are not paid by the department till November. They go on duty about 15th May and are dismissed Sept. 15th in ordinary seasons—their wages being paid by the forestry branch of the Crown Lands Department and half charged to the holder of the license.

Now, what I would respectfully suggest is, that young men be encouraged to study the elements of forestry, at Guelph or elsewhere, and those holding certificates of qualification to be appointed to charge of berths not under license, or recommended to lumbermen not operating at present for appointment. The attention of intelligent young men would thus be attracted to the new country, their reports would lead to immigration from their former homes to the new territory, and they would be better able to make suggestions to Government or license holders on the capabilities of the berth than most of the present occupants. They might also act as game wardens in their respective berths during the balance of the year, and thus become the first permanent residents and valuable guides for future settlers. They might map out pulp and cedar lands, lay out roads, re-plant burnt spots, oversee trappers to have them trap in a rotation of 3 or 4 years, and otherwise advance the interests of the province in the new districts. This may be going too fast for some persons, but I believe would receive the hearty approbation of those who best understand the condition of this northland. But they would require to be paid monthly, and placed in close touch with the present timber agents, many of whose duties they might perform as well as to keep the department fully posted in everything pertaining to their charge. The position should be kept strictly non-political, or more properly, non-partizan. The more thoroughly this is done the better for all—government, the inspectors, the settlers and the country at large. By this means let us link the new country, timber trade, mining, and all other interests, with the energy and intelligence of the older settled districts.

CORRESPONDENCE

Letters are invited from our readers on matters of practical and timely interest to the lumber trades. To secure insertion all communications must be accompanied with name and address of writer, not necessarily for publication. The publisher will not hold himself responsible for opinions of correspondents.

NEW MARKETS REQUIRED FOR CANADIAN HARDWOODS.

GUYSBOROUGH, 7th Jan., 1896.

To the Editor of the CANADA LUMBERMAN.

SIR,—I was pleased to see the letter from Mr. J. T. Schell in the January number of the CANADA LUMBERMAN, he being an old business acquaintance of mine about twenty years ago. I think he is quite right in his opinion that we should look for some other market besides the United States for hardwood lumber.

I have been a saw-mill man since the year 1850, and my principal market has been the U.S. for the best of my product—in fact, for more than half of the whole product—although I have sold considerable to our own manufacturers and lumber dealers.

My pine is about done and I am now depending principally on hardwood. I think the U. S. market is getting worse every year. I have a small stock of hardwood lumber on hand which I have fairly sold, or bargained to sell, at three different times to U. S. dealers, getting nothing down. Twice the parties have fairly backed down and I have not heard from the third since the war scare. I have thought for years that Great Britain would be our best market, but could not advise the best way to reach it.

Yours truly,

S. K. GARNHAM.

P. S.—I think if a party is needed to send to Great Britain, it would be well to consider the appointment of Mr. J. T. Schell.

To the Editor of the CANADA LUMBERMAN.

SIR,—I read with interest in your January number the letter of Mr. J. T. Schell on the above subject.

I believe that there are large quantities of maple, birch, elm, basswood, white and black ash, and oak used in England. The bulk of these woods are supplied by United States dealers, many of them acting as middlemen between the Canadian manufacturer and the English consumer. If the Hon. Commissioner of Crown Lands could be induced to send commissioners to England to obtain for the hardwood trade of Canada the information indicated by Mr. Schell, it would undoubtedly be a good thing, but I fear the honorable gentleman will be slow to act, if at all. I would suggest that the trade, or a few of them, put their heads together and send a man to Europe themselves. No manufacturer who pays anything for his timber can make any money out of hardwood at the prices that have been current for the past 15 years. Take for instance rock elm plank suitable for bicycle rims, and clear white maple. The price now obtainable from wholesalers for these two varieties is $18 per M. You pay an average of $5 for your timber. Cost of manufacture and interest on capital, say $2.25 per M. It will take 5,000 ft. log measure at least to obtain 1,000 ft. of such quality as is wanted. This makes an outlay of $36.25 to obtain 1,000 ft., for which you receive $18, leaving a lot of coarse stock on hand to represent $18.25.

Where can the manufacturer dispose of this coarse stock, particularly the rock elm? Is it good value for $18.25? Are we selling the high grade too cheap, or are we paying too much ($5 per M) for our logs? I say we are selling the high grade hardwood too cheap.

The pine manufacturer, when he selects his clear pine, is always able to sell his lower grades at a profit over cost of timber and manufacture, and yet what dealer would have the hardihood to offer $18 per M for clear pine?

Mr. Schell truly remarks that there are few, if any, among the hardwood manufacturers of Canada, who are financially able to send a representative to Europe in the interests of the trade. In unity there is strength. Providence will help those who will help themselves. I would suggest, and would unite with a number of hardwood manufacturers, in sending a representative to Europe. All our hardwood mills are of small capacity, when compared with some pine mills, and it would take the output of a lot of our mills to supply a very small portion of the demand in England. We must obtain higher prices for our better grades of hardwood than are now obtainable, or else cease to manufacture. Time will not permit me to further discuss this subject at present, but may trouble you again at a later date.

J. E. MURPHY,
Hepworth Station.

To the Editor of the CANADA LUMBERMAN.

SIR,—In your last issue I notice a remark that refers to my proposition that the Ontario Government might consider it advisable to take some action in the direction of assisting in the development of the hardwood trade.

The remark referred to, while not explicit, leads me to infer that the Ontario Government would be doing what should be done by the Federal authorities under the Department of Trade and Commerce.

The Federal authorities may also claim that the hardwood trade being so largely from Ontario, they would not be justified in spending general funds for such a purpose, without embracing all the wood products of all the provinces of confederation. Excuses are easily made, and quite as valuable as poor slabs in a country mill yard.

True, the province derives a revenue, direct and substantial, from expenditures on its pine forests, for the benefit of the province. From expenditures on mines, colonization roads, railways and other matters, the benefits do not appear to me to be so general nor direct, but few would object to the outlay on account of the public service of such outlay.

My idea in proposing the possibility of the Ontario Government assisting in the development, is that it would be a public service, if of any benefit at all. If the expected benefit would be realized, the advantages would be more general than though the object sought—viz., increased markets and better prices—would be accomplished by one or more private individuals, as the information in the first instance would be public and general, while in the latter it would be private and for the special advantage of a few.

I submit the matter, as first suggested, as one of possible interest to a large section of Ontario's citizens, and if submitted to the Government of Ontario as such, the Government, as custodians for the people, in the interests of the people, or a large section of them, may see it to the advantage of Ontario and in the public interest, to look into the matter without reference to the Department of Trade and Commerce at Ottawa.

Personally I have moved in the matter and hope to profit thereby, but so far my information and any advantage which may accrue therefrom, I shall consider to be "private and for the special advantage of very few."

Beech is a useful wood in England, but how much is converted yearly into other than second-class cordwood, you could probably tell. Soft elm, basswood, ash, birch and maple are of much more value in England and the continental markets than many of the farmers of Ontario are aware of. The introduction of some of these woods into English markets is of recent date and known to but few dealers in Canada, but it may not always be so. While the United States absorbs nearly all of our stocks at present, I do not think it necessary nor advisable that such should always be the only outlet, practically, for our hardwood.

J. T. SCHELL.

Alexandria, Ont.

PERSONAL.

The death occurred on the 30th of December last, of the wife of Mr. E. D. Davidson, of the well known lumbering firm of E. D. Davidson & Son, Bridgewater, N. S.

Mr. John McLennan, lumber dealer, of Bay City, Mich., is dead. Deceased was a native of London, Ont., and was engaged in the lumber business in Canada before he went to Bay City in 1869.

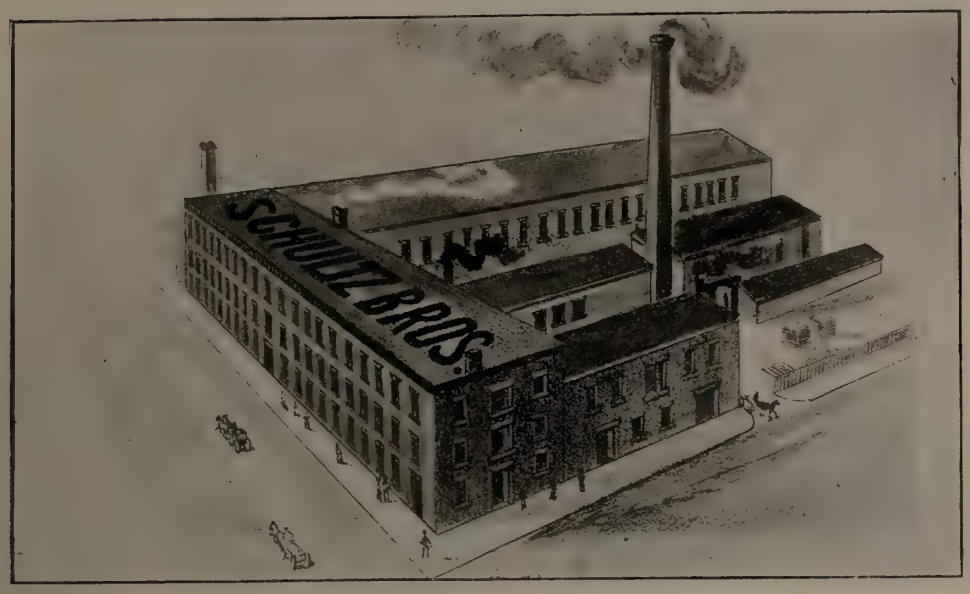
Mr. Robert Dollar, well known in Canada, is the Pacific coast manager of the Usal Redwood Co., whose mills are in Mendocino Co., California. The company is composed mainly of capitalists of Grand Rapids, Mich.

Mr. John Burstall, the prominent lumber merchant of Quebec, is going to England to reside. Before leaving he was entertained at a complimentary dinner by about seventy prominent citizens. Mr. R. R. Dobell, another well known timber merchant, and President of the Board of Trade, presided.

—The Sault Ste. Marie Pulp and Paper Company, of Sault Ste. Marie, Ont., made its first shipment of ground wood pulp on the 2nd of December last.

SCHULTZ BROS.' WORKS, BRANTFORD, ONT.

Among the foremost contractors and planing mill operators in Canada, the firm of The Schultz Bros. Co. (Ltd)., of Brantford, Ont., may justly be placed. The senior members of the firm, the Schultz Bros. proper, were left orphans at an early age, but with a strong determination they set to work doing odd jobs which came their way, saving their money, until now they are the leading contractors in Brantford, and rank high among those of the Dominion.



SCHULTZ BROS.' MILL, BRANTFORD, ONT.

Their large three-storey building on Brant ave. is in the shape of an L—one portion being 132′ x 35′, and the other 132′ x 60′. The mill yard is quite large, on which are erected dressed lumber sheds with a capacity of 10 cars, and a stable.

On West street, near the G.T.R. depot, is their wholesale lumber yard, covering two acres of ground. Mr. Wm. Schultz is in charge of this department.

As this is one of the largest planing mills in Western Ontario, a brief description will prove interesting. On the ground floor all the planing, sawing, and heavy moulding is done. A tool room, where all the drilling, setting and sharpening is done, is on this floor. In this tool room is kept an extra set of knives, etc., for each machine, so that when a knife is being sharpened the machine need not be idle. A two-storey dry kiln with a capacity of 20,000 feet is on this floor, as is also the box making department, which turns out 100,000 boxes per annum. In an annex at the angle of the L is situated the engine and boiler room. A 100 h.p. Goldie & McCulloch boiler supplies steam to a 75 h.p. Wheelock engine, receiving its hot water from an Austin heater. Steam and plunger pumps are used. The engine has been running for nine years without a cent of cost for repairs. The machinery on the ground floor comprises four planers, three stickers, a re-saw, six rip saws, a printing machine for box department, a turning lathe, a sand-paperer, a suction fan, a blower for the dry kiln, with the hot blast system with Sturtevant kiln.

On the first floor is done all the light moulding. The sash and door department is also on this floor. Their veneer doors are shipped to different parts of the country. Mr. Jas. G. Allan, the mechanical superintendent, has his offices on this floor. The machinery on the floor is made up of two rip saws, two cross saws, a band saw, a jig saw, two stickers, a jointer, a tenoning machine, two sand paperers, two boring machines, an emery wheel, a panel raiser, a shaper, a mortise machine, a blind slat tenoning cramping machine, a dowell machine, and a band saw setter and sharpener.

On the second and last floor is the mantel and hardwood finishing department. This floor is also used for storage and showroom purposes. They turn out some handsome mantels, their carver being an artist of some ability. The firm manufacture the 'Daisy' washer, which has been placed in over 20,000 homes.

The officers of the firm are as follows : President, George Schultz ; Vice-President, Wm. Schultz ; Sec'y.-Treas, John F. Schultz ; Mechanical Superintendent, Jas. G. Allan. They recently built the Expositor and I.O.O.F. buildings in Brantford, and among one of their large jobs was the making of the bicycle track at Mohawk park. They are the chief wholesale dealers in Brantford, and their trade extends over a wide section. Owing to a rapidly increasing trade, they are about to enlarge their yards. The past year has been a very successful one to them, and the spring opens with a bright outlook.

THE FIRM OF SCHULTZ BROS., BRANTFORD, ONT.

NOVEL SYSTEM OF FLOATING LOGS.

The Remingtons, of Watertown, N.Y., who own a big saw mill and thousands of acres of spruce timber in the vicinity of Benson Mines, have a novel way of floating their logs and lumber from the mill to the railroad. Their sawmill is located on the hills three miles back into the country from the railroad, which is in a valley below. Carting was expensive. The Remingtons therefore constructed a trestle three miles long, and upon that placed two troughs, one for pulp logs and one for lumber. The troughs are: For pulp wood, 24 inches at the top and 10 to the bottom, having a depth of 20 inches ; for lumber 12x12½. At the sawmill is a six inch centrifugal pump, and when the logs are ready for shipment they are placed in the trough, the pump started running, the troughs filled and the logs floated to the railroad, where there is a yard having 1,500 feet of track. The lumber runs out on the trestle and is loaded into the cars. The capacity of these carriers is 60 cords per hour of pulp wood, and 200,000 feet of lumber per day. Last spring the companies had a pile of pulp wood 1,000 feet long, 26 feet high and 40 feet wide, all of which has been carried by this scheme.

A company is being formed to erect a pulp mill at Richibucto, N. B.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

MONTHLY AND WEEKLY EDITIONS
C. H. MORTIMER
PUBLISHER
CONFEDERATION LIFE BUILDING, TORONTO
BRANCH OFFICE:
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ADVERTISING RATES FURNISHED ON APPLICATION

THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

OUR TARIFF RELATIONS WITH THE UNITED STATES.

One of the subjects in which Canadian lumbermen are at present most interested is the bill now before the American Senate, under which it is proposed to impose an import duty of 60 cents per thousand feet on lumber. The reason given for this step is that the Government of the United States are compelled to raise a large amount of additional revenue. The Bill is introduced as a temporary measure, and is supposed to be operative only until 1898.

It is not certain that the Bill will become law, as it has yet to pass the Senate and receive the signature of the President. It is the opinion of some that the measure will not reach the statute book, but will either be thrown out by the Senate, or the President will refuse his signature. As our readers know, the Cleveland administration was elected on a policy of freerer trade, and there is a possibility that the President may, on this account, refuse his signature to a measure which has the appearance of reverting to the protective doctrine. No doubt the Republicans, who have been gaining strength of late, are desirous of making the path of the present administration as difficult as possible, and knowing this, President Cleveland may refuse to place himself in the position of apparently being forced to adopt, in some measure, the policy of his opponents. Or, he may get over the difficulty by taking advantage of the rule under which a measure becomes law if the President neglects to either approve or veto it within ten days after it has passed the Senate.

The Government appears to be greatly in need of more revenue, and their only means of securing this would seem to be by an increase of duty in some directions. We should suppose, however, that there are many classes of imports on which the duty might be increased, without disturbing the provisions of the recently enacted Wilson Bill relating to the importation of lumber.

In many quarters the opinion is strongly expressed that in the event of this measure becoming law in the United States, the Canadian Government should not hesitate to at once impose an export duty on timber of all kinds, and thereby prevent the present annual exportation of about 200,000,000 feet of pine timber, by Michigan holders of Canadian limits, as well as large quantities of spruce timber which are being taken across the border to supply the pulp mills of the United States. The cartoon which we publish this month expresses the situation as it presents itself to the minds of many Canadian lumbermen.

After having carefully considered the whole question we are of the opinion that it would be unwise on the part of the Dominion Government to adopt retaliatory measures at the present time. The Bill now before the United States Government is, as we have stated, ostensibly a temporary one, and the proposed duty of 60 cents per thousand feet will not be sufficiently burdensome to interfere, to a large extent, with our American trade; therefore our wisest course would seem to be to take no action provided the duty shall not be increased beyond 60 cents per thousand feet; but if it should be increased above this amount either before 1898, or after, it should be incumbent on our Government to take action. Meanwhile, as we have pointed out elsewhere, Canadian lumbermen should be on the lookout for means of extending their trade in other markets than those of the United States.

EXTENSION OF OUR FOREIGN TRADE.

WE have pleasure in directing the attention of our readers to the correspondence appearing in the LUMBERMAN for January, and in the current number, from well-known hardwood lumber manufacturers in Ontario, urging that a united effort be made to learn what openings exist in the European market for Canadian hardwood lumber. It is evident from the tone of this correspondence, that our hardwood manufacturers and dealers have become thoroughly dissatisfied with the condition of the American market, and are tired of doing business on the margins at present obtainable.

We are pleased to see this awakening on the part of a section of Canadian lumber manufacturers, and trust that it will result in something more than a mere expression of opinions. We would suggest that those who have taken part in this correspondence, and those who endorse the opinions which have been expressed, should endeavor to meet and discuss the question in all its phases, and decide, if possible, on what lines an effort should be made to develop foreign trade.

We hope to be able to publish shortly some information regarding the possibilities of trade with France under the new French Treaty. There is ground for the hope that in France and Germany, as well as in England, a market might be found for some varieties of Canadian hardwoods.

The first thing to be done, as suggested by Mr. Schell, is to obtain definite information as to the possibilities of trade with these countries. After having learned what varieties of wood there is a demand for, and the purposes for which it is required, our manufacturers would be in a position to make an intelligent effort to extend their trade in this direction.

We have little hope that either the Dominion or Provincial Government can be prevailed on to take sufficient interest in the matter, to send a Commissioner to Europe for the purpose of learning the conditions of trade existing there. Even should they be induced, after considerable urging, to take such action, we fear the results would be reached too slowly to suit the purpose of the trade. If anything is to be done in this direction, it seems to us that it must be done by those most interested in the matter, the hardwood manufacturers and dealers themselves.

The action of the hardwood section should, we think, be followed by other sections of the trade also. We cannot disguise from ourselves that, while the United States afford the best and most convenient market for Canadian lumber, the constant uncertainty, due to continual dickering with the American Tariff, renders trade with the States very unsatisfactory, and there is no guarantee that the possibility of trade may not suddenly be entirely destroyed by a prohibitive duty. There is in addition the fact that great annoyance and loss are frequently sustained by reason of the lack of a uniform system of inspection. Complaints on this score continue to reach us from month to month.

It seems to us that in view of the uncertainty of our business relations with the United States, manufacturers of lumber and timber products of all kinds in Canada should pursue a policy which would render them, as far as possible, independent of the American market. The present seems to be the proper time for Canadian lumbermen to meet together for consideration of matters affecting their interests. There is strength in unity, and it is a matter of regret that our lumbermen have not associated themselves together for the advancement of their interests. An Association of Lumber Manufacturers was organized in Ontario some time ago, but has held no meetings for some time past, and appears to exist in name only; indeed the name itself has well-nigh been forgotten. This would be a good time to revive the organization.

The question of finding a market for our lumber, other than that of the United States, is forcing itself on our attention, and doubtless must be met, if not now, in the near future. Would it not be wise to face the situation at once, and adopt means for the extension of our foreign trade?

THE CANADA LUMBERMAN Vest Pocket Inspection Book has been selling like hot cakes, as the result of the advertisement appearing in our Weekly Edition. The orders for the book which have come to us from all parts of the Dominion and from abroad as the result of this advertisement, is the strongest possible evidence that THE LUMBERMAN is carefully read, and is a first-class advertising medium.

THE dealers in yellow pine in the Southern States are certainly hustlers. Their business is to sell lumber, and they take every precaution to supply the demand. I recently heard of the arrival of a car from that section of the country containing twenty-seven different lots of lumber. Without advocating the expediency of dealers making shipments in this manner, the effort put forth to meet competition and supply the wants of the trade is worthy of notice. Our mill men on this side of the line might well emulate this painstaking effort to get and hold trade.

* * *

I HAVE heard numerous opinions expressed regarding the effect which the probable change in the United States lumber tariff would have upon Canadian trade. The views of such well-known lumbermen as Mr. F. W. Avery, of the firm of Buell, Hurdman & Co., and Mr. J. R. Booth, of Ottawa, will no doubt be read with interest. "If the bill passes," says Mr. Booth, "and I believe it will, for the United States must increase their revenue, the lumber trade in this country will be seriously affected. These changes of tariff always injure our trade to a great extent. The new tariff will affect our coarse lumber trade the most." Mr. Avery does not take so pessimistic a view of the matter. "The new tariff would," he says, "be no steeper than that of the McKinley bill. If the lumber trade is dull the Canadian trade would suffer with a high American tariff in force; but if trade is good it will be the American buyer who will lose."

* * *

HAVING heard that the firm of Robert Thompson & Co. were about to close their Toronto office, and prompted perhaps by curiosity, I dropped in at their office a fortnight ago. There I learned from Mr. Meaney that it was the intention of Mr. Robert Thompson to concentrate the firm's interests, and with that end in view the Toronto office had been closed. I was much pleased to be informed that the firm of Thomas Meaney & Co. had been established, and had secured the offices formerly occupied by Robert Thompson & Co. Some purchases of lumber had already been made, and the manager was on the eve of a visit to mills in the Georgian Bay district. The head of the new firm, Mr. Meaney, needs no introduction to the trade, having managed the Toronto office of Robert Thompson & Co., for a number of years. He is possessed of that geniality characteristic of lumbermen, and a visitor to his office is always assured of a cordial reception. I predict for the new firm a marked degree of success. During our conversation the CANADA LUMBERMAN came in for a few words of commendation, Mr. Meaney remarking that the cartoon in the last number had "struck the bull's-eye."

* * *

"THAT article in your last issue was correct, and I hope you will keep right at it," was the remark with which I was greeted a fortnight ago as I entered the office of a well-known wholesale lumberman in Toronto. The speaker referred to the article on "Sharp Practice by Buyers." Continuing, he said that his firm had always found the United States markets unsatisfactory, particularly those of New York and Boston, owing to the difficulty of obtaining proper inspection. The policy of some dealers across the line was to realize all they possibly could out of a cargo of lumber, regardless of the interests of the shipper or the trade in general. More than one instance was related of shipments either being refused altogether or graded so low that the shipper by accepting the inspection would lose money on the transaction. In the event of the refusal or low grading of the lumber, it was conjectured that the shipper would reduce the price as an inducement to the purchaser to take the lumber off his hands. This, however, did not work out satisfactorily in all cases, from the standpoint of the would-be purchaser. My informant had, on several occasions, at a sacrifice of time, found it to his advantage to make an examination of the stock himself, in the presence of the purchaser and the inspector who graded the lumber, both of whom were compelled to admit that it was exactly as represented and fully up to the desired inspection. I admitted that I had heard such complaints before, and queried why such unfair methods of business were allowed to exist. It was explained that in New York the inspectors were appointed by and receive their certificates of efficiency from the New England Lumbermen's Association. The number of such inspectors has of late increased more rapidly than the requirements of the market demand, and they find it impossible to obtain sufficient employment. This condition has resulted in some of the inspectors entering the employ of lumber concerns, while nominally continuing the business of inspectors. It can readily be understood that inspectors thus circumstanced would not be in a position to give an unbiased opinion of lumber supplied to the company upon whom they are dependent for their bread and butter. In Boston the inspectors are appointed by a Government official, which would seem to be the most satisfactory way. But even Government officials, it is feared, are not always beyond the reach of influence, and should the inspectors not grade the lumber to the entire satisfaction of the consignee, this influence would be likely to make itself felt at election time. I give the above facts to the readers of this column as nearly as possible as they were pointed out to me. I learn that several of our Toronto dealers are adopting the more honorable method of doing business only with reputable firms with whose standing they are fully acquainted, having a distinct understanding between shipper and buyer as to grading of shipments. This is proving the most satisfactory method. The subject of a national inspection is one which I may touch on at a later date; suffice it to say that if such was in force at the present time in the United States, many of the difficulties met by Canadian shippers would be avoided.

THE fifth annual meeting of the Western Retail Lumbermen's Association is announced to take place at Winnipeg, on Wednesday, 12th February, at 8 o'clock p.m.

COMPLIMENTARY OF "THE LUMBERMAN."

WE have received the following appreciative remarks of the CANADA LUMBERMAN:

S. Schryer, Ridgetown: "Enclosed find one dollar for which please send me THE LUMBERMAN for another year. I like it very much."

Mr. Geo. Thomson, of Wingham, Ont.: "Enclosed find renewal subscription for LUMBERMAN for 1896. I may say I take great interest in reading both the monthly and weekly editions. I can't see how I could do without it. It is the first paper I read."

Mr. John Stanford, Chester: "Please find enclosed P.O. order for $1.12 for renewal subscription to the CANADA LUMBERMAN and a copy of the "The Lumberman Vest Pocket Inspection Book." I am very much pleased with THE LUMBERMAN, and it always comes promptly to hand."

Messrs. J. W. Howry & Sons, Fenelon Falls, Ont.: "We are much pleased with your paper and feel that it has come to be a part of our office literature. It is not only bright and readable, but is very reliable, and we usually find that when we see it in the LUMBERMAN it is a fact."

Pembroke Lumber Co., Pembroke, Ont.: "We are pleased with the appearance of the January number of the CANADA LUMBERMAN. In our opinion, the J. W. Bengough cartoon is quite an improvement. We would, however, like very well to see some more Ottawa valley news in the journal, it being the great lumber centre of our province."

Messrs. H. H. Spicer & Co., Vancouver, B. C.: "We took particular notice of the new feature of the current month's issue of the LUMBERMAN as an entirely new thing in lumber literature, and we certainly think you are improving your journal all the time, and that your enterprise is most commendable, and should have the hearty support of the lumber trade of Canada in all its branches."

Hon. J. K. Ward, Montreal: "Having been a subscriber to the CANADA LUMBERMAN for many years, I look forward to reading each number with a good deal of pleasure, not only for the interesting biographical sketches usually found in it, but for the amount of information on the subjects of machinery, markets, etc., that must be of great use to those who are actively engaged in lumbering. The present number, either from a mechanical or artistic point of view, is a credit to the publisher."

Mr. J. E. Murphy, Hepworth Station, Ont.: "I am very much pleased with the January number of THE LUMBERMAN. The cartoon on the front page is a pleasing feature, and to my mind, hits the nail on the head in this particular instance. This additional feature indicates a desire on the part of the publisher of THE LUMBERMAN to make the paper a welcome visitor in the office of the trade. I wish you every success, and trust you will continue to devote more space and time to the interests of the hardwood manufacturer."

Macpherson & Schell, Alexandria, Ont.: "In renewing our subscription to THE LUMBERMAN, permit me to congratulate you upon the efficiency and progressiveness of your journal. As a Lumberman's Journal, we have always noted that it is a paper for mill men as well as a medium for dealers. Your editorials, Eli column, correspondence and comments, cover in each issue a wide field of information on trade and kindred subjects, making your paper a medium of information as well as price lists. I may be permitted to observe that if your correspondent in England would look into the trade conditions there he might find a subject that would interest many of your readers, if he reported upon the extent and uses to which maple is put there, such as for cotton and woolen machinery, print rolls, etc., also on the stave and heading trade, broom handles of basswood and spruce, furniture piece stock and many lines of trade in cut up-stock, besides the regular timber and lumber trade. For a mill man I consider your journal the best of its class I receive, and your new extension into the fields of illustrations and cartoons will add another pleasing feature to your already valuable and interesting paper."

Thos. Allen, a farmer residing on the shore of Chippewa Bay, succeeded a fortnight ago in raising from the river at that point, a stick of oak timber 37 feet in length, and squaring about 20 inches. During the war of 1812 a large raft of oak timber is said to have been sunk, to which this stick is supposed to belong. The story is told that the raft was being taken down the river from Clayton when the news of the trouble between England and the United States was received, and, fearing that it would fall into the hands of the British, the raft was sunk.

THE LUMBER TRADE IN 1895.

Review of Operations throughout the Dominion.

GENERAL SURVEY.

LATE in the season of 1894 the Wilson tariff bill passed the United States congress, by which lumber, among other commodities, was placed on the schedule of free imports entering that country. The tariff was viewed with favor by Canadian lumbermen, and the year 1895 was ushered in with bright anticipations of improved conditions. A retrospective glance over the past year proves that these expectations were only partially realized. While the volume of trade done in 1895 was equal to or slightly in excess of that of the previous year, the margin of profit was smaller, and few dealers are to be found who succeeded in materially increasing their bank accounts. During the first six months of the year trade was extremely limited, but operators were hopeful, and during the latter portion of the year they experienced a much better demand. Several causes may be mentioned as operating to retard the progress of the past year and to reduce the profits accruing to lumbermen. The benefit to be derived by Canada from free lumber was scarcely felt, owing to the prevailing financial and commercial conditions in the United States. These conditions restricted trade generally, and consequently limited the demand for lumber. The dispute with the United States authorities regarding the definition of dressed lumber, and which as our readers know, resulted in the imposition of a duty of 25 per cent. ad valorem on a large portion of that class of lumber, proved a heavy blow to a number of our planing mill men, many of whom formerly shipped largely to the United States. Another reason is to be found in the decline in demand from foreign markets. While trade with some foreign countries improved slightly, exports to South America were considerably less than was anticipated.

The western provinces of the Dominion were, perhaps, the greatest sufferers during the past season, as, owing to the increased demand for spruce for pulp wood both at home and abroad, the maritime provinces succeeded in holding their own. The shipments from New Brunswick, Nova Scotia and Quebec compare favorably with those of 1894. From the port of Montreal, as shown by the Harbor Master's report, there were shipped to the United Kingdom and continental ports 168,672,028 feet board measure, and to River Plate 8,744,000 feet, making a total of 177,416,028 feet. This shows a decrease of 10,725,397 feet. During the year the situation in British Columbia and Manitoba improved slightly, and future prospects are good. From statistics received from mill men throughout the Dominion, we learn that the volume of trade done last year was about equal to that of 1894, but the amount of stocks on hand was too large for the demand. The stocks of lumber being carried over are heavier than those of the previous season. The greatest drug upon the market is shingles.

The year 1896 opens with prospects of an improvement in trade, notwithstanding the fact that the re-imposition of an import duty on lumber entering the United States is among the possibilities. With a hearty revival in trade the proposed duty of 60 cents would have but little bearing. To counteract the effect of this duty, should it become law, the opinion is held by many that an export duty on logs should be imposed by the Dominion Government. Our views on this question are given elsewhere. Our lumbermen are gradually finding new fields for their product, one of which may be mentioned as Germany, and viewing the situation from all sides, we predict for 1896 a year of prosperity and satisfactory monetary returns.

ONTARIO.

In Ontario, perhaps, more than in any other province, trade failed to show any decided improvement in 1895. The effect of free lumber was to increase the output of logs during the season of 1894-95. Much of the lumber manufactured is, unfortunately, yet at the mills. The United States market, which is the greatest consumer of Canadian hardwoods, has been dull. Competition has also been keen from the Michigan and Minnesota mills.

To dealers in white pine the year just closed has been unprofitable, sales of importance being comparatively few. In the Georgian Bay district the stocks being carried over are heavy, and some of the mill men have a large portion of last year's cut still on their hands. One company inform us that they are carrying over 7,000,000 ft. Very little work in the woods is being done. In the Ottawa district the past season has proved more satisfactory to operators. The output there has been increased by the operations of the St. Anthony Lumber Co. at Whitney. The firm of Gilmour & Hughson closed operations earlier last fall than usual, consequently their cut will show a shortage. Many of the Ottawa lumbermen have closed contracts for their next season's cut, which is an encouraging feature.

The replies from mill men throughout Ontario indicate that the cut of lumber for the past two years has been about equal, but fewer shingles have been manufactured. Profits were smaller in 1895 than in the previous year, notwithstanding the fact that lumber was allowed to enter the United States free of duty. The enquiry, "Is trade with the United States increasing?" brought forth a negative reply from 65 per cent. of the mill men who responded to our solicitations. The same question regarding other countries received a corresponding reply, only in a more pronounced tone. Over 80 per cent. are in favor of free trade in lumber with the United States. In nearly every case the question regarding the volume of work in the woods this winter showed that the output of logs is likely to be greatly curtailed; at some points it is being reduced as much as 50 per cent. This will, eventually, prove beneficial to the trade. The season so far has been unsatisfactory for logging operations in Ontario, some operators having been obliged to withdraw their men from the woods.

The total output of lumber from the various mills on the Ottawa valley last year is estimated at 627,000,000 feet, being nearly one million feet in excess of that of the previous year. The amount is made up as follows:

	Feet.
J. R. Booth, Ottawa	100,000,000
Bronson & Weston, Ottawa	75,000,000
W. Mason & Son, Ottawa	15,000,000
Shepard & Morse, Ottawa	25,000,000
Buell, Hurdman & Co., Hull	50,000,000
Gilmour & Hughson, Hull	20,000,000
Carswell & Francis, Renfrew	10,000,000
Martin Russell, Renfrew	2,000,000
John Mackay, Renfrew	1,500,000
A. & P. White, Pembroke	5,000,000
Pembroke Lumber Co., Pembroke	15,000,000
R. W. Conroy, Aylmer	15,000,000
A. Lindsay, Aylmer	3,000,000
J. R. & J. Gillies, Arnprior	5,000,000
McLachlan Bros., Arnprior	55,000,000
W. C. Edwards, Rockland	45,000,000
Gillies Bros., Braeside	30,000,000
R. H. Klock's Mills	3,000,000
St. Anthony Co., Whitney	20,000,000
Gilmour & Hughson, Ironsides	20,000,000
A. Hagar & Co., Plantagenet	5,000,000
Ottawa Lumber Co., Calumet	10,000,000
McLaren Estate	15,000,000
Ross Bros	10,000,000
Canada Lumber Co., Carleton Place	20,000,000
Hawkesbury Lumber Co	57,000,000
Total	627,000,000

The following statement shows the declared exports from the consular district of Ottawa, Ont., to the United States, during the four quarters of the year ending December 31, 1895.

ARTICLE.	Qr ending March 31.	Qr ending June 30.	Qr ending Sept. 30.	Qr ending Dec. 31.
Bark	$	$	$ 6,528.00	$ 4,215 00
Lath and Shingles	6,477.70	28,102.29	24,908.55	23,027.84
Logs and Timber		159.95	1,587.26	1,717.25
Lumber	351,751.30	585,114.47	625,746.15	597,903.64
" in bond for exp't	3.585.69	17,232.95	35,341.07	47,046.93
Match Blocks	1,420 20			
Pulp, Sulphite	17,570.57	18,239.39	14,478.94	19,309.10
Pickets		3,690.73	3,406.72	6,254.64
Railroad Ties	450.00	5,950.10	3,307.30	4,838.40

The opinion prevails in Ontario that an improvement in trade will take place as spring approaches. Dealers are finding new markets for the best grades of hardwood lumber, which will result in less dependence being placed on the American market, but they must look to the United States, the nearest market, for the disposal of the greater portion of their coarse lumber.

QUEBEC.

The volume of business in the Province of Quebec during the past year has shown no improvement, but there is every indication of more activity during 1896. Judging from present indications a larger quantity of lumber will be manufactured, provided there is sufficient snow to permit of logging operations, from the lack of which, up to the present time, the trade has suffered. Should the American Government not impose an import duty on lumber, trade with the United States will no doubt greatly increase, and better prices are anticipated. South America is also affording a market for large quantities of Quebec spruce and other lumber, which is realizing a fair figure. The latest advices from England show a decided improvement; prices have advanced and stocks are decreasing. On the opening of navigation the demand for all sorts of lumber will advance considerably. In view of these facts, the outlook for 1896 is considered favorable.

The following particulars of the operations during 1895, are furnished by J. Bell Forsyth & Co.'s annual trade circular, which is recognized as a high authority on lumber matters in that province:

The general advance in value of all articles of produce and staple merchandise has at length affected wood goods in the markets of the United Kingdom, and the prospects are decidedly more hopeful in the United States.

A strike in connection with the shipbuilding trade of Belfast has unhappily spread to the Clyde, but now seems certain of early adjustment and settlement; and there is every prospect of a sufficiency of orders for the construction of steamers being shortly placed with the shipbuilders of the United Kingdom to keep yards busy for a long time to come.

The increased production of gold, consequent on the development of mines in South Africa, British Columbia and elsewhere, has given an impetus to trade like that which followed similar discoveries in California and Australia, and will certainly result in several years of good business prosperity.

WHITE PINE.—The supply shows little change as compared with last year, the increase in waney pine being counterbalanced by the diminution in the production of square wood. There is absolutely nothing wintering above Quebec—a most unusual position.

The wintering stock is very bare of first-class waney of the smaller averages, and square pine suitable for deck plank purposes.

		Supply.	Export.	Stock.
1895	Square..	273,771	2,838,080	1,090,892 Square
	Waney..	3,086,469		2,254,717 Waney
1894	Square..	838,246	3,468,600	1,656,993 Square
	Waney..	2,288,663		1,610,571 Waney

RED PINE—Seems to be neglected, being unable to compete in the markets of the United Kingdom with pitch pine from the Southern States. Fresh good wood is scarce. It is well to note that a marked advance has been established in the value of pitch pine on the other side of the Atlantic.

	Supply.	Export.	Stock.
1895	108,661	326,080	154,120
1894	59,835	146,120	282,084

OAK.—The supply has again been in excess of the export, but there is an active demand in Great Britain, which, with somewhat reduced prices on this side, may improve the tone of the market.

	Supply.	Export.	Stock.
1895	1,006,139	869,560	790,486
1893	1,276,869	937,840	699,205

ELM—Has been in good demand throughout the season. With active shipbuilding this will no doubt continue. Unless production is overdone, the market is promising.

	Supply.	Export	Stock.
1895	596,137	537,120	218,871
1894	528,761	528,880	244,145

ASH.—The stock is quite ample for any present demand. Large wood may sell to a moderate extent if of fine quality and color.

	Supply.	Export.	Stock.
1895	149,077	146,360	118,127
1894	183,626	134,920	99,659

BIRCH—Throughout the season has sold slowly, having suffered from competition with cheap African mahogany. The prospects for this wood are now decidedly better, and unless too much is manufactured, birch should meet with a ready sale at fair prices.

	Supply.	Export.	Stock.
1895	240,818	200,160	5,156
1894	131,191	189,920	13,242

STAVES.—The business has left Quebec, being diverted into other channels.

PINE DEALS—Are now almost altogether produced above Montreal, and largely shipped from that port, though the business remains to a very great extent in the hands of Quebec houses. The opening of new railroad connection between western points and this port, and possibly some readjustment of cargo freight, may later on bring back a portion of the business to Quebec, if merchants and ship laborers both work with that end in view. The cuttings for next season have been eagerly secured by shipping merchants at about last year's prices, in expectation of an advance in value.

	Supply.	Export.	Stock.
1895	823,665	501,200	135,489
1894	647,408	479,700	63,624

SPRUCE DEALS—Have been throughout the season disappointing and unprofitable, but a great advance has recently taken place in value at the chief centres of consumption. As yet there has been no marked change in prices here, but that must certainly follow. The removal of the United States duty of equal to about sixteen shillings and sixpence per Petersburg Standard Hundred, the alteration in the French duties, equivalent to five shillings for same, and the extent to which spruce is now used for the great and growing industry of pulp manufacture, must shortly have a very marked effect on the value ot this wood.

	Supply.	Export.	Stock.
1895	3,878,142	3,471,700	736,216
1894	3,447,856	3,462,800	579,774

In regard to the manufacture of pulp for paper and the many purposes for which it is now being adapted, it is generally admitted by those in the trade that spruce wood produces the best and strongest pulp, and the demand for paper manufactured exclusively from pulp wood is now very great. It is not a new industry we admit, for wood for many years has been converted into pulp, but the demand of late has enormously increased, more so than any other branch of the timber or wood business. We hear of mills being built or enlarged wherever good spruce is to be found. A large mill such as the one at Grand'Mere, St. Maurice River, will turn out about ten carloads of pulp per day. Most of the output ot this extensive establishment is intended for paper mills in the United States. It looks, therefore, as if spruce is likely to be in the very near future a much more valuable wood than it has been in the past.

SAWN LUMBER.—South American Lumber.—The market this season has been very active in spruce, especially from the Saguenay and other Lower St. Lawrence ports, and from the Maritime Provinces, the shipments having aggregated 18,000,000 feet more this year than last. Prices have ruled from $9.00 to $11.00 for rails and $13.50 for twelve-inch boards in the Maritime Provinces, and from $11.50 to $12.00 for rails and $13.50 to $14.00 for boards in the Province of Quebec.

Shipments of white pine have considerably fallen off on account of the change in the United States customs tariff, which reduced duties on pitch pine from $10.50 to $5.25, which reduction militated very strongly against the use of white pine.

Prices range about the same as last year, say $17.50 for common shippers, $27.50 for good shippers, $37.50 for selected and $45.00 to $47.50 for clear.

FREIGHTS—Have ruled without much change on last year's figures, being the bottom rates at which vessels can be sailed: Clyde, 16 shillings; Liverpool, 18 shillings, for timber cargoes by sail, with proportionate rates to other ports. By steam, 40 shillings for deals from Montreal to safe ports in United Kingdom, with 65 shillings for timber for Quebec, have been current rates. Liners from Montreal were obliged, during summer, to take lower rates for deals to fill up, though the difference was by no means so marked as previous seasons, and rates closed firm at an advance.

COMPARATIVE STATEMENT OF SAILING VESSELS CLEARED AT THE PORT OF QUEBEC FOR SEA, LUMBER LADEN, 1880 TO 1895, FROM THE OPENING TO THE CLOSE OF NAVIGATION.

(COMPILED BY MR. F. JOHNSTON, QUEBEC EXCHANGE.)

1880	634	Vessels	555,451 Tons.
1881	459	"	380,186 "
1882	426	"	359,025 "
1883	487	"	416,169 "
1884	366	"	291,398 "
1885	369	"	294,789 "
1886	325	"	250,635 "
1887	271	"	206,172 "
1888	227	"	195,928 "
1889	275	"	240,892 "
1890	250	"	238,162 "
1891	205	"	182,615 "
1892	244	"	225,008 "
1893	177	"	146,970 "
1894	136	"	115,639 "
1895	86	"	70,960 "

OCEAN STEAMSHIPS.

1894	51	Steamers	72,531 Tons.
1895	58	"	87,749 "

STATEMENT SHOWING THE QUANTITY AND VALUE OF WOOD EXPORTED FROM THE PORTS OF MONTREAL, THREE RIVERS, BATISCAN AND SOREL, FROM MAY 1ST TO NOVEMBER 30TH, 1895.

PORTS.	ARTICLES.	QUANTITY.	VALUE.
Montreal	Pine Deals	69,730 Std. H.	$2,374,711
	Spruce Deals	3,526 "	85,248
	Deal Ends	5,422 "	269,383
	Planks, Boards, &c.	11,970 M. ft.	311,717
	Other Headings	.....	245,302
	Square Timber	7,820 Tons.	99,620
		Total value	$3,385,981
Three Rivers and Batiscan	Pine Deals	31,755 Std. H.	$ 127,516
	Spruce Deals	3,627 "	87,194
	Deal Ends	428 "	7,170
	Planks, Boards, &c.	30,813 M. ft.	293,639
	Spruce Pulp-Wood	.....	138,910
		Total value	$ 654,435
Sorel	Deals	3,375 Std. H.	$ 135,000
	Planks, Boards, &c.	2,814 "	60,000
		Total value	$ 295,000

MARITIME PROVINCES.

Trade in the maritime provinces has been helped to some extent by a free lumber tariff between the United States and Canada, and this fact, coupled with the increased demand at home and in Great Britain for spruce wood, enabled operators to hold their own during 1895. The early part of the year was quiet, but a brisk demand towards its close balanced matters up to a fair proportion. An advance in the European market came too late to be of much benefit, owing to the extra freight rates and fall insurance. A firmer feeling was evidenced at all spruce producing points as this year was ushered in, and stocks are held at advanced prices.

The following particulars, taken from the annual wood circular of Mr. J. B. Snowball, of Chatham, N. B., will show the prevailing conditions during 1895:

The winter, so far, has been the most unfavourable for logging for the past twenty years—a cold, wet, disagreeable fall followed an unusually dry summer; snow came without frost in the ground, and low lands, which have been the stay of operations for the past few years, are not accessible, while late extensive thaws and the disappearance of snow, combine to make operations more difficult and expensive than for many years.

The export from Miramichi has been 82 millions superficial feet, against 96 millions in 1894, which is 5 millions below the average of the past twelve years; that from St. John, 126 millions against 153 in 1894, or 19 millions less than the average of the past twelve years. The total shipment from the Province of New Brunswick for the year was 291 millions superficial feet, against 326 millions superficial feet in 1894 The reductions were from St. John, Miramichi, Richibucto and Sackville.

The stock of merchantable spruce deals wintering here is 6,630 St. Petersburg standards, against 3,600 standards last year, and 7,600 standards in 1893, the average for the past 10 years being 8,580 St. Petersburg standards.

South American business has slightly increased this year, and results were satisfactory. There are several orders already in the market for next season's shipment, and this business will be largely increased as soon as our shippers understand it, and get over existing prejudices. The size of each cargo is from 350 to 450 standards, and the stock must be fairly weather-seasoned.

The export to France increased in anticipation of the import duty being reduced in that country. The minimum tariff on Canadian products only came into force on the 14th October of this year, so that the trade on this side has not benefitted much by it, but a more extended business is looked for next season.

Operators in the province of Nova Scotia, being exempt from crown land or stumpage tax, find more profit in their business than do the producers from the New Brunswick forests, and although the quality and specification of their exports are generally inferior to ours, still their stock finds a ready market at a price, and they, for years, had been forcing their production to its utmost limit.

SHIPMENTS FROM MIRAMICHI FOR 12 YEARS, FROM 1884 TO 1895, INCLUSIVE.

	Sup Feet.		Sup. Feet.		Sup. Feet.	
1884	108	millions.	1888	73 millions.	1892	95 millions.
1885	87	"	1889	110 "	1893	83 "
1886	72	"	1890	88 "	2894	96 "
1887	68	"	1891	72 "	1895	82 "

SHIPPERS FROM PORT OF MIRAMICHI, SEASON OF 1895.

Shippers.	No. Vessels.	Tons.	Sup. ft. Deals, Scantling, Ends and Boards.	Palings Pcs.
J. B. Snowball	38	28,781	26,727,735	160,910
W. M. McKay	29	27,397	28,049,169	46,000
D. & J. Ritchie	21	12,920	12,343,805	89,300
Ernest Hutchison	8	6,602	5,342,490	
F. E. Neale	11	6,499	5,917,376	
Geo. Burchill & Sons	6	4,520	4,077,000	26,400
Clark, Skillings & Co.	3	3,052		
Jas. Aiton	Part.			
8 Shippers	116	89,771	82,457,575	322,610

Laths—J. B. Snowball, 268,900. Spool wood—W. M. McKay, 653,146 sup. ft.; Clark, Skillings & Co., 2,577,137 sup. ft.; Jas. Aiton, 519,093 sup. ft.

DISTRIBUTION OF MIRAMICHI SHIPMENTS.

Country.	No Vessels.	Tons.	Sup. ft. Deals, Scantling, Ends and Boards.	Palings Pcs.
Great Britain	55	47,753	42,540,813	145,950
Ireland	42	29,072	27,892,435	163,650
France	14	9,409	9,114,586	1,760
Spain	2	1,334	1,078,379	11,250
Africa	2	1,299	1,126,616	
Australia	1	904	704,746	
6	116	89,771	82,457,575	322,610

Spain, 268,900 laths; Great Britain, 3,749,376 sup. ft. spool wood.

ST. JOHN, N. B., SHIPMENTS OF DEALS, &C., TO TRANS-ATLANTIC PORTS, DEC. 1ST, 1894, TO DEC. 1ST, 1895.

Shippers.	No. of Vessels.	Tons reg.	Sup. ft. Deals, &c.	Timber (Tons) Pine	Timber (Tons) Birch
Alex. Gibson	50½	65,249	67,047,435		1544
W. M. McKay	50½	65,914	50,262,501	324	6368
George McKean	9	10,005	6,640,461		
Others	7	8,058	2,499,310		462
Totals	117	149,226	126,449,707	324	8374

DISTRIBUTION OF ST. JOHN, N. B., SHIPMENTS, DEC. 1, 1894, TO DEC. 1, 1895.

Ports.	No. of Vessels.	Tons reg.	Sup. ft. Deals, &c.	Timber (Tons) Pine	Timber (Tons) Birch
Australia	1	1,511	1,039,139		
Barrow	1	2,466	2,533,388		
Bristol	2	3,420	3,638,513		
Fleetwood	5	6,780	7,330,290		
Ireland	45	38,707	38,946,843		9
Liverpool	26	44,622	42,843,556	324	7,588
London	19	24,794	3,287,833		462
New Port, Mow.	3	3,590	3,520,904		
Penarth R'ds, f.o.	4	6,125	5,274,236		
Sharpness	4	6,835	7,040,158		
Scotland	4	7,198	8,018,353		127
Wales	2	2,632	2,359,307		188
Whitehaven	1	546	617,187		
Totals	117	149,226	126,449,707	324	8,374
Canary Islands	6	982	1,512,000		

SHIPMENTS FROM ST. JOHN TO TRANS-ATLANTIC PORTS FOR THE PAST 16 YEARS.

	Total Sup. ft, Deals, &c.	Timber (tons) Birch	Timber (tons) Pine
1880	215,485,000	16,035	2,441
1881	210,281,730	5,134	1,734
1882	201,413,717	7,576	3,332
1883	181,517,932	11,778	3,883
1884	164,829,825	14,006	3,836
1885	152,543,026	13,769	3,686
1886	138,934,392	7,354	4,313
1887	118,450,590	5,197	1,587
1888	153,184,187	4,721	457
1889	180,167,488	7,221	487
1890	132,608,516	1,311	4,317
1891	122,242,682	5,004	——
1892	146,529,309	10,200	——
1893	156,653,334	5,294	——
1894	153,473,076	5,015	——
1895	126,449,707	8,374	324

TOTAL TRANS-ATLANTIC SHIPMENTS OF NEW BRUNSWICK IN 1894 COMPARED WITH 1895.

—1894—

Ports.	No. Vessels.	Tons.	Sup. ft. Deals, &c.	Tons Timber.
Miramichi	128	101,951	95,605,185	16
St. John	150	171,789	153,473,076	5,015
Bathurst	12	9,947	8,829,000	43
Dalhousie, (including Campbellton)	39	24,444	20,451,756	203
Richibucto	13	6,130	5,936,920	
Shediac	20	16,331	9,806,100	
Sackville, (including Baie Verte)	23	13,626	13,402,771	
Outports of Moncton (Hillsboro, Harvey, Alma)	20	19,081	18,675,813	
Totals	405	357,299	326,180,621	5,277

—1895—

Ports.	No. Vessels.	Tons.	Sup. ft. Deals, &c.	Tons Timber.
Miramichi	116	89,771	82,457,575	
St. John	117	149,226	126,449,707	8,698
Bathurst	12	8,987	8,817,000	20
Dalhousie, (including Campbellton)	42	30,264	25,568,030	164
Richibucto	9	4,561	4,420,210	
Shediac	23	11,456	11,250,269	
Sackville, (including Baie Verte)	19	9,009	9,083,501	
Outports of Moncton (Hillsboro, Harvey, Alma)	22	22,532	23,336,282	434
Totals	360	325,806	291,382,574	9,316

The trans-Atlantic shipments from the Province of New Brunswick for the past ten years were :

Sup. feet.		Sup. feet.	
1886—276	millions	1891—253	millions
1887—250	"	1892—325	"
1888—277	"	1893—312	"
1889—369	"	1894—326	"
1890—293	"	1895—291	"

SHIPMENTS FROM NOVA SCOTIA, 1895.

Port.	No. Vessels.	Tons.	Sup. ft. Deals, &c.	Tons Birch T'br'.
Outports of Amherst	31	27,188	21,302,000	
Halifax	50	35,517	29,353,192	158
Hubbard's Cove	1	498	445,664	
Ship Harbour	4	2,191	2,087,833	
Sheet Harbour	2	1,526	1,457,712	
St. Margaret's Bay	2	887	702,428	
Parrsboro	37	45,274	42,701,549	
Pictou	8	6,170	3,683,000	2,370
Liscomb	6	7,672	7,293,181	
Sherbrooke	1	350	297,834	
Totals	142	127,273	109,324,393	2,528

The shipment of deals from Nova Scotia to trans-Atlantic ports for the following years were :

1886	87,280,125	1891	78,603,742
1887	82,959,589	1892	87,861,398
1888	85,070,005	1893	109,252,930
1889	92,605,488	1894	106,327,250
1890	99,512,924	1895	109,324,393

BRITISH COLUMBIA.

The lumber trade of 1895 in British Columbia was of a satisfactory volume. The exports to foreign countries increased considerably, the largest shipments being made to South America and the United States. The shingle trade has shown little improvement, but dealers are looking forward to better conditions in 1896. The following figures will show the amount of shipments made to the different countries during the year :

	Feet.
United States	13,597,305
South America	13,430,970
South Africa	9,694,816
Australia	5,874,958
China	4,699,068
France	2,541,222
Belgium	838,515
Ireland	1,177,408
England	1,008,566
Halifax, N.S.	673,900
Japan	169,086
Total Shipments	53,705,814

It will be observed from the total amount of shipments that a considerable trade was done. The largest shipments were made from Vancouver, from which port 44 vessels sailed. 15 sailed from New Westminster and 10 from Moodyville. No advance in prices has taken place, and the margin of profit has been small. The prospect for the lumbermen of British Columbia is good. An increased foreign trade is anticipated, and from China and Japan a large demand is probable as a result of improvements now being carried out in those countries. The lumber of the province is also to find a market along the borders of the Baltic sea—one of the greatest timber countries of the world—its strength and uniformity of size making it adaptable for many purposes for which no other woods are suitable. The improvement in the mining business will also create considerable local demand. The Central Lumber Company, of San Francisco, which has recently been formed, embraces nearly all the mills on the Pacific coast. Under the intended mode of conducting the business, it seems probable that a fair share of business will be secured by each individual mill, and that shortly better prices will be realized. All the available lumber steamers have been chartered by the combine, and outsiders will experience difficulty in securing vessels to carry lumber for export. An advance in prices would not, we think, affect the demand for British Columbia fir and red cedar, more especially where its qualities are known.

MANITOBA.

Operations throughout Manitoba and the Northwest Territories during the early part of the year were restricted, but large crops stimulated trade after the first six months had passed. The cut of the Lake of the Woods mill was small, as fewer logs were taken out during the winter of 1894-95, owing to the fact that stocks carried over were large. In Winnipeg considerable building has been done, which has resulted in a local demand. A number of grain elevators have also been built throughout the country. Prices have been well maintained, but lowered slightly towards the end of the year, as a result of the importation of Minnesota lumber and a supply of spruce from the Riding Mountains. The operations of the Western Retail Lumbermen's Association have been felt by the retail trade, and the prospects for 1896 are of a satisfactory character.

CORRECTION.

IN the description of Messrs. Leischman, Maundrell & Co.'s works at Woodstock, Ont., which appeared in our last number, it was stated that they had three mills, turning out three million feet per year. This is incorrect, as they have only one mill, turning out one million feet per year. The firm control three yards, at which are handled from eight to ten million feet per year.

HON. J. W. LONGLEY, M.A.

COMMISSIONER OF CROWN LANDS FOR NOVA SCOTIA.

FOR the past ten years the position of Attorney-General of Nova Scotia has been held by the Hon. J. Wilberforce Longley, M. A. The extent of crown lands in that province is not sufficient to justify the maintenance of a Commissioner for that department alone. The duties of that position have therefore been looked after by Mr. Longley as Attorney-General.

Mr. Longley was born at Paradise, N. S., in the year 1847. He was educated at Acadia College, and graduated in June, 1871. Four years afterwards he was called to the bar of Nova Scotia.

While articled as a law student in the city of Halifax he became a frequent contributor to the press, and took an active interest in current political questions. In 1873 he became chief editorial writer for the Arcadian Reporter, and afterwards joined the staff of the Halifax Morning Chronicle, paying special attention to public affairs. In the year 1882 Mr. Longley

HON. J. W. LONGLEY, M.A.

was nominated by the Liberals of Annapolis County to contest the riding as a candidate for the Local House. The county was regarded as a Conservative stronghold, and few people were to be found who considered the election of the Liberal candidate probable. However, after an exciting campaign, Mr. Longley headed the polls by a majority of 79 votes. From the time he first took his seat in the House of Assembly he became a prominent and influential member of that body, and two years afterwards was chosen a member of the Executive Council. At the general elections of 1886 he again contested the County of Annapolis. As in the case of the previous contest, the election was very close, but Mr. Longley was successful by the narrow majority of sixteen. He immediately entered upon his duties as Attorney-General in the Government, a position which he has since maintained. He is considered one of the ablest orators of the House, is energetic and industrious, and one of the best informed men of the day. Since that time he has been the author of a large number of measures dealing with criminal procedure, town incorporation, the abolition of imprisonment for debt, the assessment law and other important subjects.

At the general elections in 1890 he was re-elected, and all hopes of defeating him have now been abandoned by his opponents.

CANADA LUMBERMAN

WEEKLY EDITION

The Lumberman Monthly Edition, 20 pages } $1.00 PER YEAR { The Lumberman Weekly Edition, every Wednesday

THIS PAPER REACHES REGULARLY THE PRINCIPAL LUMBER MANUFACTURERS AND DEALERS THROUGHOUT CANADA, AND WHOLESALE BUYERS IN THE AMERICAN AND FOREIGN MARKETS.

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Weekly Lumberman, published every Wednesday. Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

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Toronto, Canada
C. H. MORTIMER, Publisher
1895

THE above is a fac simile of the title page of the latest and most complete Lumber and Inspection Book published.

We shall be pleased to send you a copy on receipt of four 3 cent Canadian postage stamps o o o o

ADDRESS:

THE CANADA LUMBERMAN,

Toronto, Canada

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue.

TIMBER LIMITS — WHITE PINE — FOUR small berths for sale, in the township of Gibson, on the Georgian Bay. THE MUSKOKA MILL & LUMBER CO., TORONTO.

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A MAN IN CANADA, ACQUAINTED WITH the band saw trade, to sell on commission. Address, "BAND", Care CANADA LUMBERMAN, Toronto.

FOR SALE.

10 CARS DRY BASSWOOD LUMBER, GOOD mill run—$13 on cars.
MACPHERSON & SCHELL,
Alexandria, Ont.

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LUMBER, LATH AND SHINGLE MILL, cheap, in the thriving village of Richard's Landing, 24 miles from Ste. Marie—one of the best locations in Algoma. Apply to DAVIES & DEAN, Richard's Landing, Ont.

POSITION WANTED.

A YOUNG MAN, EXPERIENCED IN THE lumber business, thoroughly acquainted with the New York lumber trade, and with several years' experience in the hardwood trade, wishes a position on the road, as shipper or inspector, for reliable house. Correspondence solicited. Address,
R. C. JAMIESON, Meaford, Ont.

NOTICE

Sale of White-Pine Timber

TENDERS WILL BE RECEIVED AT THE office of the undersigned up to and including
SEVENTEENTH DAY OF MARCH NEXT,
for the purchase of the Pine Timber (only) over seven inches on the stump, on the understated Townships in the District of Parry Sound, described as follows:

Township of Lount, Berth No. 4. Area, 14 square miles. Concessions 9 to 14 inclusive, Lots 21 to 35 inclusive.

Township of Pringle, Berth No. 3, 13½ square miles. Concessions 9 to 14 inclusive, Lots 1 to 15 inclusive.

Township of Pringle, Berth No. 4, 17¾ square miles. Concessions 9 to 12, Lots 16 to 35 inclusive; Concession 13, Lots 16 to 25 inclusive; Concession 13, Lots 27 to 35 inclusive; Concession 14, Lots 16 to 22 inclusive; Concession 14, Lots 28 to 35 inclusive.

Township of Mills, Berth No. 2, 12 square miles. Concessions 9 to 14 inclusive, Lots 1 to 15 inclusive.

The above Berths are well watered, with excellent facilities for lumbering.

Tenders may be for each Berth separate, or for the whole Lot, and should state the amount the parties tendering are prepared to pay for the Pine Timber (only) on each Berth or on the whole Lot.

The timber when cut is subject to Crown dues of $1 per thousand feet board measure, and ground rent of $3 per square mile per year.

Terms of payment: One-half cash, balance in 6 and 12 months, good notes, with interert at 7 per cent. per annum. The highest or any tender not necessarily accepted. Parties intending to explore the above limits should get off at South-River Station G T Railroad, and thence by stage to Mecunoma Post Office, Nipissing Road, where Mr. A. Urquhart will be found after February 15th, and can give all information regarding the limits.

For further particulars apply to
BURTON & BRO.
Barrie, Ont.

Barrie, 25th January, 1896.

WANTED—SILENT OR ACTIVE PARTNER, with five to ten thousand dollars, to extend sure and safe export trade (patented). Large profits and immense field; fullest investigation. Mill man having mill and power east preferred. Address, Box 20, CANADA LUMBERMAN.

CURRENT TRADE CONDITIONS.

ONTARIO.

THE trade of the past week has been slow, but no one is disappointed. Activity is not looked for until the month of February has well set in. No cutting of prices to effect sales has taken place, which is an encouraging feature. The demand for rock elm for bicycles is increasing as the season advances. From the Ottawa district comes a report of a good enquiry for box lumber at fair figures. The mills are actively engaged in getting in their supply of logs, sufficient snow having fallen to facilitate operations in the woods.

The attention of the trade is directed to the correspondence appearing in another column from Mr. Magie, of Bordeaux, France, which shows the possibility of an increased trade with that country.

QUEBEC AND NEW BRUNSWICK.

Lumbermen in the maritime provinces are actively engaged in logging operations. From some points a scarcity of snow is still reported, but sufficient has fallen in the greater part of the lumbering sections to remove the gloomy outlook which prevailed earlier in the season. The stock of deals at the mills in New Brunswick is diminishing rapidly. At St. John the city mills have no deals to offer, but sufficient quantities are coming in to supply the steamers loading for British ports. At railway points considerable quantities are available. The quotation on country cut deals is $9.25.

The demand on the spruce supply continues, and owing to the possibility of a small winter's cut, there is an inclination to force prices upwards. Spruce clapboards and boards are firm; shingles and pine lumber dull. Hemlock is in a healthy condition, and is following the lead of spruce. The trade at St. John is likely to receive further encouragement in the shape of another line of steamships. The New York and Porto Rico Company will put vessels on the route between St. John and Halifax and Porto Rico. Monthly trips will be made during the winter and spring. This should prove a further boom to shippers. From the province of Quebec comes the report that stocks are small and prices firm. A considerable quantity of spruce is going forward to foreign ports.

BRITISH COLUMBIA.

If present indications can be taken as a basis of conjecture, the prospects for lumbermen in the western provinces are of a hopeful character. Quotations for Douglas fir lumber for foreign shipment are firmer. Some of the mills have already advanced prices $1 per M. The position of the trade is steadily growing stronger, and justifies the advances. For lumber tonnage a fair enquiry exists, and the local fleet is fairly well engaged. The most encouraging feature of the past year's trade has been the cargo shipments to foreign countries, and there seems no reason why this trade should not be more fully developed in 1896. In Manitoba and the North-West Territories the trade is fairly active, logging operations being in full swing. The Ontario and Western Lumber Co., of Rat Portage, have started five camps, and will operate five mills. Capt. Robinson has 200 men employed in the woods on Lake Winnipeg. Prices are firm, and a good local demand for lumber is reported.

UNITED STATES.

Association meetings have occupied the attention of lumbermen during the past week. Apart from these meetings little has been done, as dealers are very cautious about buying, and are carefully choosing their steps. The unsatisfactory business of 1895 has not been without its lesson. Wholesalers report a quiet week, but there is in places a postive revival of distributive demand, especially at Chicago. The call for white pine does not usually arise until late in February, but from some sections of the country there is a tendency to increased demand. This is particularly so of the east, where the export trade is brisk. White ash is also increasing in demand for manufacturing purposes. The hardwood trade is a little slow, but there is a call for some sorts. At Buffalo, oak, birch and maple are in favor, some cherry is moving, while maple flooring is active. From the Michigan district complaints reach us of the low price of lumber. Lath and shingles are quiet, but with the advent of spring a better trade is expected. Now York trade is slow, the principal demand being for export.

FOREIGN.

The market in foreign countries is steady, and a restoration of confidence is reported. Stocks generally are light, and the demand is increasing. The latest reports from Australia announce a better enquiry for 1-inch white pine. The English market has shown more activity of late than for some time past. In London oak is firm, and winter stocks unusually light for the season of the year. Canadian elm is in moderate demand, sufficient to

keep prices firm. At Foy, Morgan & Co.'s recent sale, several parcels of Quebec goods were offered. First spruce sold fairly well at £9 to £9 10s., with £7 15s. for 2nds. Some 4th pine irregulars sold at £6 15s. 2nd pine, 12 to 16 ft., 3x11, brought £22 15s. Quebec red pine timber did well at £2 17s. 6d. per load. From Glasgow sales of pine and spruce deals are reported at good figures. The prospects of an early settlement of the shipbuilding strike are good, which will result in stimulating trade. The stock of Canadian lumber on hand at Liverpool is small, but several vessels carrying considerable cargoes of lumber are due to arrive there in a few days.

STOCKS AND PRICES.

CANADA.

J. A. Ellis, of Fenelon Falls, Ont., who operates a circular mill, has 1,005,000 feet of lumber for sale.

A Lindsay firm has sold their cut of 1894 to R. Laidlaw & Co., Toronto. They have the cut of 1895 yet for sale.

J. W. Howry & Sons, of Fenelon Falls, Ont., have 25,000,000 feet of lumber now in their yards, and have 900 men at work in the woods.

A member of the firm of John C. Hall & Co., Boston, has recently been in New Brunswick, buying lumber for shipment to South American markets.

Gilmour & Co., of Trenton, cut 150,000 logs on their new limits last year, while on their limits on the Moira, their cut amounted to 10,000,000 feet.

The British ship Nineveh has sailed from Moodyville, B. C., for Sydney, N. S. W., with 100,000 feet of flooring, 720,000 feet of rough lumber, and 45,000 laths, the value being $7,800.

The following shipments from Windsor, Ont., to the United States, for the quarter ending Dec. 31st, are reported: Staves, $23,661; logs and timber, $8,764; cedar posts, $9,418; lumber, $4,586.

Louis McConnell, Van Vlack, Ont., is stocking his new mill. He has 750,000 shingle timber on hand, and will cut 5,000,000 shingles and 5,000,000 feet of lumber, mostly pine and hemlock.

Kennedy, Davis & Son, of Lindsay and Bobcaygeon, expect to make a large cut this year. A large gang of men is in the woods and sufficient logs are now on hand to run their mill for several months.

The Reid Co., of Toronto, have been awarded the contract by the city of Hamilton for the supply of lumber, at the following prices: Lumber, $12.97 per thousand feet; cedar posts, 10 cents per foot.

The Christopher Langelier timber limits of Maria, Bonaventure County, Que., have been purchased by T. Nadeau, president of the Washington Building Trust Co., J. M. Fortier, and Alphonse Charlebois, a Quebec contractor. Three hundred men are now employed on the limits cutting timber.

The following are the quotations for Douglas fir lumber, in cargo lots at Vancouver, for foreign shipment: Rough merchantable, ordinary sizes, in lengths to 40 feet inclusive, $7 per M feet; deck plank, rough, average length 35 ft., $15 per M; dressed T. and G. flooring, $13 per M; pickets, rough, $7 per M; laths, 4 feet 6 in., $1.50 per M.

Exports of lumber from New Brunswick are reported as follows: From Quaco on Jan. 8th, for Boston, per sch. Silver Wave, 100,000 boards, etc, 75,000 laths, by J. R. McDonough; on Jan. 14th, per sch. Frank W., for Salem f. o., 135,000 ft. plank, 15,000 laths, by Stetson, Cutler & Co. For Buenos Ayres, f. o., per bark Bessie Markham, 137,277 ft. spruce boards, 603,256 ft. do. scantling, 16,433 ft. do. plank, by Stetson, Cutler & Co. For New York, per sch. Clayola, 225,000 laths, by J. R. Warner & Co. For Glasgow, by W. M. Mackay, 325,518 feet deals, etc.; John Wilson, 194 pcs. birch timber (84 loads).

UNITED STATES.

Sol. Froet, of Menominee, Mich., will bank 3,000,000 feet of logs at Saunders this winter.

The Donovan & O'Connor mill at Menominee, Mich., have 4,000,000 feet of stock in hand for sawing.

Alger, Smith & Co., of Saginaw, Mich., have 4,000,000 feet of long logs to be hauled to Black River, Alcona county.

Prices for logs at Manister, Mich., range about $4.00 to $4.50 for maple, ash, elm, etc. Rock elm commands a little higher figure.

Culligan & Doyle, of Bay City, Mich., have 1,000,000 feet of logs banked on the Oqueoc river. They will be rafted to Alpena next summer.

The H. Witbeck Co., of Marinette, Wis., have sold to the Schroeder Lumber Co., of Milwaukee, 40,000,000 feet of pine timber on Popple river, for $150,000.

The lowest bidder on 3,200,000 feet of lumber and thick stuff to be used for canal improvement at Buffalo, was the Laycock Lumber Co., their price being $67,759.05.

PROSPECTIVE TRADE WITH FRANCE.

The following interesting letter on the prospects of Canadian trade with France has been received by the CANADA LUMBERMAN:

BORDEAUX, FRANCE,
January 16, 1896.

DEAR SIR, — Regarding the outlook and market in France for Canadian lumber under the new treaty, I have gone over the position recently with many of our important dealers, and have had published here, the copy of the treaty I received. For the moment it is impossible to give you any very definite information, as it is so recent an affair, coming at our dead season, and when everyone is making up stock and closing their books, that no decided action has taken place to indicate to what extent our buyers will take hold of it.

Speaking particularly of spruce, which perhaps is of most interest to you, all our buyers are more or less familiar with the Canada spruce deals, having bought in a limited way from time to time under the old or maximum duty. Now that the new treaty allows a reduction of 13 Fcs. per standard (or say, $2.50), it is more than probable that Canada can count on France to buy largely.

The position to-day can perhaps be described in a few words. Geographically, France is near the great forests of Norway, Sweden, Russia, and Austria; their products have a good foothold here, and are well liked, and justly so, because the lumber is very carefully manufactured, all sawn and equalized with band saws, in current sizes here. Clean, bright and even, it, as the French say, "pleases the eye," and everyone who has had experience in the French markets knows that this goes further towards selling it than a practical lumberman would at first believe. The nearness of France to these forests allows of freights which are low and easily obtained.

In front of these facts Canada comes with a reduction of $2.50 per std. to compete with the Baltic shippers. The result of this competition you will have from time to time in my regular reports to you, but, as I said before, nothing can be predicted for the moment.

I will make off a list of imports showing exact importations at different ports. The sizes most desired and saleable here are 3x7, 3x8, 3x9, 9 to 22 feet (metric) long, with an average of 14½ to 15 feet (metric). Long lengths are sought for. Inspections are 1st, 2nd and 3rd, with a good average of 2nd. It is impossible to name you any price, because no contracts have been made recently. The market is quiet and steady, with rather good prospects for active demand when the season opens.

Staves continue depressed and quiet, and our market continues overstocked. Some activity is looked for during the spring buying. If anything can be done in your staves here, I would be glad to hear from your shippers. Bordeaux uses some 30,000,000 a year, and it seems there ought to be room for Canadian trade as there is for American.

Yours truly,
GEO. ALFRED MAGIE.

OTTAWA.

[Special Correspondence WEEKLY LUMBERMAN.]

The trade, in keeping with other lines of business here, is rather quiet just now, but the prospects for the coming spring and summer are gradually brightening. Of course, so far as the manufacturers are concerned, they are largely safeguarded against any possible fall in prices during the coming season, as their prospective output of deal has been sold, leaving only the ordinary thin lumber for them to handle. A feature worthy of note has been a marked improvement during the past few weeks in the sale and shipment of box lumber. In the early part of the season there was a lack of the usual demand for this class of lumber, but lately, however, the demand has increased, and many large lots have been disposed of at fair prices, so that at present only the average winter stock is in the yards. Of all other classes of lumber, the usual quantity is now on hand.

THE SITUATION.

REFLECTED THROUGH CORRESPONDENCE OF THE "WEEKLY LUMBERMAN."

Eastman Lumber Co., Eastman, Que.: No. 2 spruce is all we are selling. Stocks in this locality are small, and prices firm.

Geo. Thomson, Wingham, Ont.: Hemlock is in most demand. Prices are firm, and stocks on hand small. The logs coming in are mostly hardwood.

Leischman, Maundrell & Co., Woodstock, Ont.: Barn stock and 1½ and 2-inch in good demand. Lumber is at a stand-still, but logs are coming in from all parts.

H. G. Ross, Victoria, B. C.: Stocks are moving slowly. For export, fir is in most demand, and for local use, fir and cedar. Stocks in this province are very small, and prices are inclined to advance. I may say that in British Columbia stocks are not held, the lumber being cut as ordered.

Thos. Ouellett, Detroit, Mich.: Regarding purchases of one million feet in the neighborhood of Owen Sound, the lumber consisted chiefly of hard maple, with some soft elm and basswood. I expect to buy more in that section during the coming season. Am buying car-loads now to be shipped east. Water shipments nearly all come to Detroit.

Robert Christie, Chesley, Ont.: There is a good enquiry for rock elm for bicycles. The old stocks of hardwood are well sold out, but considerable hemlock is carried. The usual stock of logs will be taken out.

COOPERAGE.

The Sutherland-Innes Co., of Chatham, Ont., have favored us with the following notes regarding the condition of cooperage stocks:

At this season of the year business for prompt shipment is very limited indeed, and until something definite is known regarding the United States tariff and the winter we are going to have, very little contracting will be done for delivery over 1896.

Owing to the entire absence of snow so far this year, manufacturers of cooperage stock advanced prices about two weeks ago. The stock of staves, hoops, and heading in Canada is very limited, and it does not look as if there would be enough stock to go around until the new cut comes in. Under the circumstances, very high prices are looked for by all manufacturers in the near future. Should the winter continue as at present, none of the mills in Canada will be stocked up, and all kinds of cooperage stock will be at a high premium this season.

SHIPPING MATTERS.

Bark Ethel Clarke is at Bear River, N. S., loading lumber for the West Indies.

Sch. John H. Cross is loading creosoted piling at Richmond, N. B., for New York.

Steamer Derwent Holme has sailed from St. John, N. B., for Liverpool, with a cargo of deals.

The Etta White has left Vancouver for Blaine, with 200,000 feet of cedar logs for shingles.

The Beaver Line boat Lake Superior sailed on the 23rd inst., from St. John, with 350 standards of deals for Liverpool.

The British ship City of Florence, which took a cargo of lumber from the Hastings mill, at Vancouver, has arrived at Antwerp.

The Hawaiian schooner Americana, which sailed from Vancouver, B. C., on September 5th with a large cargo of lumber, arrived at East London on Janaary 7th.

Sch. Fred H. Gibson has sailed from Mobile for St. Jago, with a cargo of 394,000 feet of pine. She is chartered to return and load at Pascagoula for Port Spain, p. t.

BUSINESS DIFFICULTIES AND CHANGES.

D. C. Matthews, lumber, Lakeport, Ont., is reported in financial difficulties.

The Revelstoke, B. C., Lumber Co. is reported to be in financial difficulties.

S. V. Bray, lumber and general store, Wellesley, Ont., has been succeeded by McGee Bros. & Co.

The assets of Atchison & Co., planing mill, Hamilton, have been sold to James Houlden, at $7,150 for mill and machinery, and $1,020 for the lumber.

FIRES.

James Smith & Son's saw-mill at Stanley, N. B., has been burned. No insurance. They will probably rebuild.

The Alexandria Furniture Factory at Alexandria, Ont., was destroyed by fire on the 21st inst. The loss is estimated at $20,000.

Campbell's mill, above Hartland, N. B., was burned recently. Loss on mill, $6,000; insurance, $3,000. The stock burned was valued at $5,000, and was insured for $1,700.

LUMBER FREIGHT RATES.

Lumber freight rates on the Canada Atlantic Railway are as follows: Ottawa to Toronto, 10 cents per 100 lbs; Ottawa to Oswego, $1.90 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Montreal, $1.25 per M ft., (3,000 lbs. and under per M ft.); Arnprior to Montreal, $1.75 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Buffalo, 12 cents per 100 lbs.: Ottawa to Port Huron and Detroit, 14 cents per 100 lbs. Ottawa to New York, 15 cents track delivery 17 cents per 100 lbs lightered; Arnprior to New York 17 cents track delivery 9 cents lightered; Ottawa to Boston, Portland and common points, local 15 cents; exports 13c. per 100 lbs.; Arnprior to Boston, Portland and common points, local 17 cents; export 15 cents per 100 lbs.; Ottawa to Burlington, 6 cents per 100 lbs.; Ottawa to Albany, 10 cents per 100 lbs. Arnprior to Albany, 12 cents per 100 lbs.; Ottawa to

St. John, N. B. and common points, 20 cents per 100 lbs.; Ottawa to Halifax, N. S. and common points, 22½ cents per 100 lbs. Minimum carload weight for shipment of lumber, lath, shingles, etc., is 30,000 lbs., and rates quoted above are in cents per 100 lbs., except when quoted per M ft. the minimum carload charged is 10 M ft., lumber not exceeding 300 lbs. to the M feet. Ottawa rates apply on shipments from Rockland and Hawkesbury.

LUMBER freight rates for pine on the Grand Trunk Railway have been made a fixture, as below. Of any intended change due notice will be given lumbermen.

General instructions in shipping by Grand Trunk are embodied in these words in the tariff schedule: On lumber in carloads, minimum weight, 30,000 lbs. per car, unless the marked capacity of the car be less, in which case the marked capacity (but not less than 24,000 lbs.) will be charged, and must not be exceeded. Should it be impracticable to load certain descriptions of light lumber up to 30,000 lbs. to the car, then the actual weight only will be charged for, but not less than 24,000 lbs. The rates on lumber in the tariff will not be higher from an intermediate point on the straight run than from the first named point beyond, to the same destination. For instance, the rates from Tara or Hepworth to Guelph, Brampton, Weston or Toronto, would not be higher than the specific rates named from Wiarton to the same points. The rates from Cargill and Southampton to points east of Listowel and south and west of Stratford will be the same as from Kincardine, but in no case are higher rates to be charged than as per mileage table published on page 9 of tariff.

Rates from leading lumber points on pine and other softwood lumber, shingles, etc., are as follows: From Glencairn, Creemore, Aurora, Barrie and other points in group B to Toronto, 6½c.; Collingwood, Penetang, Coldwater, Waubaushene, Sturgeon Bay, Victoria Harbor, Midland, Fenelon Falls, Longford, Gravenhurst and other points in group C, to Toronto, 6½c.; Brace, bridge to Toronto 7c.; Utterson, Huntsville, Navor-Emsdale, Katrine to Toronto, 7½c.; Burk's Falls, Berriedale and Sundridge, to Toronto, 8c.; South River, Powassen and Callender to Toronto, 9c.; Nipissing Junction and North Bay, 10c. Rate from Goderich, Kincardine and Wiarton to Toronto, 6½c. These rates are per 100 lbs. Rates from Toronto east to Belleville are 7½c. per 100 lbs.; to Deseronto, 9c.; to Brockville and Prescott, 10c.; to Montreal and Ottawa, 11c. The rates on hardwoods average about from 1c. to 2c. per 100 lbs. higher than on softwoods. For rates on railway ties, mahogany, rosewood, walnut, cherry, and other valuable woods, application must be made to the district freight agent.

On the Canadian Pacific the rates on pine and soft woods may be illustrated as follows: Cache Bay, North Bay, Sturgeon Falls and Warren, to Toronto, 10c.; Algoma, Cook's Mills, Massey, Spanish River and Whitefish to Toronto, 13c.; Ottawa to Toronto, 10c From Ottawa, Hull, Aylmer and Duchesne Mills to station on the Lake Erie and Detroit River, Erie and Huron, Toronto, Hamilton and Buffalo, and Michigan Central Railways, the rate is 14½c. per 100 lbs. Regulations apply as to minimum size of carload of 30,000 lbs., and an advanced rate is charged for hardwoods.

MODIFICATION OF HARDWOOD RATES.

THE Grand Trunk Railway and Canadian Pacific have made the rates on hardwoods from certain points to Toronto and Hamilton as follows. The regulations are over the signature of Mr. John Earls, W.D.F.A., of the G. T. R., and given in reply to a letter from Toronto hardwood men:

"After careful consideration we have come to the conclusion that, on and after Jan. 1st, 1895, a modification will be made in the present arrangements for hardwood lumber, to the effect that the rate will be 7½c. per 100 lbs. from our Northern and Northwestern branches to Toronto and Hamilton. This rate, however, will not apply from main line points and the straight run between Toronto, Sarnia and Windsor; also that so far as rates on common lumber to points like Guelph, Galt, London, Woodstock, Ingersoll, etc., from all lumber shipping stations the rate will be the same on hardwood as on pine." On the old principle, we suppose, that half the loaf is better than none, hardwood men have something, possibly, to be thankful for, though there is no good reason why the rates generally on hardwood should not be as low as on pine. It is understood that the C. P. R. rate will be made uniform at 7½c. from same points.

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Machine Knives, Peter Hay, Galt, Ont.
Rails, John Cartshore, Toronto.
Silver Solder, P. W. Ellis & Co., Toronto.

WHOLESALE PRICES CURRENT.

TORONTO, ONT.

TORONTO, Jan. 29, 1896.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		2 30
XX shingles 16 inch		1 35
Lath, No. 1		1 70
Lath No. 2		1 40

HARDWOODS—PER M. FEET CAR LOTS.

Quality, 1s and 2s unless otherwise specified.

Ash, white, 1 to 2 in.			$26 00	$28 00	Cherry	1	" 1½ 50 00 60 00
" " 2½ to 4 in.			30 00	32 00	"	2	" 4.. 60 00 65 00
Ash, black, 1sts and 2nds, 1 to 1½ in.			21 00	23 00	Elm, soft	1	to 1½ $14 00 $15 00
Ash, black, 1sts and 2nds, 2 to 4 in.			23 00	25 00	" "	2	" 3.. 15 00 16 00
Ash, M. R., 2	"	1½	18 00	20 00	" rock	1	" 1¾ 16 00 18 00
" 1	"	2..	20 00	24 00	" "	1½	" 3.. 20 00 22 00
Birch, 2	"	2½	22 00	24 00	Hickory	1½	" 2.. 28 00 30 00
" 1	"	2..	24 00	26 00	Maple	1	" 1½ 16 00 18 00
" sqrs. 4x4	"	8x8	24 00	26 00	"	2	" 4.. 18 00 20 00
Basswood 1	"	1¾	16 00	18 00	Oak, red, p'n	1	" 1½ 28 00 30 00
" 1½	"	..	19 00	20 00	" "	2	" 4.. 30 00 32 00
" m. r. 1	"	1¼	14 00	16 00	" white	1	" 1½ 28 00 30 00
Butternut 1	"	1½	23 00	25 00	" "	2	" 4.. 30 00 35 00
" 2	"	..	25 00	28 00	" quart'd	1	" 2.. 48 00 52 00
Chestnut 1	"	..	24 00	2 600	Walnut	1	" 3.. 85 00 100 00
					Whitewood	1	" 2.. 32 00 36 00

OTTAWA, ONT.

OTTAWA, Jan. 29, 1896.

Pine, good sidings, per M feet, b.m.	$30 00	35 00
Pine, good strips, " " "	26 00	30 00
Pine, good shorts, " " "	18 00	25 00
Pine, No. 1 dressing sidings, per M feet, b.m.	18 00	22 00
Pine, " " strips, " " "	15 00	18 00
Pine, " " shorts, " " "	13 00	14 00
Pine, 10 s.c. and better stock, " " "	14 50	16 00
Pine, 8 s.c. " " " " " "	12 00	13 50
Pine, " sidings " " "	13 00	15 00
Pine, " strips " " "	10 00	12 00
Pine, " shorts " " "	8 50	10 00
Pine, box culls " " "	9 00	11 00
Pine mill culls	8 00	10 00
Lath per M No. 1	1 20	1 40
Lath per M No. 2	90	1 10
1x10 No. 1 barn	18	20
1x10 No. 2 "	16	18
1x8 & 9 No. 1 "	16	18
1x8 & 9 No. 2 "	15	

QUEBEC, QUE.

QUEBEC, Jan. 29, 896.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For interior and ordinary according to average, quality etc., measured off	16 @	22
For fair average quality, according to average, etc., measured off.	20	26
For good and good fair average " " " " "	25	30
For superior " " " " "	32	40
In shipping order " " " " "	36	42
Waney board, 18 to 19 inch " " " "	36	42
Waney board, 19 to 21 inch " " " "	38	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	40	49

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	22	30

BIRCH.

16 inch average, according to average and quality	21	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

STAVES.

Merchantable Pipe, according to qual. and sp'cfct'n—nominal	$330	$350
W. O. Puncheon, Merchantable, according to quality	90	100

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $40 to $43 for 3rd quality.
Bright spruce, according to mill specification, $40 $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality. F.O.B. batteau.

SAGINAW, MICH.

SAGINAW, Mich., Jan. 29, 1896.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$43 00	Selects, 1 in., 8 in. and up wide	$36 00
1¼, 1½ and 2 in.	43 00	1¼, 1½ and 2 in.	38 00
2½ and 3 in.	52 00	2½ and 3 in.	48 00
4 in.	53 00	4 in.	50 00

FINE COMMON.

1 in., 8 in. and up wide	31 50	2½ and 3 in., 8 in. and up wide	41 00
1¼, 1½ and 2 in.	33 00	4 in.	45 00

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	23 00	2½ and 3 in., 7 in. and up wide	34 00
1¼, 1½ and 2 in.	28 00	4 in.	38 00

STRIPS. A AND B (CLEAR AND SELECTS).

1½ in., 4, 5 and 7 in. wide	34 00	1 in., 4, 5 and 7 in. wide	32 00
6 in. wide	36 00	6 in. wide	36 00

FINE COMMON OR C.

1¼ in., 4, 5, 6 in. wide	30 00	1 in., 6 in. wide	30 00
1 in., 4, 5 in. wide	28 00		

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24 00	1 in., 4, 5, 6 in. wide	23 00

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in	17 00	1 in., 4, 5 and 7 in.	17 00
1 in., 6 in.	18 00	1 in., 6 in.	18 00

NO. 2 FENCING OR NO. 4 FLOORING.

1 in., 4, 5 and 7 in.	14 00	1¼ in., 4 to n.	14 00
1 in., 6 in.	14 50	No. 3 fencing, 1 in., 6 in.	13 00

SHELVING.

No. 1, 1 in., 10 in. stocks	25 00	No. 2, 1 in., 7 and 8 in. stocks	19 00
1 in., 10 in. and up wide	26 00	1 in., 10 in. stocks	21 00
1 in., 12 in. stocks	29 00	1 in., 12 in. stocks	23 00
1 in., 12 in. and up wide	30 00	1 in., 10 in. and up wide	23 00
1¼ in. 1½ and 2 in., 8 in. and up wide	29 00	1 in., 13 in. and up wide	25 00

BARN BOARDS OR STOCKS.

No. 1, 12 in.	20 00	No. 2, 9 in.	14 00
10 in.	17 50	8 and 7 in.	14 00
9 in.	17 50	No. 3, 12 in.	13 00
8 and 7 in.	17 50	10 in.	12 00
No. 2, 12 in.	16 00	9 in.	12 00
10 in.	14 00	8 in.	12 00

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$10 00	1 in., 13 in. and up wide	$12 00
1 in., 6 in. wide	11 00	1¼, 1½ and 2 in., 7 in. and up wide	12 00
1 in., 7 in. wide and up	11 00		

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9 in. wide	17 00	1 in., 10 in. and up wide	17 00
1 in., 6 in. wide	17 00	1¼, 1½ and 2 in., 8 in. and up wide	17 00

COFFIN BOARDS.

No. 1, 1 in., 13 in. and up	20 00	No. 1, mill culls	9 00
No. 2	17 00	No. 2, or red horse	7 00

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23 00	No. 2	19 00
No. 1 (nearly clear)	21 50	No. 3	15 50

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16 ft.	$ 8 50	Hemlock, 2x4 to 10, 12 to 16 feet	8 00
18 ft.	10 50	2x12	8 50
20 ft.	11 50	Add $1 to each additional 2ft. in length.	
22 and 24 ft.	12 50		

WHITE PINE LATH.

No. 1	1 75	No. 2	1 35
		Hemlock	1 25

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA N. Y., Jan 29, 1896.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in.	$45 00	47 00	No. 3, 1½ to 2 in.	15 00	17 00
2½ and 3 in.	50 00	53 00	Shelving, No. 1, 13 in and up, 1 in.	30 00@31 00	
4 in.	54 00	56 00	Dressing 1¼ in.	24 00	25 00
Selects, 1 in.	39 00	40 00	1¼x10 and 1		26 00
1¼ to 2 in.	39 00	40 00	1½ in.	24 00	25 00
2½ and 3 in.	47 00	50 00	2 in.	25 00	26 00
4 in.		52 00	Mold st'ps, 1 to 2 in.	31 00	33 00
Fine common, 1 in.	35 00	37 00	Barn, No. 1, 10 and 12 in.	19 00	21 00
1¼ and 1½ in.	34 00	36 00	6 and 8 in.	18 50	20 00
2 in.	34 00	36 00	No. 2, 10 and 12 in.	15 00	16 00
3 in.		45 00	No. 3, 10 and 12 in.	13 00	14 00
4 in.		45 00	6 and 8 in.	12 50	13 50
Cut'g up, No. 1, 1 in.	26 00	28 00	Common, 1 in.	15 00	16 00
1¼ to 2 in.	32 00	34 00	1¼ and 1½ in.	17 00	18 00
No. 2, 1 in.	15 00	17 00	2 in.	18 00	20 00
No. 2, 1¼ to 2 in.	22 00	23 00			

WHITE ASH.

1st & 2nd, 1 inch,	26 00		2½ to 4 in.	28 00	30 00
1¼ to 2 in.	27 00	28 00	Strips	17 00	18 00
			Culls	9 00	10 00

BLACK AND BROWN ASH.

1st & 2nd, 8 inch up,	20 00	22 00	Com. & good culls	8 00	10 00

BIRCH.

1st & 2nd, 6 inch & up, red	25 00	28 00	1st & 2nd, white, 6 in. & up,	18 00
			Com & good culls	8 00	10 00

ELM.

1st & 2d, rock, 8in. & up,	18 00	22 00	1st & 2d, soft, 8 in. & up,	14 00	16 00

MAPLE.

1st & 2d, hard, 6in. & up	16 00	18 00	1st & 2d, soft, 6in. & up,	14 00	16 00

WHITE OAK.

1st & 2nd, plain, 8 in. & up	26 00	28 00	Clear squares, 5x5 to 7x8	30 00
Good common	15 00	17 00	1st & 2nd quartered,	
Good culls	9 00	10 00	6 in. up	40 00	45 00
			Common quartered	20 00	25 00

RED OAK.

1st & 2nd	24 00	26 00	Quartered 1st & 2nd	38 00	40 00
Common	14 00	16 00	Common	18 00	22 00
Cull	9 00	10 00			

NEW YORK CITY.

NEW YORK, N. Y., Jan. 29, 1896.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$40 00 @ 50 00	Building orders	$28 00 @ 40 00
Decking	45 00 50 00		

SPRUCE.

6 to 9 in.	14 00 15 00	10 to 12 in.	16 00 17 00
6 to 12 in.	14 50 15 20	Lath	1 85 1 90
9 to 12 in.	15 50 16 00		

HARDWOOD.

4/4 and thicker, No. 1 and 2	Black Ash, 10 to 16	23 00
" " "	Soft Elm, "	17 00
" " "	Hard Maple, "	21 00
" " "	Basswood, "	20 00
" " "	Birch, "	23 00
" "	Black Ash, Com. and Shipping Cull, M.C.O.	14 00
" "	Soft Elm, " " "	12 00
" "	Hard Maple, " " "	14 00
" "	Basswood, " " "	12 00
" "	Birch, " " "	14 00

ALBANY, N.Y.

ALBANY, N. Y., Jan. 29, 1896.

PINE.

Uppers, 3 in. up	$50	$52	Dressing boards, narrow	$19	$21
2½ in.	50	52	West India shipping boards	16	17
1 to 2 in.	45	48	Box boards	12	14
4 inch uppers	50	52	10-in. dressing and better	26	30
Selects, 2½ in. up	40	42	10-in. common	14	15
1 to 2 in.	36	40	12-in. dressing and better	26	32
Fine common, 2½ in. and up	38	40	Common, 1x12	14	16
1 to 2 in.	34	38	No. 1 barn, 1x12		20
No. 1 cut, 1 to 2 inch	25	35	1x10	18	21
No. 2	18	25	1x8	16	18
No. 3	17	20	No. 2 barn, 1x12	17	19
No. 1 molding, 1 to 2 in.	33	36	1x10	17	19
No. 2 molding, 1 to 2 in.	25	28	1x8	17	19
Stained saps		20	Shaky or star clear, 1 to 2 in.	19	21
Bracket plank	30	35	Dressing	16	18
Shelving boards, 12-in. up	28	30	Common	11	15

LATH.

Pine	$2 25		Spruce	$2 00

SHINGLES.

Sawed Pine, ex. XXXX	$4 25	$4 30	Bound butts, 6 x 18	$6 00	$6 15
Clear butts	3 25	3 35	Hemlock	2 15	2 30
Smooth, 6 x 18	5 40	5 50	Spruce	2 20	2 30

OSWEGO, N.Y.

OSWEGO, N. Y., Jan. 29, 1896.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$45 00@46 00		
Pickings, " "	36 00	38 00	
No. 1, cutting up, " "	31 00	33 00	
No. 2, cutting up, " "	24 00	25 00	
In strips, 4 to 8 wide, selected for moulding trips, 14 to 16 ft.	30 00	32 00	

SIDING.

1in siding, cutting up ricks and uppers	32 00@39 00	1¼ in selected	38 00@43 00
1in dressing	19 00	21 00	1¼ in dressing	20 00	22 00
1in No. 1 culls	14 00	15 00	1¼ in No. 1 culls	15 00	17 00
1in No. 2 culls	13 00	14 00	1¼ in No. 2 culls	14 00	15 00
			1 in. No 3 culls	11 00	12 00

1x12 INCH.

12 and 16 feet, mill run	21 00	24 00	
12 and 16 feet, No. 1 and 2, barn boards	19 00	20 00	
12 and 16 feet, dressing and better	27 00	31 00	
12 and 16 feet, No. 2 culls	15 00	16 00	

1¼x10 INCHES.

Mill run, mill culls out	$22 00@25 00	No. 1 culls	17 00	18 00
Dressing and better	27 00	35 00	No. 2 culls	14 00	15 00

1X4 INCHES.

Mill run, mill culls out	17 00	21 00	No. 1 culls	14 00	15 00
Dressing and better	24 00	30 00	No. 2 culls	12 00	13 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20 00	25 00	6, 7 or 8, No. 1 culls	16 00	17 00
6, 7 or 8, drsg and better	25 00	30 00	6, 7 or 8, No. 2 culls	14 00	15 00

BOSTON, MASS.

BOSTON, Jan. 29, 1896.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$11 50	12 00	¾ inch	$ 9 25	9 50
Coarse No. 5	15 00	16 00	11-16 inch	8 25	8 75
Refuse	13 00	13 25	⅝ inch	8 00	8 25
Outs	9 00		Clapboards, sap ext.	45 00	46 00
Boxboards, 1 inch	10 75	11 00	Sap clear	41 00	42 00
⅞ inch	9 75	10 00	Sap, 2nd clear	34 00	36 00
			No. 1	23 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in.	$50 00@52 00		Fine com., 3 and 4 in	46 00	50 00
1¼, 1½ and 2 in.	52 00	53 00	No. 2, 1 in. Fine com.	28 00	30 00
3 and 4 in.	57 00	62 00	1¼, 1½ and 2 in.	29 00	31 00
Selects, 1 in.	44 00	45 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in.	45 00	47 00	No. 2	36 00	37 00
3 and 4 in.	52 00	55 00	No. 3	28 00	30 00
Moulding boards, 7 to 11 in. clear	37 00	39 00	Cut ups, 1 to 2 in.	24 00	32 00
60 per cent. clear	32 00	34 00	Coffin boards	19 00	21 00
Fine common, 1 in.	40 00	41 00	Common all widths	22 00	26 00
1¼, 1½ and 2 in.	40 00	41 00	Shipping culls, 1 in.	15 00	15 50
			do 1¼ in.	15 50	16 50

SHINGLES.

Spruce	1 30	1 50	Second Clear	1 75	2 00
Cedar, extra	2 75	3 00	Extra No. 1	1 25	1 50
Clear	2 35	2 50			

HEMLOCK.

Boards, rough	10 00@11 00		No. 2	7 00@ 9 50	
Planed	11 50	12 00			

LATH.

Spruce		By cargo	1 80@ 1 90
By car	1 80@ 2 00		

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE lumbermen in the Ottawa valley view the operations of the past year as satisfactory, compared with those of other parts of the Dominion. The total cut was slightly in excess of that of 1894.

The trade and navigation returns for 1895 have been distributed, showing the total exports of forest products to be valued at $24,129,199, against $26,504,736 for the previous year.

For the quarter ending December 31st, the following items of export are reported: Lumber, $481,775.60; sulphite, pulp, $19,309.10; lath, $17,351.56; shingles, $5,678.58; ties, $4,838.40; pickets, $4,372.04.

Mr. W. C. Edwards, the well-known lumberman, is interested in the manufacture of acetylene gas. Ottawa is said to afford exceptional facilities for its manufacture, and many excellent sites and water powers are available.

INDIFFERENT LENGTHS.

Mr. J. R. Booth, the well-known lumberman, has recently returned from a holiday trip in the Adirondacks.

The quantity of logs, ties and pulp wood being taken out on the Gatineau this winter is much less than usual.

It is the intention of Mr. J. R. Booth to erect a lath mill on the site of the mill burned last year. Machinery will be put in for cutting slabs and waste material into laths.

A project has been mooted for the establishment of a coffin manufactory here, which would result in the employment of a large number of men, and the consumption of considerable lumber.

OTTAWA, Can., Jan. 27, 1896.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE ports of this province have recently presented a scene of activity, many lumber vessels being loaded for foreign countries. It is satisfactory to British Columbians to know that the lumber of the province is shortly to find a market along the borders of the Baltic sea. A shipment to Volgaster has recently been made from the Hastings mill.

The Burrard Inlet Red Cedar Mill Co. are refitting the mill at Port Moody, putting in new machinery, and making improvements throughout the buildings. They commence operations again the 1st of February, when they will employ about forty white men in the mill, besides those employed in the woods. They expect to cut 60,000 ft. of lumber and 200,000 shingles per day. They have sufficient orders ahead to keep the mill running constantly for a year.

As a result of the formation of the recent combine, British Columbia lumbermen are strong in the hope of a profitable year in 1896. The combine is said to be growing stronger every day, the latest acquisition being thirty-one redwood mills in California, with a capitalization of $10,000,000. Mining operations are also likely to help the lumber business in this province.

The Brunette Saw Mill Co. have received a new edger from the Wm. Hamilton Mfg. Co., Peterboro.

The Pacific Coast Lumber Co. are equipping a new planing mill. The machinery is from McGregor, Gourlay & Co., of Galt, Ont.

The largest cargo of lumber ever carried out of Burrard Inlet was taken by the Norwegian steamer Florida, recently. It consisted of 2,453,158 feet, and was loaded at the Hastings saw mill for Australia.

NEW WESTMINSTER, B. C., Jan. 20, 1896.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN.]

A SCHEME in which New Brunswick lumbermen are interested is being promoted by Messrs. H. C. Secord and F. R. Bossely, of Toronto, who propose constructing a colonization railway from Campbellton, on the I. C. R., across the counties of Restigouche, Victoria and Madawaska, and eventually giving a through line from Bay Chaleur to Bangor, Boston, etc. The road will be about 106 miles in length, and will result in stimulating the lumber industry.

Regular shipments of lumber are being made by the Beaver Line Steamship Company to Liverpool, England. The steamers of this line will carry a certain portion of deals, not to exceed 25 per cent. of their cargo. This will affect the full cargo business to some extent. The Furness Line steamers running fortnightly to London also carry a part cargo of deals.

The season has been somewhat unfavorable for lumbering operations so far this winter, the lack of snow having prevented lumbermen from getting their logs out of the woods. At St. John, the quantity of logs in hand for winter sawing is much lighter than usual. The firm of Stetson, Cutler & Co. have by far the largest percentage of logs available for winter sawing. On the Tobique river about 24,000,000 feet will be taken out.

Since he went to the Nashwaak thirty odd years ago, Alex. Gibson has cut fully a thousand million feet of logs there and at Blackville. The cutting has been done judiciously, and all necessary waste avoided. This is a great record for one operator.

The news of the death of Mr. Edward Jack was received with profound regret throughout the province. His name was the first to suggest itself to lumbermen in search of information bearing on the lumber resources of the country.

SELECTS.

Alex. Gibson has 5,000,000 feet of logs now in the booms at Marysville for sawing.

A new saw mill, with a capacity of 30,000 feet, is being erected at New Mills by Crandall Prescott.

Mr. Upham, of Woodstock, is erecting a large saw mill on the bank of the river opposite Andover.

The value of export from Fredericton during December was $19,388, principal of which were shingles, hemlock and bark.

The Masterman pulp mill on the Miramichi, near Chatham, is almost completed. It will have a capacity of 80 cords of wood per day, and will turn out 30 tons of dry pulp.

ST. JOHN, N.B., Jan. 24, 1896.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

THE Saginaw Lumber Dealers' Association is evincing a deep interest in the proposal to impose an import duty on lumber. At a meeting of the Association held early in January, a resolution was passed urging Congress to impose duties as follows: "A fixed amount on sawed boards, planks, deals and other lumber rough; a fixed amount on all lumber merely surfaced on one or two sides; an ad valorem duty on lumber of any kind worked to any specified form; 20 per cent. ad valorem on shingles and lath, provided that where any country now imposes, or hereafter shall impose, an export duty on logs, on discriminating stumpage dues, the amount of such duty or dues shall be added to the duties named on articles enumerated above imported from such countries imposing such export duties or discriminating stumpage dues."

At a recent meeting of the North Michigan Hardwood Manufacturers' Association, held at Traverse City, it was decided to organize another association, to be known as the Michigan Maple Association. The object will be to handle all the maple cut by the members and fix the prices.

The trade here have received some encouragement by a reduction of freight rates on lumber to 1,500 different points in Pennsylvania, Ohio and Indiana. The reduction averages from 1 cent to 2½ cents per 100 pounds.

Wm. Rowe, of Columbus, Ohio, has been succeeded by the Michigan Lumber Co.

The two mills operated by Albert Pack, at Alpena, cut last season 24,000,000 feet of long lumber and 400,000 pieces of lath.

The Thunder Bay Boom Company, at Alpena, handled during the season of 1895, 50,678,573 feet of logs, 402,792 ties, 411,530 posts, and 22,570 poles.

The annual meeting of the National Wholesale Lumber Dealers' Association is announced to take place at East Saginaw the first Wednesday in March.

The shipment of lumber from the Saginaw valley for the past season is shown to be the smallest for over thirty years. The figures are: Lumber, 136,120,632 feet; shingles, 8,415,000 feet; lath, 2,002,000 feet.

SAGINAW, Mich., Jan. 25, 1896.

OBITUARY.

MR. JOHN BRYSON, M. P.

THE death of Mr. John Bryson, M.P. for Pontiac, Que., and an extensive lumberman, took place at his residence, Fort Coulonge, on the 18th inst. About a week previous Mr. Bryson visited his timber limits on the Upper Ottawa, where he was attacked by heart disease, from which he had been a sufferer for years, and which resulted in his death. He was prominently known among the lumbermen of the Ottawa Valley, and the news of his death occasioned much regret.

Deceased was born at Fort Coulonge, Que., in 1849, being therefore 47 years of age.

Personally, he was an estimable man, and leaves a family which is greatly honored in the district in which they live.

MR. EDWARD JACK.

FEW men were better and more favorably known throughout the maritime provinces than Mr. Edward Jack, whose death took place at his home at Fredericton, N. B., on the 31st of December last. After an illness of ten days he succumbed to an attack of effusion of the brain. In his death the lumbermen of those provinces lose an esteemed friend, and one who took a deep interest in the timber resources of the country.

He knew the province of New Brunswick and its resources as a student knows his book, and was always willing to give any information required of him. His knowledge of the natural wealth of the province, coupled with the circumstance than he was naturally of a sanguine temperament, gave him great faith in the future of New Brunswick, especially the northern belt. Deceased had been for many years a contributor to the pages of the CANADA LUMBERMAN. In company with our readers we shall miss his kindly aid.

Mr. Jack was born in St. Andrews nearly seventy years ago. He studied law in the office of Mr. Geo. D. Street, then a prominent lawyer in his native town, and after practising for a short time gave it up, and was appointed a deputy surveyor of Crown lands, in which work his law knowledge served him in good stead. He soon after was made chief engineer for the contractors on the then-called St. Andrews and Quebec Railway. During his surveying work he took especial interest in the forest growth, and soon came to be recognized as an expert in choosing timber lands, and was appointed to take charge of the stumpage department of the Crown lands of his native province, which position he resigned about fifteen years ago. In 1884 he went to Edinburgh as commissioner to the Forestry Exhibition held at that place, and received a medal from the management in recognition of his services while there. He was a good Latin, Greek, German and French scholar. In fact he spoke the latter language with such fluency that he has been taken for a Parisian by Frenchmen with whom he has been conversing. He visited the Southern States twice to choose timber lands for parties purchasing there. His knowledge of geology and mineralogy was also extensive, and one of the best-producing gold tracts in Nova Scotia was selected by him. Whatever he undertook he "did with all his might," and was a thoroughly honest and God-fearing man. No one in trouble or distress ever applied to him in vain. Latterly his attention was much taken up with studying various uses to which the spanghum or moss litter might be put to, and had been experimenting largely in that direction.

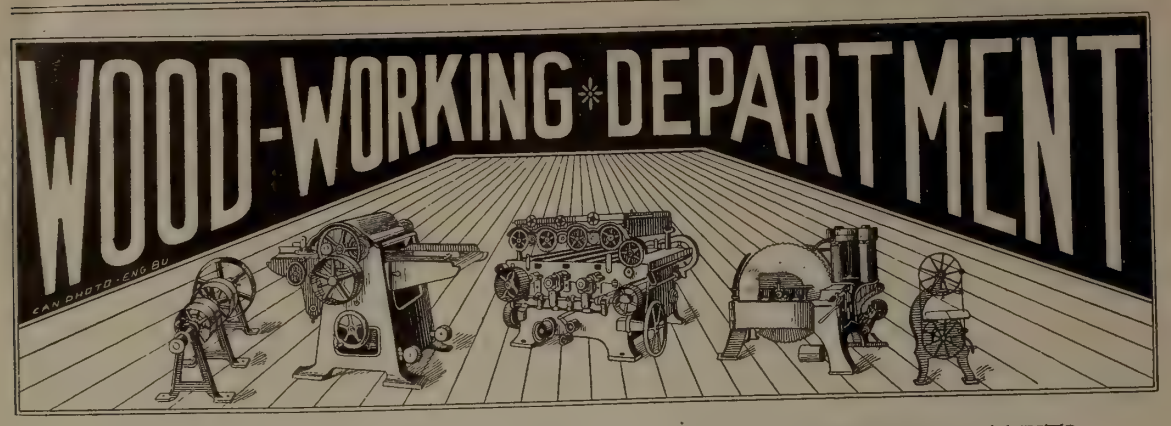
For a number of years past he also interested himself in the endeavor to secure the establishment of several enterprises, such as a pulp mill at Fredericton.

The deceased leaves two sisters and one brother, the latter being Mr. R. Melrose Jack, of St. Andrews, N. B.

Ten years ago the logs from the Menominee River, Wis., lumber region ran four or five to the 1,000 feet of lumber; in 1890 they averaged six to 1,000 feet, and now twelve, fifteen, and even twenty logs are required to furnish as much.

The receipts of lumber at Buffalo by lake last year, fell short of the previous year about 17,000,000 feet. Besides the lumber receipts there were 5,000,000 feet of timber. Lath receipts are 3,000,000 short, shingles 15,000,000, and ties 54,000 less.

Four hundred and eighty-two million feet represents the amount of timber manufactured in the Duluth, Minn., district, exclusive of lath or shingles, during the season just closed. In 1894 the production of lumber in the district amounted to 346,000,000 feet.



SKILLFUL WOODWORKERS

A CORRESPONDENT writes to the Northeastern Lumberman as follows:

There is just as much room for the expansion and development of mechanical ideas in the wood-working trade as in that of metal working. It is a mistaken idea that any one can run a saw or a planer who knows enough to feed the material to the machine, and is sufficiently experienced to keep from losing his own limbs in doing the work.

Wood-working machinery as it has been perfected at the present time requires skill and a considerable degree of mechanical knowledge and ability to operate successfully and profitably. There is something more to be considered than the ability of the operator to crowd the stock through. The profits of a mill cannot be reckoned by the amount of work done in a single day.

Wood-working machinery, more than any other, needs the attention of a skilled mechanic, from the fact that, as a rule, it is run at a very high speed, bringing greater strain and wear upon the running parts than those of machinery run less rapidly. For this reason the operator should be a man with some knowledge of mechanics, capable of detecting the least sign of a defect or an injury to the machine, and able to set it right before a more serious injury occurs.

It only requires a visit to some of the wood-working plants, where the only idea is to get out stock, to show the necessity of more skilled mechanics in the operation of the machinery. Belts are patched up until they are unfit for use and require more time to look after and fix up than a new one would cost; the machines are allowed to become clogged with dust and sawdust, and poor stock is the rule rather than the exception.

There is no more reason why a man without mechanical ideas, skill and experience should be employed to run wood-working machinery than there is why such help should be employed in a machine shop or a factory. The quality of work, as well as the durability of the machinery and the profits from its operation, depend largely upon the skill with which it is operated.

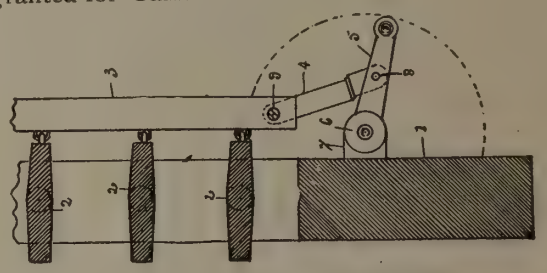
Main strength and ignorance are poor recommendations for any one employed about machinery. Good judgment, backed by skill and experience, will accomplish more, cost less and last longer.

The formation of a company is in progress to build a pulp mill at Greenfield, N. S.

A match-cutting machine is quite an automatic curiosity. It cuts 10,000,000 a day and then arranges them over a vat, where the heads are put on at a surprising rate of speed.

NEW WOODWORKING PATENTS.

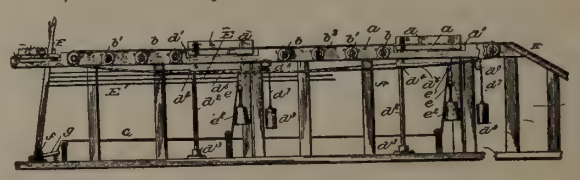
The following patents have recently been granted for Canada:



BLIND SLAT HOLDER AND FASTENER.

Patentee: Alfred Harley, Albany, N. Y., patented 4th November, 1895; 6 years.

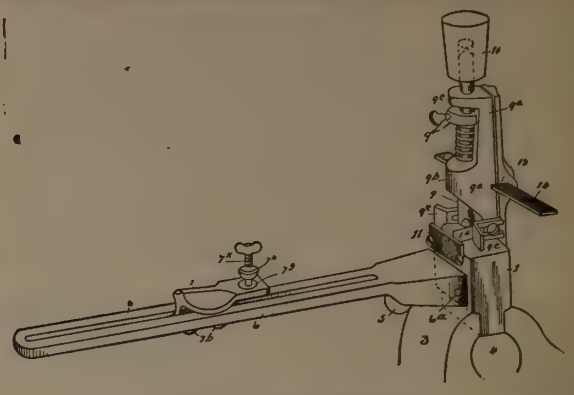
Claim.—1st. A blind stop having a movable arm 5, pivoted to a base 7, said arm 5 being arranged to have an uninterrupted movement throughout its sweep, and a resilient device 10, 11, 12, 13, arranged within the chamber 6, to exert an unvarying automatically controlled resistance to movement of said arm 5, and a connecting rod 4, pivoted to the arm 5, and movably attached to the movable portion 3, of the blind, said connecting rod 4 having an offset therein arranged to allow the connecting rod to pass the base, as and for the purpose described. 2nd. A blind stop having a movable arm 5, pivoted to a base 7, the pivoted end being corrugated forming a plate spring and arranged to exert constant unvarying automatically controlled frictional resistance to movement of the said arm, and having a connecting rod 4, pivoted to the arm and movably attached to the movable portion 3, of said blind, substantially as described.



CONVEYOR AND ASSORTER FOR LUMBER.

Patentee: Wm. A. Leary, Norfolk, and John F. Hostetter, Suffold, U. S. A., patented 19th November, 1895; 6 years.

Claim.—1st. A conveyor and assorter having a passage-way, conveying means in said passage-way, one or more deflectors capable of being thrown across said passage-way, and operating means connected thereto and extended to one end of said passage-way. A conveyor and assorter having a passage-way, a series of rollers therein, means for rotating all of said rollers, a series of shunt-arm pivoted each at one end, a shaft therefor, a bell-crank lever on said shaft, a pivoted locking lever, means for returning said shunt arms to their normal positions when unlocked, and means for operating each of said shunt arms independently from a single point, substantially as set forth.



SAW SET AND JOINTER.

Patentee: Wm. I. Simmons, Northville, Mich., U. S. A., patented 19th November, 1895; 6 years.

Claim.—1st. In a saw setting machine, the combination of an anvil and its support, with an upright arm adapted to carry a vertically moving setting punch, a track arm hinged to the anvil support and adjustable through a vertical angle with respect thereto, a sadle adjustable along the track arm and adjustable with respect thereto through an angle in the same plane with that of the angular adjustment of the track arm, a reversible setting punch provided with facets on each end, and a collar on said punch having one side flattened and adapted to bear against the upright to prevent the punch from turning in its bearings, substantially as described. 2nd. In a saw set and jointer, the combination of a main support, a jointing file secured thereto, an arm hinged to the main support, a bearing screw adapted to adjust the angularity of the hinged arm, a centreing device comprising a saddle adapted to slide along the hinged arm and adjustable with respect thereto, and means for securing the saw to the tabular piece, substantially as described. 3rd. In a saw jointer, a centreing and holding device comprising a saddle convex on its under side, an overhang projecting therefrom and provided with a socket and a conical fillet plug and means for clamping the ollet plug in the socket, substantially as described.

FORESTRY AT THE EXPERIMENTAL.

Prof. C. S. Sargent, director of the Arnold Arboretum at Jamaica Plain, near Boston, Mass., visited the Experimental Farm at Ottawa during the past summer, and was so gratified with the progress which has been made in forestry that he asked Mr. W. T. Macoun, who is in charge, to go to the Arnold Arboretum and make a selection for the Ottawa station. These have been safely received, and include 179 varieties of trees and shrubs, and cuttings of 24 species of willows, nearly all of which are new to the collections here. Prof. Sargent's collection is especially rich in rare species from Northern Japan and China, countries which he has twice visited.

The Farm has also received recently from Siberia, from Prof. Max. Sivers, of Roemershof, six species of trees and shrubs from that country, also some tree seeds. Among the trees sent are specimens of the Siberian larch and the Siberian spruce, both new to the Farm collection.

When these additions are planted in the spring, the Arboretum will contain more than 1,000 varieties of trees and shrubs under test. Thus far a large proportion of those tried have been found hardy in this climate. The information gained in this branch of the work is proving of great value to the country generally, by showing the capabilities of the Canadian climate and by supplying valued information to lovers of trees and shrubs in all parts of the Dominion.

THE NEWS.

—R. Hartman is erecting a saw mill at Albert, Ont.

—A large saw mill is to be erected at Mono Mills, Ont.

—M. Durham is building a box and basket factory at Grimsby, Ont.

—P. Genelle & Co., NaKusp, B. C., will build a saw mill with a capacity of 70,000 ft.

—James McCartney, South River, Ont., has sold his saw mill to McArthur & Moir.

—The boom house of the Fredericton Boom Co., at Lincoln, N. B., was destroyed by fire recently.

—W. T. Murray & Co., of Sarnia, Ont., are erecting a new saw mill. It will be ready for operations in May.

—At North Bay, Ont., F. & F. Chadbourn have recently put in operation a saw mill. Principally birch lumber will be manufactured.

—Thomas Marks has made a proposal to the town council of Port Arthur, Ont., to establish a large mill and woodenware establishment.

—The storehouse and office of the Holland & Emery Lumber Co., at Wahnapitae, Ont., were recently burned. Most of the stock was saved.

—The city clerk of St. John, N. B., has been notified that the governor in council has approved of the new by-law relating to lumber surveyors.

—The exports of deals from the port of Parrsboro, N. S., during last year amounted to 42,701,540 ft., carried in 37 vessels, aggregating 45,274 tons.

—The Upper Canada Tract Society, of Ontario, have supplied a number of lumber camps on the Ottawa river and in Algoma, with religious literature.

—Wm. Stuckey, of the Grand Valley, Ont., planing mills, proposes erecting a saw mill at Keldon. He will make a specialty of cutting soft elm, maple and birch lumber.

—The suit of the Dominion government against E. D. Davidson & Sons, of Bridgewater, N. S., to restrain them from putting sawdust in the river, has been decided against the government.

—The action brought by Mrs. Wm. Spence, to recover damages from Craig & Co., of Toronto, for the death of her husband, who was killed in their saw mill on Dundas street, has been dismissed for want of prosecution.

—Le Syndicat du Lac Labelle is the title of a company now being formed, with head office in Montreal, for the operation of flour and saw mills. The capital stock will be $50,000, and among the promoters are J. U. Emard and Ferdinand Bayard.

—A new competitor in the saw mill business are the Sisters of the Bon Pasteur, who propose carrying on business in the parish of St. Martin, Que., under the firm name of F. Lavoie & Cie., running the saw, grist and carding mill known as "Moulin du Crochet."

—Mr. John McAdam's mill on the Gibson Branch, N. B., is now completed and running. It is equipped by E. Leonard & Sons with one of their clipper engines, rotary saw and patent edger, and by the Small & Fisher Co., with one of their well known shingle machines.

—Mr. John Simpson, superintendent of Algonquin Park, while in Toronto recently, submitted his report for the past year. Eight rangers are now employed. Their work in the winter consists in preventing trappers from hunting and lumbermen from blazing boundary lines.

—Mr. J. F. Richardson has finished his mill located near the Gibson & Fredericton R. R. It is one of the best small mills in the maritime provinces. The power is furnished by a Leonard boiler and engine of 60 h. p. The rotary is a new design, with steel rope feed, built by the Small & Fisher Co., of Woodstock, N. B., and is working satisfactorily.

—Mr. Thomas Southworth, of the Bureau of Forestry for Ontario, has issued a circular to the township clerks, calling attention to the fact that some of the assessors fail to make any distinction between wood land and waste or pasture land which may be scantily timbered here and there. In consequence there are no accurate data obtainable as to the extent of forest covered land remaining in the settled parts of the province. They have been requested to enter as "wood land" only areas where the ground is well shaded with trees.

CASUALTIES.

—John Brown, a well known mill man of Lower Gaspereau, N. S., was recently killed by a train while walking on the track.

—While working in Sergeants' planing mill at London, Ont., W. H. Edgecombe was seriously injured by the breaking of a belt.

—A Canadian named Albert Abbatory, employed by William Perry, of West Somerset, N. Y., was killed while logging at that place recently.

—Wm. Forbes, of Goshen, N. S., had his leg broken while chopping a tree in the woods. In endeavoring to save his horse the tree fell on him.

—Norman Johnson, of Spry Lake, Ont., was felling a tree when it sprung back on him, almost severing his left leg, necessitating amputation below the knee.

—A log maker in W. C. Edwards and Co.'s shanties, named Alphonse Renaud, died on the train a fortnight ago, while going from Mackay's Station to Renfrew. He belonged to Wendover, Ont.

—A serious accident occurred in the lumber woods at Melrose, N. B., by which John Berry, fifteen year old son of Wm. Berry, lost his life. The unfortunate boy got tangled in the chains and the horses dragged him from the woods to his father's door.

TRADE NOTES.

Mr. Geo. F. Rich, of Preston, Ont., has recently placed new machinery for Joshua Oldham & Sons, New York.

The Robb Engineering Co., of Amherst, N. S., have supplied a portable saw mill to M. Mason & Son, Millstream, N. B.

B. R. Mowry & Sons, of Gravenhurst, Ont., have recently supplied seven tons of shafting to the J. B. Smith & Son's mill at Callender, which is being rebuilt.

The Robb Engineering Co., of Amherst, N. S., have supplied a portable saw mill to G. R. McDonough, St. Martins, N. B.

A copy of the Penberthy Injector Co.'s calendar for 1896 has reached us. It was issued from the "Penberty Press," and is a creditable piece of work.

It is the intention of Mr. Charles Hofferberth, the well known importer of American hardwoods, Burdett Road, Eng., to retire from business, Mr. Arthur Dempsey assuming control.

The Bain Wagon Works Co. has been incorporated, with a capital stock of $250,000, to manufacture lumber trucks, wagons, carriages, etc. The concern was formerly known as the Bain Bros. Mfg. Co.

The Waterous Engine Works Co., of Brantford, have recently put in a new band saw for F. G. McMullen, Windsor, N. S. Mr. McMullen is putting in a system of rolls to carry the deals direct from the mill to the cars.

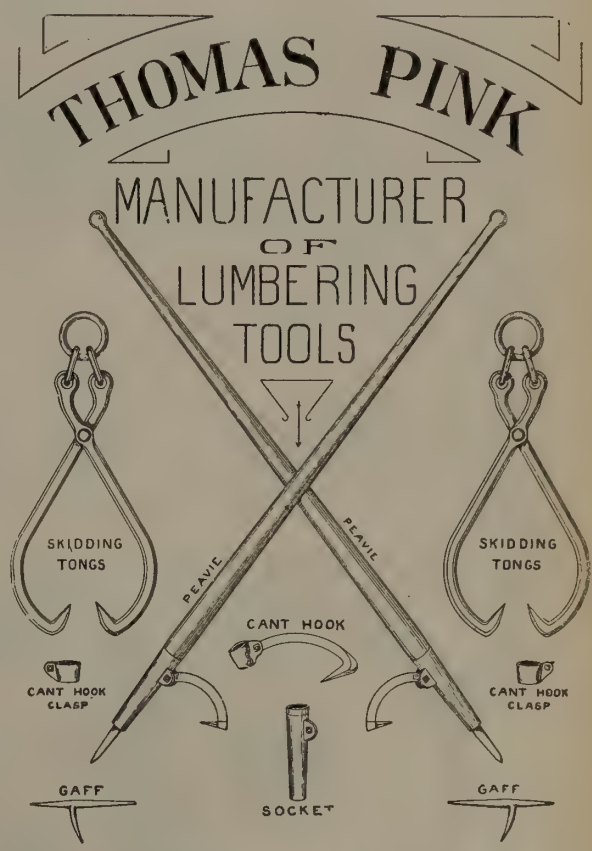
The Waterous Engine Works Co., through their eastern representative, have placed an Allis band mill at Bastican, Que., for parties in Elizabethtown, N. J. They have also put in improved wheels and machinery at Marysville, N. B., for Alex. Gibson.

A pretty hanger has been sent us by H. H. Spicer & Co., the well known lumber dealers and manufacturers of red cedar shingles, Vancouver, B. C., showing several good views of their works. The capacity of their shingle mill is now one hundred million per year.

The well known New York firm of Young & Keeler Co., wholesale hardwood dealers and manufacturers, has been succeeded by Wm. B. Young, Mr. J. H. Keeler retiring. The business management of the late firm has for some years been in the hands of Mr. Young, and consequently the business will in no way be effected.

Mr. Thos. Pink, of Pembroke, has sent out a very handsome calender for the current year. It is of large size, and presents a richly colored picture of a cavalry officer binding up the leg of his wounded charger. In a more subdued manner it also directs the attention of lumbermen to the fact that Mr. Pink manufactures an excellent variety of lumbermen's tools.

—The largest order for yellow pine ever placed with a single firm is said to have been recently awarded to the Lutscher & Moore Lumber Co., of Orange, Tex. The order is for 8,500,000 feet of all heart yellow pine, and was placed by the North Western Elevated Railway Co., of Chicago. The lumber will be shipped by water to New York, and by rail from there to Chicago.



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The editor of the Review of Reviews, in the January number, ventures a brief forecast of the new year's developments, in which he predicts the settlement of the Cuban, Turkish and Chinese problems of nationality and government, the rapid industrial advancement of Japan, the still greater progress of European enterprise in Africa, the unprecedented hastening of railway-building in northern Asia, the laying of two Pacific cables, the practical use of horseless carriages in Europe, the replacing of steam by electricity on some important lines of railway, and valuable discoveries in medical and sanitary science. On the whole, the Review looks forward to a "hopeful and interesting new year."

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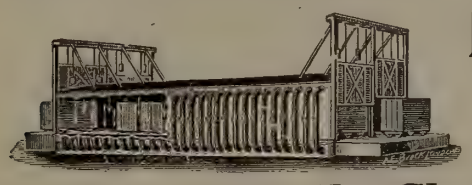

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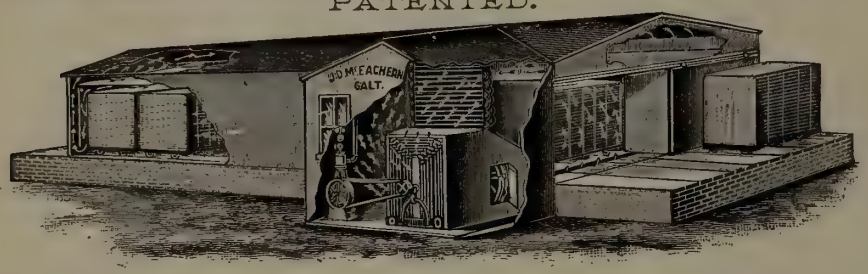

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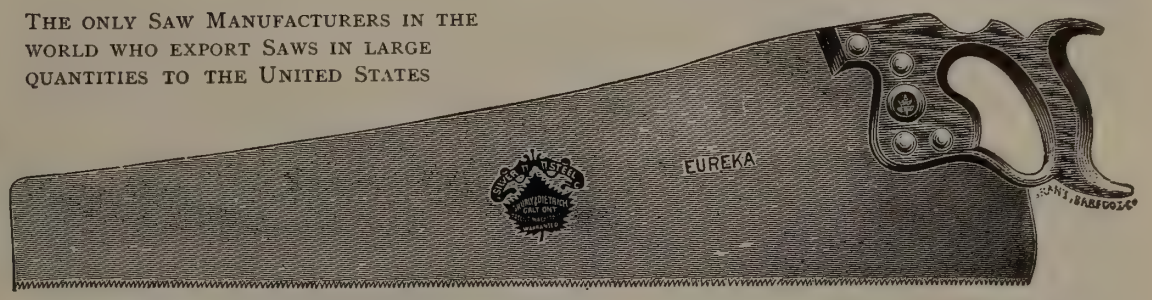

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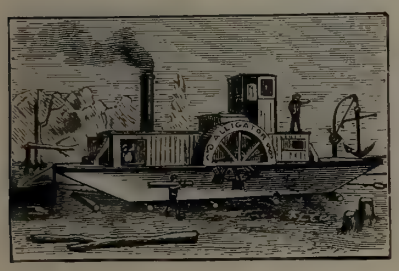
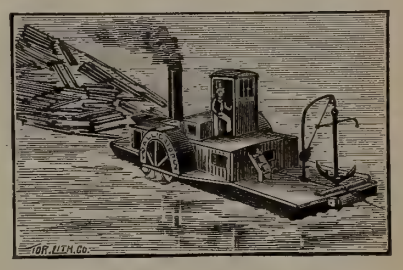


ALLIGATOR STEAM WARPING TUGS



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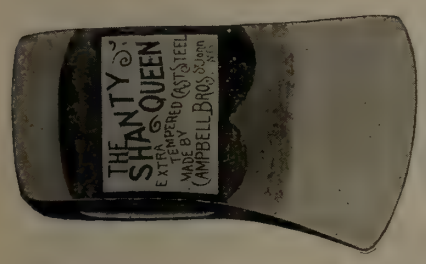

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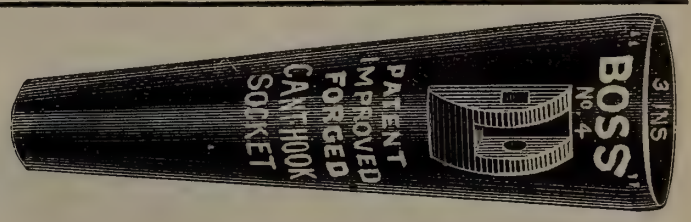

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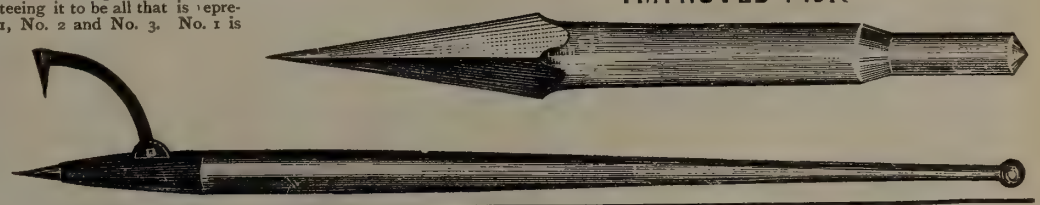

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INSPECTION
BOOK

Containing Rules for the Inspection and Measuring of Pine and Hardwood Lumber in the leading markets of Canada and the United States. Embracing also many useful tables and calculations of everyday service to lumbermen.

Prepared by the Editor of the "Canada Lumberman."

Toronto, Canada
C. H. MORTIMER, Publisher
1895

THE above is a fac simile of the title page of the latest and most complete Lumber Inspection Book published.

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Toronto, Canada

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RAILROAD
FROM
Port Huron and Detroit
Is the Short Line to
SAGINAW AND BAY CITY
(Centres of the vast lumber interests of Michigan)
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BALDWIN, LUDINGTON, MANISTEE
AND
MILWAUKEE, WIS.

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The line thus formed is a short and direct route from
MONTREAL TORONTO
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This road traverses a section of Michigan with unrivalled advantages to settlers. Cheap lands, thriving villages and towns, well watered with streams in all directions: a market for every product of Forest and Field.
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WHY BAND SAWS BREAK
SIXTEEN REASONS,
AND HOW TO
AVOID THEM

Being instructions to filers on the care of large band saw blades used in the manufacture of lumber.

A book filled with valuable information on the care of band saws. Giving the reasons for breaking; analyzing each reason; giving instructions to dispense with the causes as laid down in each reason; and full details on filing and brazing. The proper styles of hammers to use are illustrated and described, and views of blades showing the blows of the different styles of hammers form an important part of the illustrations. Improper and unequal tension are then treated, and the manner o properly setting irregular teeth is described. In connection with the treatise is a history of the invention, manufacture and use of the saw from its origin to the present time. The work in whole makes an accumulation of information such as has never before been published.

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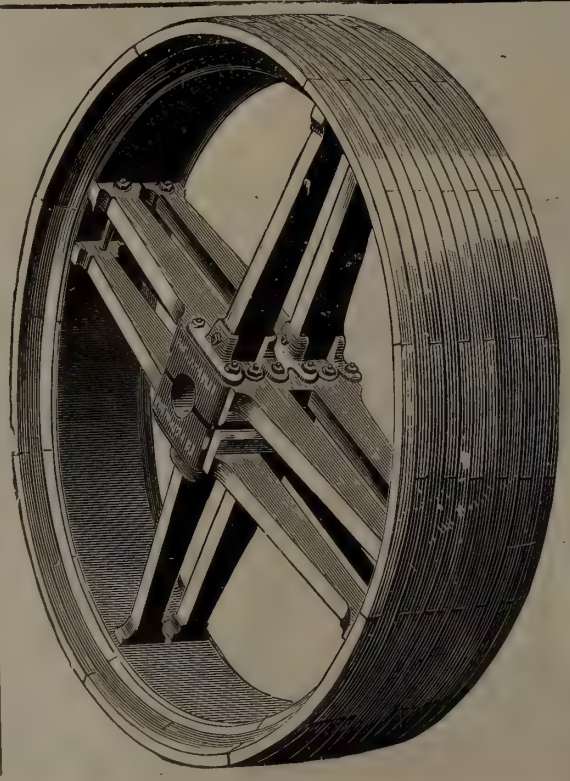

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HULL, P. Q., CANADA, November 29, 1894.
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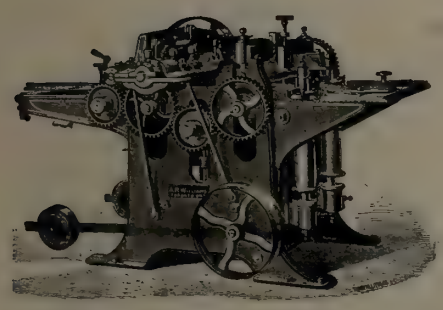

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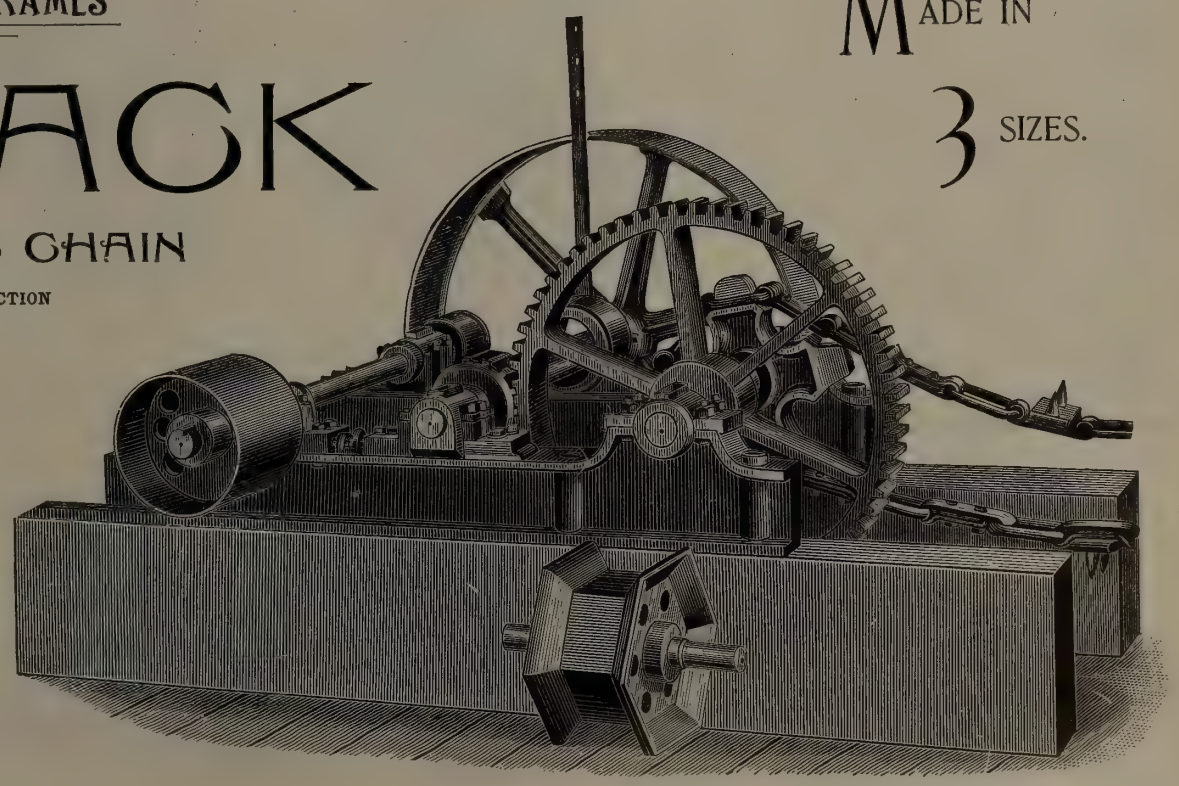

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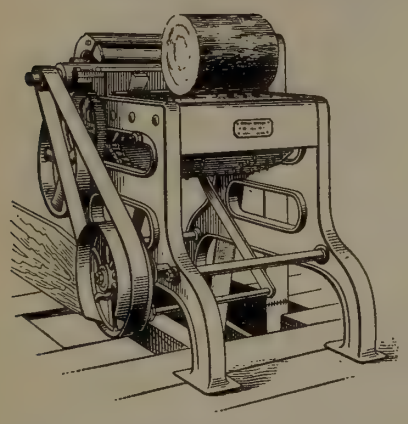

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It will peel dirty blocks without taking the edge off the knives as they cut from the clean bark or block out.
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It requires less power than a face wheel.
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It occupies about the same space as an ordinary planer.
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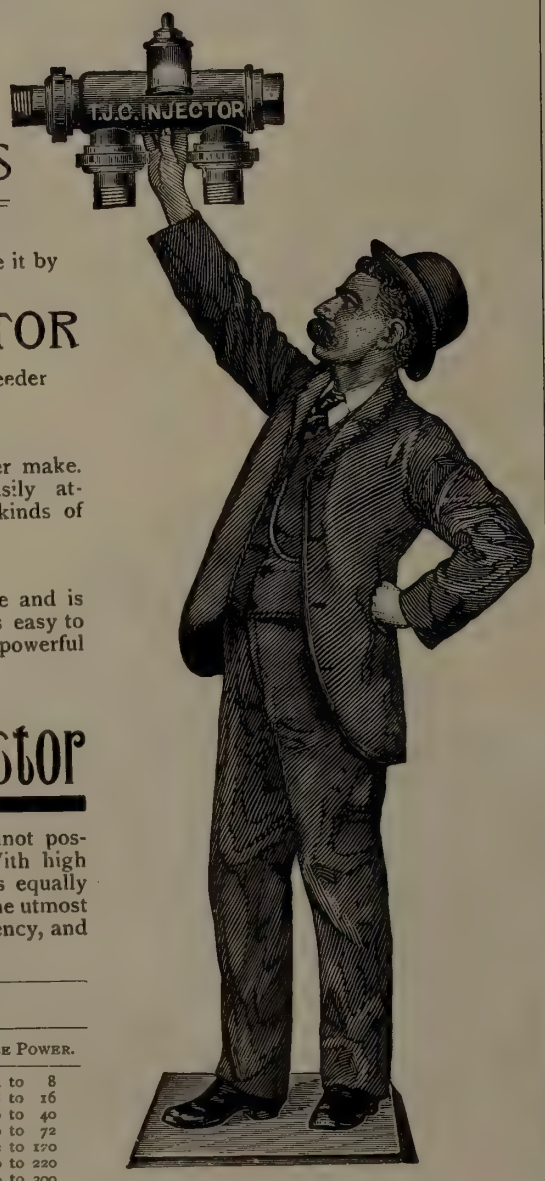

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the most economical boiler feeder in the world.

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7	$ 7 00	4 to 8
10	7 00	8 to 16
15	10 50	16 to 40
20	15 00	40 to 72
25	22 50	72 to 170
35	30 00	170 to 220
45	38 00	220 to 300

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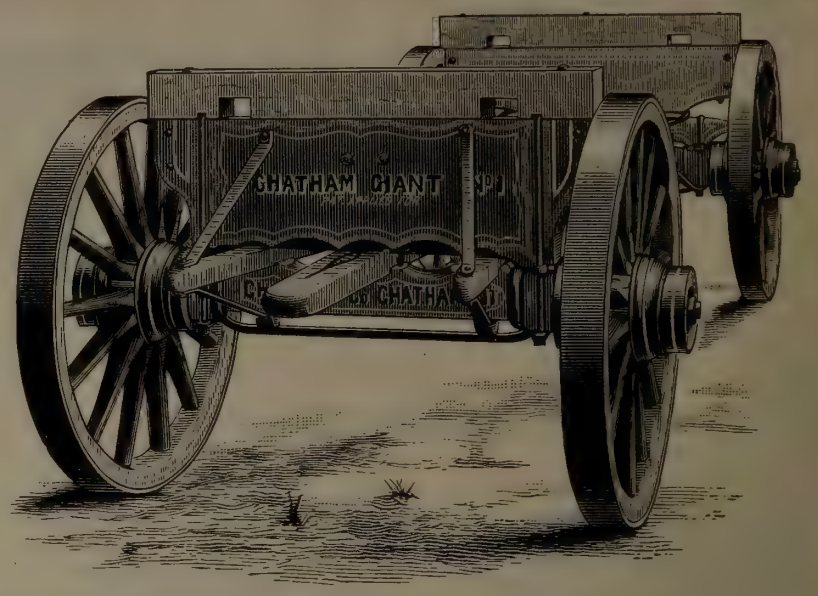
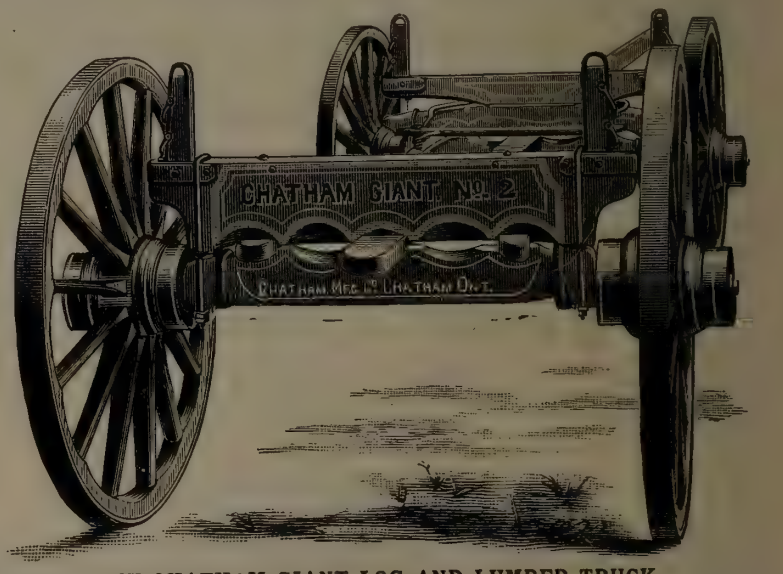
THE CHATHAM GIANT LOG TRUCK.



IT must be self-evident that our GIANT ARM LOG TRUCKS, of which the above is a faithful illustration, is the best log truck made; but if conclusive evidence of this is wanted we refer to every mill man and lumberman in the county of Essex, Ont., where millions upon millions of Elm logs are gotten out every year on them, and where these trucks sell readily, while those of other makes remain unsold at $5 to $10 less.



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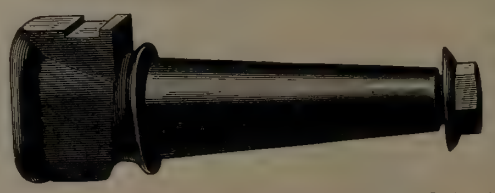
As seen above it is a Lumber Truck, but it is quickly converted into a Log Truck by bunks which are grooved at the ends to receive the stakes and slip down between them, and are perforated for side or lug poles. We build these trucks in all sizes from 2½ to 4 inch Malleable Giant Arms. Farmers all over are extensively adopting the lighter sizes as general purpose wagons.

In reference to above trucks we would call the attention of the reader to the accompanying illustration of VANALLEN'S PATENT GIANT ARM with which they are equipped.



It will be seen that the hind bolster and sand-board are formed to rest upon the flat top of this arm, and being securely clipped to the axles forms a complete and solid truss and render the axles unbreakable and inflexible.

Our Malleable Giant Arm farm and teaming Wagons have no equals on this continent, of which the judges on vehicles at the World's Fair, Chicago, gave us an unqualified certificate in the shape of a GOLD MEDAL AND DIPLOMA.

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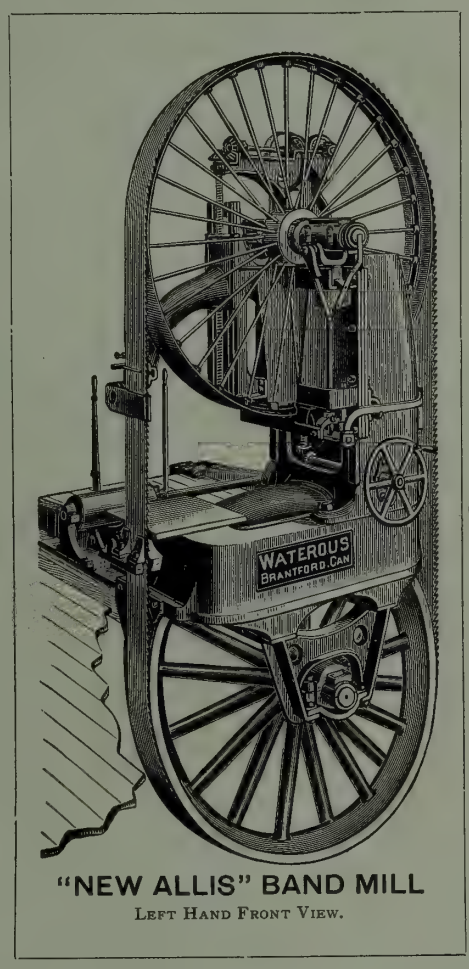
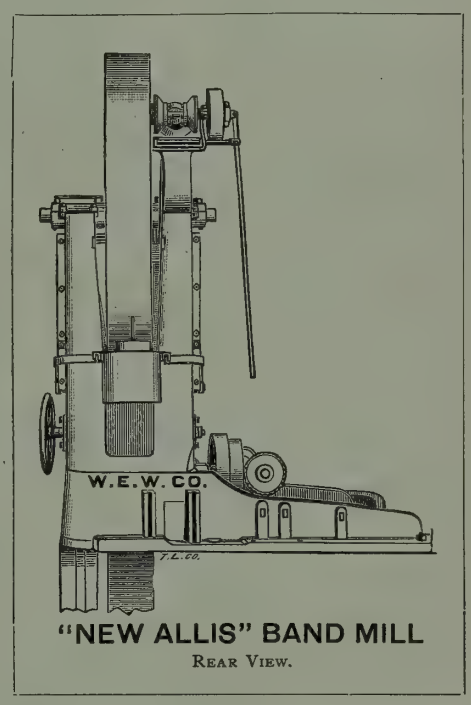
Is the "Milk in the Cocoanut."

The cocoanut is a hard nut to crack. If you don't crack it right you spill the milk. So with Business. Business done in an improvident, not-up-to-date, unbusinesslike way, will soon spill the profits. Open the cocoanut properly, you save the milk. Equip your business properly, you save the profits.

"NEW ALLIS" BAND MILL
Right Hand Front View.



"NEW ALLIS" BAND MILL
Left Hand Front View.



"NEW ALLIS" BAND MILL
Rear View.

The "New Allis" Band Mill will squeeze **profitable** returns from stocks which competition and antiquated machinery had apparently wrung out dry. The profit resulting from its use has been found by one lumberman to be actually 19%, and many have had a similar experience. Can **you** afford, in these days of slim profits, to waste this amount yearly?

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27 Allis Band Mills sold in Canada in the last 23 months.

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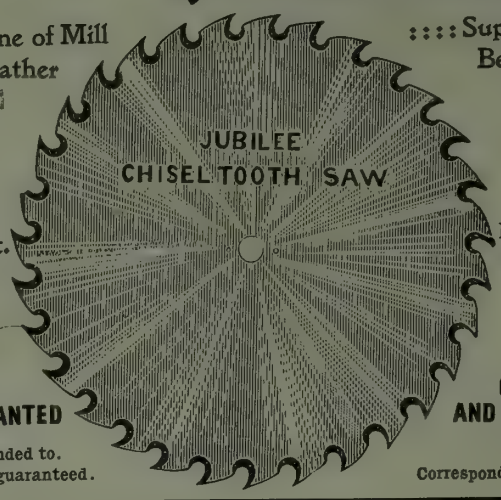

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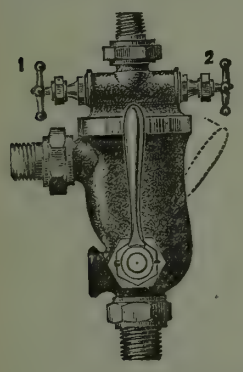

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7½	$ 6 00	⅛	⅜	60	2 to 10
10	6 75	¼	½	120	10 to 20
12½	8 40	¾	½	220	15 to 30
15	9 36	¾	½	300	20 to 40
17½	12 00	1	¾	420	30 to 50
20	13 50	1	¾	540	40 to 80
25	20 00	1¼	1	900	70 to 120
35	30 00	1½	1¼	1,740	150 to 225

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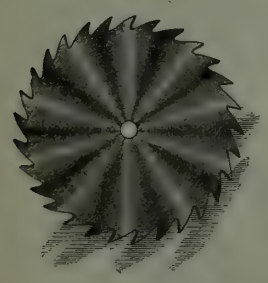

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THE CANADA LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XVII. NUMBER 3. | TORONTO, ONT., MARCH, 1896 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents

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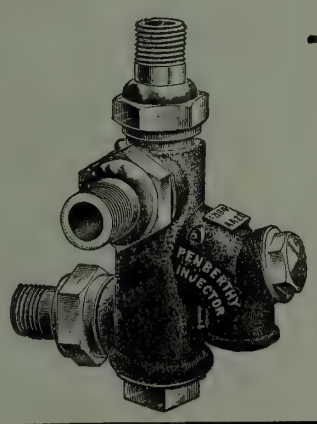

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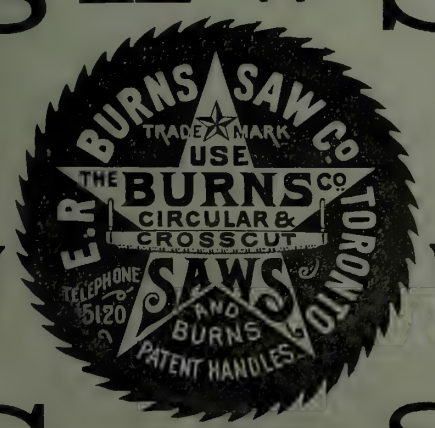
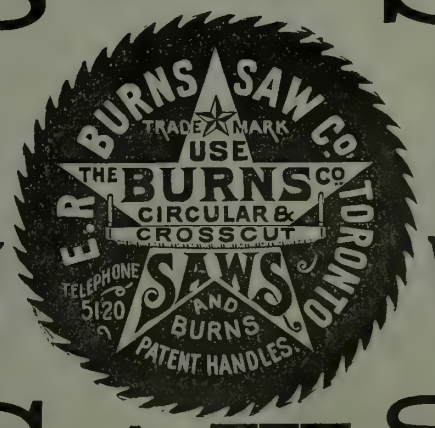


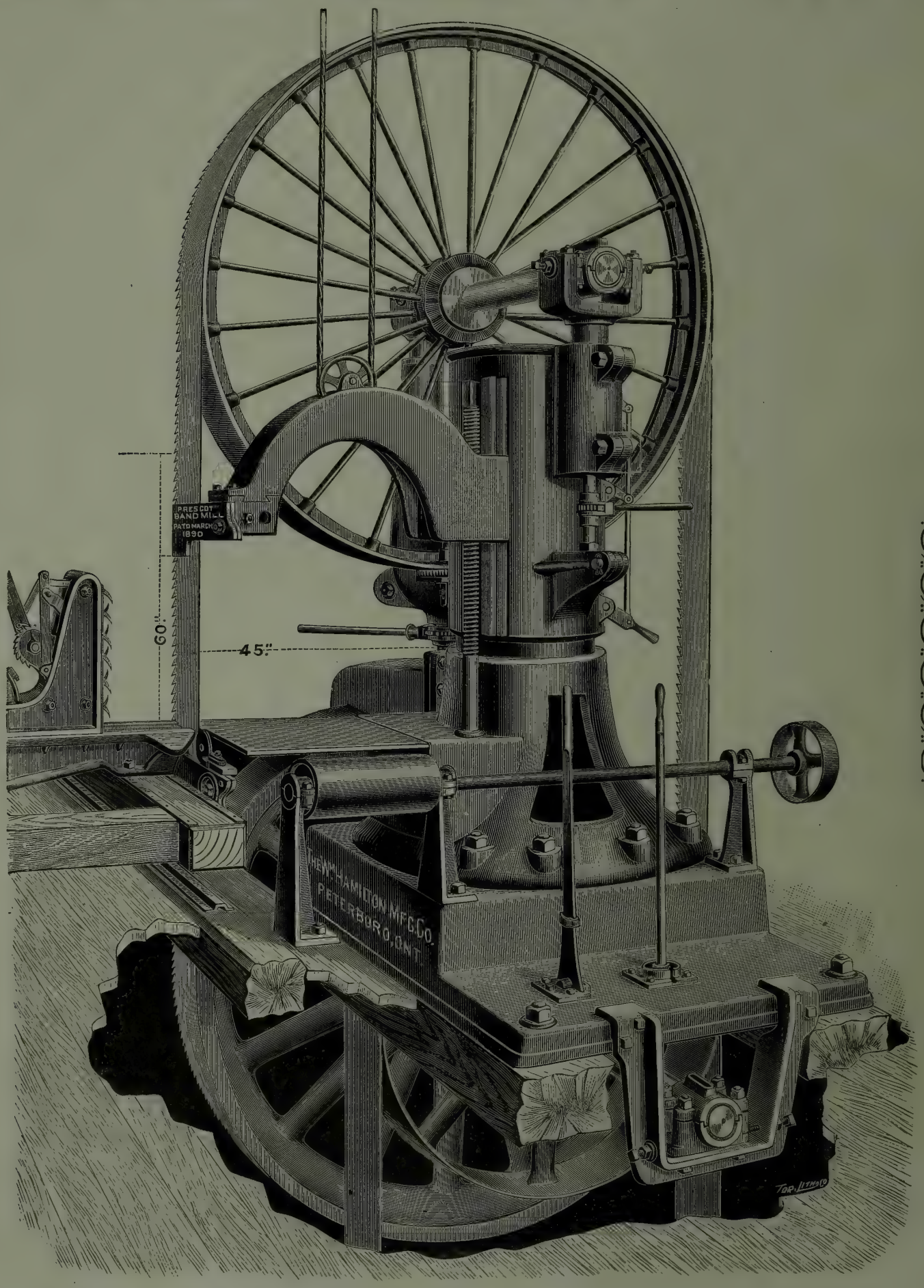
SAWS



SAWS

THE NEW PRESCOTT

Band Saw Mill



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THE CANADA LUMBERMAN

VOLUME XVII. NUMBER 3. | TORONTO, ONT., MARCH, 1896 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents

ANNUAL REPORT OF THE DEPARTMENT OF INTERIOR.

THE annual report of the Department of Interior was presented to the Dominion Parliament on the 11th ultimo. Owing to the early meeting of the session the report covers only the first ten months of the year 1895.

The revenue from timber, mineral, and grazing lands was shown to be $73,620.28, as compared with $90,584.46 for the corresponding time in 1894. This does not include sales of lands containing minerals.

The timber dues received amounted to $58,360.94, being a decrease of $7,357.14 as compared with the previous year. Of the revenue derived from timber, $16,642.34 was for bonuses, ground rents, royalties, and dues on timber cut from lands in the railway belt in the province of British Columbia, being a decrease of $3,186.68. The total revenue received from timber in Manitoba and the North-west Territories up to the 31st of October, 1895, was $1,080,047.10, and the total revenue from timber within the railway belt in British Columbia up to the same date was $267,541.55.

During the first ten months of 1895, 30,010,491 feet of lumber were manufactured from timber cut under license in Manitoba, the North-west Territories, and within the railway belt in the province of British Columbia. In the Winnipeg agency, which comprises Manitoba and portions of Assiniboia and Saskatchewan, the following quantities of lumber were sold :

	Feet.
Canadian pine from Lake of the Woods	34,000,000
Canadian pine from Fort William	6,000,000
Canadian spruce manufact'd in Manitoba	12,559,083
United States pine	6,776,518
British Columbia products (approximately)	10,000,000

It will be noticed that the quantity of lumber exported from the United States into Canada was small when compared with that of Canadian manufacture, and notwithstanding the fact that the product from the United States comes in free of duty. Canadian millmen are supplying the country with lumber at a price which largely shuts out American competition.

Approximately 60,000 cords of wood were sold at Winnipeg, the price for car lots being at the rate of $3.50 per cord for tamarac and spruce, and $2.00 for poplar. Of the above quantity, only 2,318 cords were imported from the United States.

The crown timber agent at Winnipeg and his staff of forest rangers, have completed the selection of lands valuable for timber at Turtle and Moose Mountains, which are to be set apart as timber reservations with the view of securing a continuous supply for the future needs of the settlers. Work is proceeding at Riding Mountain with the same object in view.

The prairie fires during last summer were more numerous than in former years, but no forest fires of any consequence occurred, with the exception of one at Moose Mountain.

THE CIRCUMLOCUTION OFFICE.

HARDWOOD LUMBER MILL MAN:—"Sir Oliver, we want you to send a competent man to Europe to see if a market cannot be obtained for Canadian Hardwood more favorable for this important industry than the present American market, which is played out. You ought to do this, as the lumber trade is a valuable contributor to the Provincial Exchequer."

SIR OLIVER:—"A very striking state of affairs, truly! Be good enough to just drop the whole thing in here?"

[Gentlemen of the lumber trade, you'd never get it out of that bag again. Take our advice and send a man yourself!—ED. LUMBERMAN.]

INTERESTING LEGAL DECISION.

RE LITTLE BOB RIVER DAM AND SLIDE.—Judgment on appeal by Messrs. Boyd and Company, from order and judgment of the judge of the County Court of Peterborough dismissing an application made by them under sec. 13 of R.S.O., ch. 120, an Act for protecting the public interest in rivers, streams, and creeks, to fix the amount which they may be at liberty to charge for tolls under the Act, for the use of constructions and improvements made by them for the purpose of floating saw logs and other timber down the river. The question raised by the appellants was whether they came within the provisions of the R.S.O., ch. 120, which are taken from 47 Vic., ch. 17, an Act passed in consequence of the litigation in McLaren v. Caldwell, 6 A.R. 456; 9. App. Cas. 392, which established the right of the public to float timber and logs down streams during the season of freshets, even if such streams were rendered floatable only by means of improvements made by the owner of the bed of the stream, and to use such improvements without compensation. The appellants contend that their milldam was an improvement within the meaning of the Act, for the use of which by others they were entitled to payment of reasonable tolls. The application and appeal were opposed in the interest of other lumbermen, on two grounds, viz.: (1) that the Little Bob, not being a navigable stream, and the channel being the property of the Dominion Government, and part of the property and public works of Canada, was not within the legislative authority of the province, or subject to the provisions of the Rivers and Streams Act; and (2) that, even if it was, the improvement in question was one which, by sec. 20 of the Act, was excluded from its operation as coming within the third and fourth sections of the Act respecting mills and mill-dams. R.S.O., ch. 118. Held, that the dam in question being a mill-dam, built by the appellants for the purpose of their mill, and not intended, except as incident to that, to facilitate the floating or transmission of logs and timber, the effect of sec. 20 of the Rivers and Streams Act was to exclude them from its operation, and to leave them simply in the position and subject to the burdens of the mill-dam owner under R.S.O., ch. 118, the stream being one of the characters mentioned in the 20th section of that Act. No opinion expressed as to whether the stream or channel is, or is not, one subject to the provincial legislation. Appeal dismissed without costs.

The Vock planing mill in Mitchell, Ont., was offered for sale by public auction by the assignee of the estate, but was withdrawn, the highest bid not covering the amount of the mortgage.

THE FORESTS AND FOREST TREES OF CANADA.

On the 25th January, Dr. Robert Bell, of the Geological Survey of Canada, delivered an interesting lecture on the above subject, under the auspices of the Canadian Institute, Toronto. The lecture was well illustrated by about sixty fine lantern slides from photographs taken by Dr. Bell himself, and it was listened to by a large and intelligent audience. Dr. Bell said that throughout the greater part of British North America the conditions were very favourable for forest growth and hence we have one of the most extensive wooded regions on the face of the earth. In nearly every part of the world, if there be sufficient moisture and a climate not too severe, forests will be found growing on any uncultivated land. In Canada the original forest covered Ontario, Quebec, the maritime provinces, most of the Labrador peninsula, the country around the southern half of the Hudson Bay, and thence north-westerly to Alaska. British Columbia was also a wooded province. The southern parts of our North-west Territories were prairie and plain, and this condition was principally due to the dryness of the air. The northern regions were "barren lands" or destitute of timber, on account of the severity of the climate, although the soil itself was often well adapted to the growth of trees.

Black Spruce Forest, Upper Part of the Albany River, Northern Ontario.

The great northern forest-belt of Canada, consisting mostly of conifers, stretched with a gentle southward curve from the east coast of Labrador, past Hudson Bay to Alaska, a distance of some 4,000 miles, and it had a breadth of about 700 miles. As we go south, the number of species of trees increases rapidly, but the range of each new kind we meet with becomes narrower and narrower on account of the contraction of the continent in this direction and the encroachment of the arid regions of the south-western parts of the United States and of Mexico.

In the great northern forest above referred to, the black and the white spruces are the most abundant trees. The spruce forests may be said to begin on the northern shores of Lakes Superior and Huron, and along a line drawn from Lake Nipissing to Quebec, and from this, as a base, they extend northward to the Hudson Bay, north-eastward into the Labrador peninsula, and north-westward to Alaska. Their northern boundary is the northern verge of the forests. On the west side of Hudson Bay, this line runs north-west from near Fort Churchill to the mouth of the McKenzie river. All through the southern portions of this belt the white spruce, which is the larger tree of the two, often measures six feet and upwards in girth, and would furnish two or three good saw-logs to the tree. What the black spruce lacks in size it makes up in numbers, as these trees generally grow very closely together. Although Professor Asa Gray, the great American botanist, did not point out the specific difference between these two spruces, there is no doubt they are quite distinct species and the distinction is easily recognized by anyone accustomed to our northern trees.

In all, there are about 340 different kinds of trees in North America, which represents a wealth of species unequalled in any other part of the world. Of this large number, we have in Canada 121 species, of which nearly 100 are found east of the Rocky mountains. In striking contrast with this, it was mentioned that there are only about fourteen different species of trees native to the British Islands, and only about twenty-five to all Europe.

A large map of Canada was thrown upon the screen which showed the northern limit of the geographical distribution of each of the principal forest trees east of the Rocky mountains. Most of these lines ran about east and west, or rudely parallel to one another, but there were some remarkable exceptions, such as the white cedar, the Banksian pine, the yellow birch, and the rough-barked poplar. The peculiarities in the ranges of these trees might be due to such causes as extremes of temperature, to dryness or dampness, affect of cold sea air, original dispersion, or to some unknown circumstance. In approaching the prairies of the North-west, the northern limits of the tree lines do not end abruptly, as if the prairies had been formed by the burning away of just this much of a former extension of the wooded region, but they begin to curve round and run off to the south before coming to the open country, showing that the origin of the prairies and plains was due to climatic conditions and not to forest fires. From James bay the northern boundary of the white cedar runs west to the head waters of the Severn river and then drops south into Minnesota, passing along near the east side of the Red river. To the east of James bay, after reaching the north shore of the Gulf of St. Lawrence, it drops south, crossing the other tree lines at right angles and leaving out Newfoundland and Nova Scotia, although the climatic conditions appear to be as favorable for it there as in the Gaspe' peninsula where it is abundant. In the central part of the great Labrador peninsula there is a large area, from which the balsam-poplar appears to be absent, although abundant all around it, as if the proximity of the sea were favorable for it. On the other hand the Banksian pine grows only in the central and southern parts of this peninsula, as if it shunned the sea air. These were only a few examples of the peculiarities in the distribution of some of our trees.

The trees of Canada, east of the Rocky mountains, might be divided into three groups as to their geographical range: first, a northern group of very wide extent, including the tamarac, the black and the white spruce, balsam fir, Banksian pine, balsam-poplar, aspen, white or canoe birch, alder and willow; second, a middle group, including the red and white pines, hemlock, white cedar, the different species of ash, elm, maple, oak, the beech, butter-nut, bitter hickory, yellow and black birch, ironwood, black cherry, basswood, etc.; and third, a southern group, including the red cedar, the black walnut, chestnut, shellbark hickory, button-wood, blue beech, tulip-tree, sassafras, flowering dogwood, sourgum, etc., found only or principally in the southern part of the lake peninsula of Ontario. A fourth or western group would consist of such trees as the negundo or ash-leafed maple, the cotton-wood, bur oak, green ash, etc., but the number

White Pine Trees on a Lake near Sturgeon River, Ontario.

of species was small and it might not be worth while to form them into a separate division ranking with the the other groups.

From the above facts we are not surprised to find that the trees of any district constitute a good indication of its climate. Indeed, they are a far better guide than long tables of meteorological observations. Locally, they also give us some indication of the nature of the soil, but this is of very limited application and may be misleading. For example, a fine maple and beech forest, which usually indicates good land, often grows among boulders, or on flat limestone rocks; and, on the other hand, we have the finest lands in the west where there are no maples or beeches, nor indeed trees of any kind.

The lecturer next referred to the splendid forests which formerly covered the lake peninsula of Upper Canada, where, on almost any farm lot of 100 or 200 acres, before it was cleared, one might count fifty or more species of native trees. This Canada of ours used to be contemptuously called a "wooden country," and the trees were looked upon as the enemies of the settler, but it did not require many years to change all that, and now the splendid trees of valuable timber which were so indiscriminately and recklessly destroyed, if they had been spared, would be worth more than the land itself to-day.

As yet no steps worth mentioning had been taken in Canada to replant trees or to cultivate forests. In fact, we are only beginning to try to prevent waste in lumbering, or even the needless wholesale destruction of forests by fires. There were, however, fires of a certain kind, especially in our extensive northern forests, over which we had but little control, namely, those caused by lightning, and which were described as a natural phenomenon that had existed from time immemorial, or ever since there were forests at all. Some of the trees themselves afforded proof of this. During the dry season, when a fire starts in the northern coniferous forest, it often burns with extraordinary rapidity, destroying the timber of a district more than one hundred miles in diameter in less than a day. The greater part of these northern forests had been burnt at one period or another. A year or two after such a fire has passed over, young trees begin to grow, and at the end of a century the ground is again covered by a respectable growth, and in the course of another hundred years the trees are as large as those which had been destroyed. In any large district in the northern woodlands, patches of "second growths" of different ages, as well as newly burnt tracts, may be seen—some quite young, some half grown, and others apparently of mature age. The old woods are sometimes called the original forest, but there is no certainty that any part has escaped the fire at some period. Taken as a whole, the northern forest region may perhaps consist of one-third fresh or nearly fresh brule' and brush-wood under ten years of age, one-third of second growths, from ten to one hundred years old, and one-third of trees over this age, or old timber. It sometimes happens that the different areas which have been burnt at various times are not very large, and in such a region, the country, if viewed from a mountain top, has a "patchy" appearance, as the various second growths look different from each other, according to their ages. By observing carefully all the stages of growth of these new forests, we may perceive why the trunks of the conifers are tall and nearly free from branches. At first the rapidly growing deciduous trees, such as the poplars, alders, willows and birches, cover the ground and conceal the slower growing conifers. But after a time these begin to show their tops above the former in increasing numbers, and they gradually gain the ascendency. Meantime the less favored or less vigorous of the poplars, birches, etc., die off and disappear, and by the time the remainder of this class have become old, the conifers have overshadowed them, and they mostly decay and fall down, and the forest has now got back to the condition we started with when the fire occurred. This is nature's rotation of crops of trees. Further south, forest fires are more rare, and the pines take the place of the northern conifers; and other trees, such as the oaks, the maples, beech, basswood, elm, etc., replace the northern deciduous trees, and the growth of a new forest is slower, but in the end the result is generally the same, namely, an alternation of coniferous and deciduous forests. Sometimes we have a permanent "mixed woods" and in other large tracts the ground is always occupied by deciduous trees alone, and in such regions forest fires never occur, except where the soil is poor and the vegetable mould light and dry, as on the Manitoulin islands.

The lecturer next spoke of the commercial value of our forests. Although we had already lost much by the ill-advised destruction of our choicest kinds of timber in the hasty clearing of the land in Southern Ontario, and although there had also been much waste of white and red pine in this and the other provinces, still our forest resources were immense, and they should be better looked after in the future. He was a member of a committee appointed by the Royal Society to urge this matter upon the Dominion Government. The principal difficulty was the want of the means to enforce any good laws or regulations which may be enacted. The Dominion and Provincial Governments should provide more power for carrying out the law. A few years ago our vast northern forests were not generally thought to have any value, and their destruction was not considered to be of any consequence. But now that spruce and similar wood is becoming valuable for paper-making, we perceive one of the many possible uses of these inexhaustible forests in the future. Not many years ago a vague idea was prevalent in Canada that the white and red pine extended indefinitely to the north, the west and the east. But from actual exploration we now know that these trees are comparatively southern in their habit, and that they have a very limited range compared with most of our other conifers.

The transparancies which were thrown upon the screen while Dr. Bell was delivering his lecture, illustrated the different phases of our forest growths. These photographs were from slides by the lecturer himself, and by way of contrast, views were shown of the prairies of the west and of the barren lands of the north. He also showed by means of lantern slides his photographs of typical examples of most of our trees as they grow in the forests, where they have a very different appearance from those grown in the open. It had been no easy matter for Dr. Bell to obtain these photographs, as the trees, after having attained their growth in the thick woods, required to be exposed in such a way as to enable him to photograph them.

Our illustrations are from two of Dr. Bell's photographs. One represents the black spruce woods near the Albany river, which forms the northern boundary of Ontario, and the other white pines on a lake near Sturgeon river, in the district of Nipissing.

HON. CLIFFORD SIFTON,

COMMISSIONER OF CROWN LANDS FOR MANITOBA.

Hon. Clifford Sifton, Attorney-General and Provincial Lands Commissioner for Manitoba, is a native of Ontario, having been born in London Township, Middlesex County, on the 10th of March, 1861. His parents, who are still living and reside in Winnipeg, are Hon. John W. Sifton, formerly speaker of the Manitoba Legislature, and Kate Sifton, whose maiden name was Watkins. He received his education at the London High School and at Victoria University, Cobourg, where he was awarded honors and the gold medal. After graduating from college, he

Hon. Clifford Sifton.

entered the office of Mr. S. C. Biggs, barrister, of Winnipeg, to study law. On being called to the bar he removed to Brandon, where he has practised his profession continuously ever since, and has succeeded in building up an extensive connection. He has never taken part in municipal affairs, except that he was appointed City Solicitor for Brandon and of the Western Judical Board.

In 1883 Mr. Sifton was elected to the Provincial Legislature, and was sworn a member of the Executive Council and appointed Attorney-General upon his re-election in 1891. He is considered one of the ablest speakers in the House, if not in the Dominion. His appointment as Attorney-General was received with universal satisfaction, and he has proven himself well worthy of the high honor. As Commissioner of Crown Lands his executive ability has also been of high order, although the extent of these lands in the province which he represents is not large. In religion he is a Methodist, being a trustee of the church to which he belongs. He is of retiring disposition and popular with all.

On the 13th of August, 1884, Mr. Sifton was married to Miss Burrows, of Ottawa.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the tr[illegible] Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

VALUE OF CANADIAN SPRUCE FORESTS.

DR. Bell in his very interesting lecture before the Canadian Institute recently on "The Forest and Forest Trees of Canada," a synopsis of which we are enabled to print in this number, refers to the fact that there are in Canada no less than 121 species of native trees. Until recently the general supposition was that the bulk of our forest area was covered by white pine, and to this source we must look for our forest revenues. Dr. Bell in his lecture makes clear the fact that white pine inhabits only the southern part of our northern territory, and bears but a small proportion to the illimitable forests of spruce which extend from Hudson's Bay to Labrador. Mr. Archibald Blue in a lecture still more recently delivered at the Canadian Institute, expresses the no doubt well founded opinion that there exists an extensive area of spruce lands in the unexplored northern parts of the Province of Quebec. In fact it would appear that much the greater part of the forest area existing in Canada to-day is covered with spruce timber. This timber is of the finest quality, and has been found to be particularly adapted for use in the manufacture of paper.

The present would seem to be the proper time to place a true estimate on the value of our spruce forests, in order that we may not permit their wanton destruction, as in the case of the magnificent hardwood and pine forests of which we were the possessors a generation ago. The white pine we still possess has depreciated in value to some extent on account of the growing difficulty of disposing of the low grades of lumber in competition with southern pine. On the other hand the indications point to a rapidly increasing demand and value for spruce. The principal demand at present is from the pulp manufacturers who supply the paper mills. The extent of this demand can in some measure be guaged by the statement that an average of 100 cords of spruce per day is required in the manufacture of the paper used by the New York Daily World, and for the Christmas edition of that paper alone 230 tons of ground pulp, representing 310 cords, or 200,000 feet of spruce logs, were required. As an indication of the growth of demand in Canada the value of exports of pulp wood from Port Arthur, Ont., increased from $80,000 in 1890 to half a million dollars in 1895.

It is not alone in the manufacture of paper however that the future demand for spruce is likely to come. In Norway the manufacture of roofing tile from pulp has been commenced. The new product is said to be meeting with favor, inasmuch as it combines lightness with extreme durability, is not subject to contraction and expansion, and is cheaper than slate or clay goods. Its use is also advocated as a substitute for stone for building purposes. Combined with coloring matter it has been successfully applied as a paint for steel ships and metallic surfaces, being found impervious to heat and dampness. At Haverhill, Mass., it is being used in the manufacture of shoe heels. It is thus evident that wood pulp is adapted for a great variety of purposes; it is therefore equally evident that a few years hence spruce wood will in all probability be largely in demand at profitable prices. Canada is therefore fortunate in being one of the few countries in which are to be found extensive forests of spruce, and our people should as far as possible preserve these forests in view of their coming value.

CUT-OFFS.

THE subject of the utilization of our forest products, now wasted, is of as great moment to us as the forests themselves. We waste altogether too much in our saw mills. It is true a great deal of defective timber is made into shingle bolts and shingles, and that in some of the large mills they cut the largest and best of their edgings into lath, but no one who has visited the mills of the country can fail to be struck with the immense waste that ought to be utilized in some manner. As it is now, it actually costs a large sum every year to destroy this material, which we think has some value. Even if it only produced the cost of the labor, necessary to collect and pile it and put it on cars, or saw it into sizes, etc., it would be much better than seeing it burnt as now is done. For instance, a builder wants to trim a house that he is building. He wants the casing for say 25 to 100 doors. The usual sizes of doors are 2'6" x 6'6", 2'8" x 6'8", 2'10" x 6'10" and 3' x 7', so he will require enough casing of the above length and widths to trim two sides of that number of doors. As it is now, he goes to the factory man, who buys from the dealers lumber, all 12, 14 and 16 feet long, and 4 ft. and up wide, which he has to cut to the width and length required by the builder for his doors. If he could buy stuff in the rough, cut 1 x 5 x 3 ft. and 4 x 7 ft., 1 x 6 ft. of same length, he would do so, and be glad to get it, as it would save him extra work in ripping to widths and waste in cutting off odd lengths; and besides, the mill man could afford to sell such stuff cheaper than the regular sizes as it would otherwise be wasted.

There are also uses for much smaller stuff, such as corner blocks 4½, 5, 5½ and 6" square; door stiles, 1¼", 1½", and 2" thick, by 4½ to 6" wide and 7' long; door rails 1¼ to 2" thick, by 4½" to 6" wide, 22" to 26" long—also 10" wide of same length, and 8" wide of same lengths; blind and sash stiles, 1¼" thick by 2½" wide, by any lengths; door panels, any thickness (for resawing) x 8, 10, and 12 inches wide by 20 and 40 inches long. These panels can be sawn plump ⅛ inch thick, and what will not pass for panels would make good box shooks.

All this stuff can be taken from the waste now going into the burner of the ordinary mill. We have seen slabs come into Toronto that would have made a large percentage of first-class door stock, had it been properly handled.

This refers to the hardwood business as well as the pine—in fact, more so, as there is a market for all grades of pine from dead culls up, as long as it is 4 inches and up wide, and 10 feet long, but in hardwood the lower grades and the heart lumber is practically unsaleable. There is a great deal of the low grades that could be cut into small and short stuff and made clear, that now goes into culls or into the burner. There are so many purposes for which small hardwood is used that there should be much more of it made to the sizes required by the factory man and furniture manufacturer. There is in Massachusetts a section about thirty-five miles square that has nearly 100 chair factories, who use an immense quantity of small oak, ash, birch, and maple, in sizes of from one inch square to 2 inches square and from ten to forty inches long, for spindles, legs, etc., and for seats 1" x 4" wide, x 12½", 16½" x 18½" long. They usually require the squares to be cut to sizes and lengths called for piled up so as to dry out brightt and straight, and when dry to be tied up into bundles, and the seat stuff to be cut in sets and be shipped in that way.

This stuff is furnished largely by the mills in Virginia and Tennessee, and the Southern mill men are making a specialty of furnishing this small piece stock to manufacturers of furniture, sewing machines, etc. Why should not our mill men do the same? One reason is that they are not careful to cut their stuff exactly to sizes required, and this would be fatal to their success. If a piece is required 3" x 3" and is furnished 2½" x 2½" at one end, by 3¼" x 2¾" at the other, as is often the case here, it had better be put into the burner or cull pile. But with properly made stuff there should be a great deal saved that is now wasted, and we believe fair prices could be realized for such stuff. It only remains for some mill owner to make a start in this direction. There are doubtless numbers of factory men and furniture manufacturers here who would be glad to get stuff with a minimum of waste. It would save their money in stock, in yard room and labor, and also in the price of the material itself, and the mill man would be realizing something for material which he is now at an expense to destroy. How shall they be brought together? We would be glad to hear from any parties who will cut this stuff, and also from those wanting such, and would do our best to bring producer and consumer together for their mutual benefit and to prevent such waste as we now witness.

EDITORIAL NOTES.

Our Pacific coast lumbermen will no doubt be interested in the announcement that after June 30th, next, rough or dressed lumber will be admitted into New South Wales, Australia, free of duty. A considerable trade has already been done with that country by the lumbermen of the west, and the removal of the duty should materially increase its volume.

The commission appointed by the United States government to report on the project to construct a water way across the Nicaragua isthmus, have declared a more thorough investigation necessary before even the engineering possibility of the work can be decided upon. The report is at great variance with the numerous rumors and predictions which from time to time have been published concerning this project. The commission place a provisional estimate of cost at $133,472,893, or nearly double that of the Maritime Coal Company's unconditional estimate. The report may be considered rather unfavorable to the execution of the work.

The war cloud has reappeared on the European horizon, much to the disgust of those who have been looking forward to improved trade conditions. While warlike preparations may occasion a demand for certain kinds of materials, therefore benefitting a few individuals, their greatest influence is in the direction of unsettling conditions and retarding the progress of trade. There is little doubt that our export timber trade with Europe, the outlook for which has been brightening for some time past, would be adversely affected by a European war, in which Great Britain, Germany, and perhaps France—three of our best customers—would be involved. Let the dogs of war be chained up, and the battle fought out on commercial lines.

The cedar shingles of Maine and New Brunswick are meeting competition from the Michigan mills. The shingles of Michigan are said to be of equally good quality, and not excelled by any in the market. The freight from Michigan to eastern points is about fifty cents per thousand, which is only a slight increase on the cost of freight from New Brunswick and Boston. Although enormous quantities of shingles are produced by New Brunswick and the above mentioned States, no heavy stocks are held over at the end of the year. The supply being only equal to the demand, there is no necessity for cutting prices, and an effort should be made to reach an understanding by which such cutting would be avoided.

The advantages of organization are strikingly manifest in the case of the manufacturers of southern pine. Prior to organization the market for yellow pine was in a demoralized condition. To-day prices are being firmly maintained by means of the united action of the Manufacturers' Associations, which include 85 per cent. of the mills. Similar results are likely to be achieved by the recent organization of mill owners on the Pacific coast. It is surely not assuming too much to say that what has been done in the south and in British Columbia can also be accomplished in Eastern Canada. Is there not at least sufficient encouragement to justify an effort being made in this direction? As somebody must take the initiative, we would suggest that the promoters of the Western Ontario Lumber Manufacturers' Association, to which reference was made in last month's issue, should endeavor to set the ball rolling.

Large quantities of rock elm are now being used in the manufacture of bicycle rims. This industry is rapidly increasing in Canada, and promises to provide a home market for a considerable quantity of first class elm. Two firms have recently commenced the manufacture of bicycles in the vicinity of Toronto, which will no doubt result in a considerable local demand. The requirements of the stock, however, are such that lumber dealers find little profit in filling the orders. The least indication of brashness, or of cross-grain, will at once condemn the lumber. It must be of the toughest possible kind, perfect in color, and thoroughly straight. Such stock commands a high figure, but considering the rigid inspection which is necessary, the margin of profit is small.

While birch lumber is as yet a staple article, the bright outlook for that wood which was predicted a little less than two years ago, has to some extent disappeared. No one believed for a moment that it would replace oak or mahogany as a furniture wood, but it was used to imitate those woods, and met with considerable favor for the cheaper lines of furniture. Its use for this purpose has not proven satisfactory, however, owing to the fact that instead of becoming darker and more beautiful in color with age, it becomes lighter. Birch has also suffered somewhat during the past year from competition with cheap African mahogany. Nevertheless, a limited quantity will always be in demand, and unless too much is manufactured, birch should find a ready sale at fair prices.

Complaints have recently been made by settlers that forests on the American side of the boundary have been denuded of timber by Canadians, and that millions of dollars worth of lumber have been stolen during the past few years. The matter has been referred to the Secretary of the Interior. It is claimed by Canadian papers published along the border that if the timber was stolen, the American people did it, and sold it to Canadians, who considered it none of their concern whether the U. S. timber regulations had been complied with or not. If such an amount of timber was stolen, it does not speak well for the officers whose duty it was to protect the property. Another claim from the United States comes in the form of a boundary dispute, brought by the Congressional representative of Minnesota, by which claim is laid by that State to an island or islands in Rainy river, which both the American and Canadian governments have hitherto regarded as belonging to Canada. It is held that Minnesota has been the loser in territory by the erroneous location of the boundary line by the English commission of 1842. The land in those days was thought to possess little value, but is now found to be rich in timber and minerals. For fifty-four years this boundary line has been accepted as correct by both countries, and cannot surely be open to be challenged now, when such changes in physical conditions may have taken place as to render the correct boundary line somewhat uncertain.

THE LUMBER COMBINE ON THE PACIFIC COAST

[Special correspondence Canada Lumberman].

The recent lumber combine, which practically embraces all the mills on the Pacific coast has been accomplished, after a long, patient, and persevering struggle. Although for some time it has been known that such a combination was under process of formation, it was not until a few days ago that the details were published and the real strength of the combine was known. The mills in the combination are all exporters, and, therefore, the local markets are not affected and the conditions of local supply not altered. There are somewhere between 40 and 50 mills in British Columbia, large and small, in operation. There are only four in the combine. The big McLaren-Ross mills are not in operation, and are not likely to open up until the prices and demand considerably improve. Unless a mill like the foregoing, which is equipped on a large scale, can run full capacity and full time, expenses are too heavy to make a profit, and the McLaren-Ross Co. has wisely decided to wait until conditions suit them.

As to all the details of the arrangement the public has not been taken into the confidence of the mill men. The object is to maintain prices above the ruinous competitive rates of the past four or five years, and the machinery is said to be very elaborate, far reaching and effective. It necessarily includes the retail dealers of outside markets, who, if they buy from others outside of the combine, at lower prices, will be dropped. The effect of this will be to cause the mills outside of the combine to keep up to the market price as arranged, the expectation being that they will not be strong enough to work by themselves. Of course there are many difficulties to overcome in carrying out an unbroken plan on such a large scale, and it will demand the utmost good faith on the part of all concerned. There are numerous conditions to observe, and many interests to take into consideration, and it is certainly a question for speculation if it can continue to operate successfully. Besides the mills there are 150 ships under control. The trust represents an actual capital of over $70,000,000, and an annual output of about 600,000,000 feet. The effect has been to raise prices $2 a thousand, and certainly there is much greater activity observable in Burrard Inlet than for some time. There are 12 or 15 ships waiting to load, with a number on the way. It is claimed that wages and the price of logs will advance, and that is a matter of the very greatest importance to us from an industrial point of view. The loggers have suffered a good deal; in fact, the depression has been very severe, and prices very low. Loggers, like mill men, have been losing money. A local paper discussing the situation says:

"The relation between the loggers and the lumbermen are extremey complicated. Some of the mills have logging facilities of their own, and hence are not wholly dependent on loggers for their supply. At the same time it is known that some of this very class of mills have done their logging work at a loss. On the other hand, few of the loggers have disengaged capital enough to think of embarking in the mill business on their own account. Even if this should be done in a few isolated cases, or jointly by a logger's association, it could not be done on such a scale as to utilize the entire supply of logs. It will be seen, therefore, that while a sharp line of distinction has been drawn between the two industries, they are more or less dependent on each other. At present neither is inclined to make war on the other, and perhaps it is not putting it too strongly to say that neither is very much disposed towards co-operating with the other, at least so far as any organic connection is concerned. The loggers are going ahead quietly, prosecuting their work of organization week by week. They expect by March 1st to have their business as a whole in more systematic shape than it has ever been. It will not be part of their plan to levy on the mill men for an advance in price, but it is in the wind that they may curtail the supply so as to avoid glutting the market, and thus indirectly prevent the loss at which so many logs have been cut."

The above applies to the situation as a whole on the coast. In order to protect the interests of the loggers, about which there was much complaint during the dull times, the Government has appointed official log scalers, whose duty it is to scale logs offered for sale to the mills.

Apart from the combine altogether the trade in lumber is improving, and in all probability would continue to improve, but no doubt the situation has been greatly strengthened as a result. It is to be hoped that a new era for the lumbering industry in British Columbia has set in. It has been a long and hard struggle for all concerned. In the past four or five years export mills, if not working at an actual loss, have made no profit. Local trade up to within the past three years was good, but subsequently demand has been limited and competition extremely keen. The North-west trade, too, was very unsatisfactory. It now gives prospect of considerable improvement.

WESTERN RETAIL LUMBERMEN'S ASSOCIATION.

PROCEEDINGS OF THE FIFTH ANNUAL CONVENTION.

THE fifth annual meeting of the Western Retail Lumbermen's Association was held in Winnipeg on Wednesday, February 12th. There was a good attendance and much interest exercised in discussing matters brought before the meeting. In the absence of the President, the chair was taken by the Vice-President, Mr. Alexander Black. The meeting being called to order, the proceedings and minutes of the last annual meeting were read and confirmed.

The chairman read the following address from the retiring President, Mr. J. L. Campbell, of Melita.

To the Members of the Western Retail Lumbermen's Association.

Gentlemen:—It is a matter of pleasurable satisfaction to all that our Association meets this year under conditions more favorable than have existed for one or two years past. The abundant harvest with which our farmers have been blessed has brought prosperity not only to this, the most important class of our population, but also to the general public. In this renewed prosperity the members of our Association, both honorary and active, I am pleased to say, have participated in a satisfactory degree.

Our Association has made substantial progress in the way of solidification. It is true that during the past year we have had some disturbing conditions, but notwithstanding these, I am convinced that we stand stronger than ever. The immense advantages accruing to the members, both honary and active, is becoming to be more and more appreciated. The general public, too, are recognizing more clearly the laudable objects of our Association, and are recognizing as well, that while we wish to guard our own interests, we are not unmindful of their welfare, as instance the liberal reduction in the price of lumber the past year. This wider knowledge has considerably dissipated their prejudices and they are coming to believe that, if we have faults, "they lean to virtues' side."

You will notice from the financial statement submitted to you that our balance is respectible and on the proper side. I would recommend, however, that the fees be restored, if not to their old figure, as nearly so as possible. With a commendable object in view, the dues last year were reduced 50%. We find now, that while the strictest economy has been observed, our expenditures have exceeded the accruing dues for the year by a few hundred dollars. It is exceedingly unwise for this depletion of our funds to continue. A strong treasury is an element of general strength, and, as no one can tell when our strength can be tested, I trust you will give this your very serious consideration.

During the past year a number of questions for adjustment have come before your directors. In every instance they have endeavored to obtain the fullest possible information bearing npon the various questions, and in every instance their conclusions have been based upon a conscientious desire to deal even justice to all parties. If they have fallen short in any respect, I am sure your generous nature will forgive what your good sense may have seen wrong in their judgment.

It affords me much pleasure to bear testimony to the indefatigable attention our Secretary has given to the affairs of our Association. I do not presume he needs any apology at my hands, but if there be any who have misunderstood his intention, I should simply ask to quote the words of President Tuthill, of the Mississippi Valley Lumbermen's Association :

"There seems to be in some quarters a disposition to think our Secretary is a little too persistent and pushing in the presentation and collection of claims sent to him for adjustment, but you must remember that behind every one of these claims there is a red hot retailer with every hair turned the wrong way, impatient for his ten per cent. regardless of any explanation. It has been a wonder to me, as well as others of the directory, that he gets along with so little friction. When he gets a claim from any of our members he must ask the accused of making the shipment for an explanation of it in writing, so a complete record may be kept of all cases. We have not found our Secretary guilty of unbusiness-like or ungentlemanly couduct in his way of doing this business, still, if he fails to collect the claim promptly he is liable to be accused of being in league with the wholesalers, or on the other hand criticised by the wholesale for over-activity in his efforts to get replies to his communications which are not unlikely to receive as tardy attention as any which comes to the wholesaler's desk."

But as I have said, I am not aware our Secretary requires any justification at my hands. The results of his labor are a sufficient commendation.

I cannot omit to make mention of the loyalty of our honorary members to the Association. The closer arrangement entered into last year, I believe, has been faithfully observed on their part. Perhaps as much cannot be said of all the active members, but I believe any breach of arrangement has been surrounded by extenuating circumstances. Taking it all in all, perhaps the new conditions of mutual fidelity between honorary and active members have been as well observed as could reasonably be expected under a change so complete and so sudden.

Several matters will come up for your consideration. As good always comes of discussion, I trust your deliberations will be full and cordial, exemplifying the good sense and harmony that have always characterized our meetings in the past.

The address having been read, the chairman called upon the secretary to make his financial statement. Upon proceeding to read the statement he prefaced his remarks by stating that it afforded him much pleasure to meet so many members present on this occasion. He was glad to be able to report the goodly sum of $811.53 as the balance on hand. There are 147 names on the membership list. Much harmony prevailed among the dealers during the year just closed, there being only two cases of complaints brought before the directorate to be dealt with during the year. He then enlarged on reciprocity as between active and honorary members, and was glad that the fairness of it was so generally recognized on the part of active members. The amendment to the by-laws requiring active members to buy from honorary members only was fairly well adhered to. He also reminded honorary members to keep before them, in shipping, the membership list, and interim notices of changes in the membership.

In referring to some grievances that were reported to him showing an evasion of the association rules in shipping through intermediate points in the mountains, the secretary urged that the utmost honor in dealing one with the other should have due regard, in order to keep good faith and fidelity in association matters in cases where the clauses of the by-laws did not reach them, and at all times as well. In conclusion, he congratulated the members upon the improved condition of the lumber business during the last year, both in increased volume of business done, and in the collection of accounts carried by them during the last four years. He thanked the directors for their good attention to the affairs of the Association and the benefit he had derived from them in their good counsels.

The election of officers was then proceeded with and resulted as follows: D. M. McMillan, Morden, president; T. A. Cuddy, Minnedosa, vice-president. Directors: A. Black and J. Arbuthnot, Winnipeg; C. E. Pieper, Gretna; J. M. Taylor, Portage la Prairie, J. M. Neilson, Carberry; J. B. Mathers, Glenboro.

The convention then adjourned.

Jarrah wood piles, 2 feet 2 inches square, driven 33 years ago at the Largs Bay pier, were found on examination to be as sound as when put in.

"THE NEW ONTARIO."

A LARGE and interested audience were present at the Canadian Institute in this city on the evening of the 15th ultimo, the attraction being a lecture by Mr. Blue, of the Ontario Bureau of Mines, entitled "The New Ontario." Mr. Blue described the title as including all that part of the province lying beyond the Mattawa and French rivers and the Nipissing, Huron, and Superior Lakes, and bounded on the north and west by lines established by Imperial Statute in 1889.

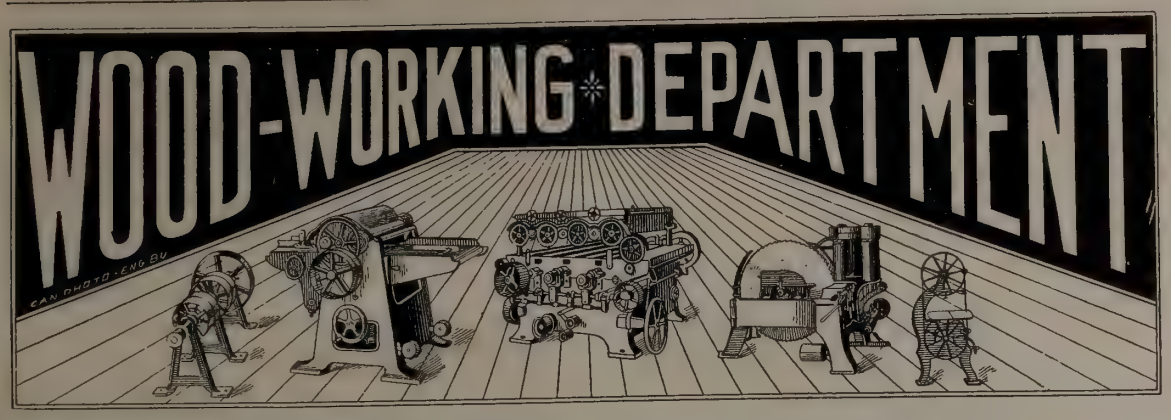
This territory was in dispute between the Ontario and Dominion governments in 1872, but was finally ceded to Ontario. Of this country little was known, but it was believed to be rich in natural resources. The immense size of this unexplored district was a revelation to many in the audience, its size being given as 100,000 square miles greater than the settled portion. "The discovery," said Mr. Blue, "of what appears to be a valuable tract of country was made only within the past year by Mr. Henry O'Sullivan, of the Crown Lands Department, Quebec, and Dr. Bell, of the Geological Survey, Ottawa. They ascertained that in the basin of the Nottaway river and its tributaries, the Waswanipi and the Mekiskan, there is a tract of rich and finely timbered land, as large in extent as the whole of England, of which nothing was known two years ago. This inspires us with the hope that regions of perhaps equal extent are yet to be found.

The Hudson Bay Company, whose only interest is the fur trade, have always discouraged explorations which might result in bringing settlers into the couutry. A gentlemen who had been a missionary among the Ottawa and Hudson Bay slope for nearly thirty years, stated to Mr. O'Sullivan that he had seen some good land and large timber in the neighborhood of Lake Waswanipi and advised him to explore, but he was further told by the guardian for the Georgian Bay Co. at Grand Lake, Victoria, that the Indians who visited the post could not get sufficient wood to make an axe handle there. This, of course, was in keeping with the traditional policy of the Hudson Bay Company.

Of all the natural resources of the New Ontario the forest is of the most obvious value, as there is nothing to hide or obscure it. There are no doubt yet to be found large tracts of valuable timber land, although many square miles have been cut by lumbermen and many more swept by fire. The forests west of Port Arthur were swept within the memory of many now living. In one day fire is said to have ravaged a tract of forest land seventy miles long and thirty miles wide, or containing upwards of 2,000 square miles."

Concluding his remarks on the forest, Mr. Blue said he "scarcely dared to forecast what our needs would be a quarter of a century hence, for the wit of man was seeking out many new inventions. But in all probability there never would be found a substitute for wood, and he therefore urged that a conservative policy be pursued in regard to our forests, and that the Government set them apart as Crown lands."

E. Leonard & Sons, of St. John, have sold one of their latest improved Clipper portable saw-mills to Mr. R. Hoey, of Hardingville, St. John Co.



ECLIPSE PLANER, MATCHER AND MOULDER COMBINED.

The accompanying cut represents a somewhat new machine for general planing, matching and moulding, and embodies a number of new features which by long practical experience have been found desirable in preparing inside woodwork for practical use.

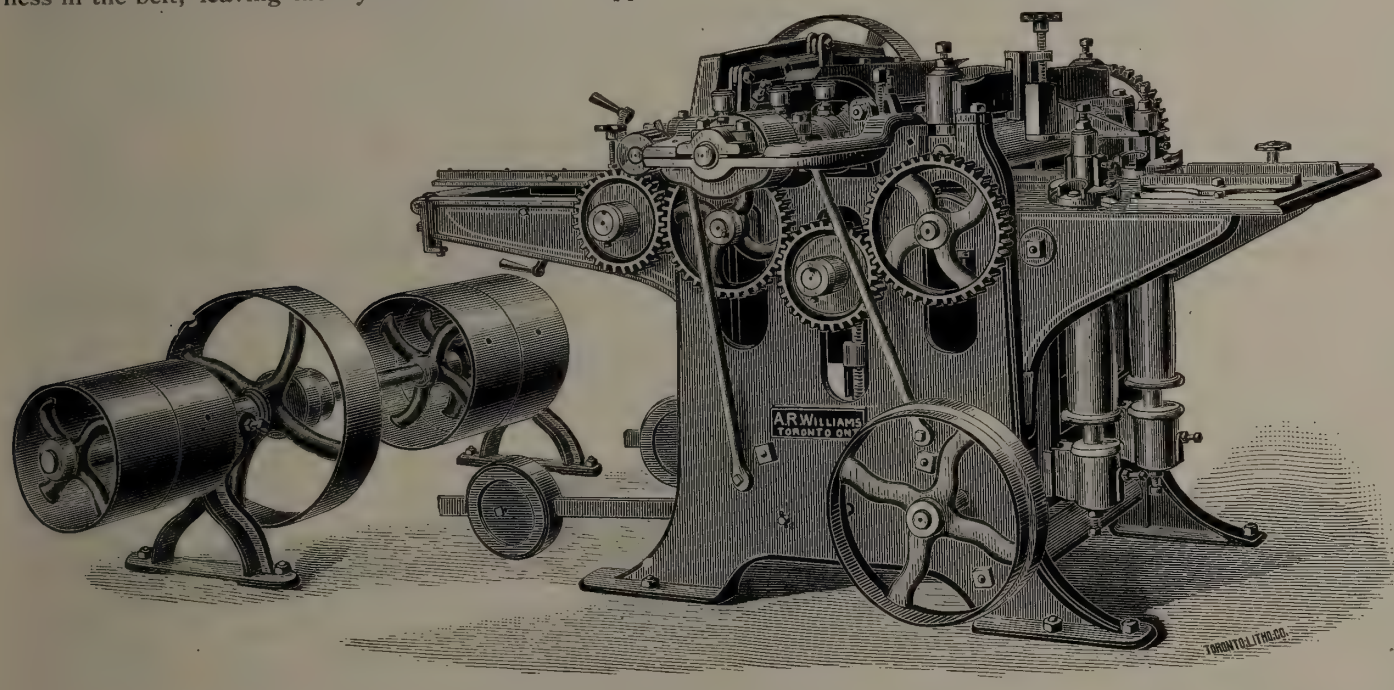
It is a well known fact that in most planing machines the running of the belt over the pulley causes a jar upon the cylinder at every joint of the belt, making a perceptible mark across the lumber. The "Ross" attachment used in connection with this machine completely obviates this difficulty, as the cylinder is cut off from that portion of the shaft carrying the driving pulley by a coupling, with sufficient flexibility in said coupling to arrest the jar caused by any unevenness in the belt, leaving the cylinder to revolve without the slightest vibration, thus ensuring the desired result of perfectly smooth planing.

The cylinder of this machine is also slotted to permit the use of beading, moulding and shaping bits of various patterns, and in the same connection,b oth front and rear pressure bars are adjustable to and from the cylinder to allow the projecting knives to revolve.

The rollers, both top and bottom, are power driven, thus ensuring a powerful feed. At the same time, the bed is the solid bed which is found necessary to secure perfect planing. The pressure bars and rollers are so arranged that very short material can be passed through and planed perfectly without in any way gouging at the ends of the stick.

The writer was shown at the office of The A. R. Williams Machinery Co., Ltd, at the Soho Machine Works, Toronto, samples of the work done on this machine, and forwarded to them by Messrs. Knight Bros., of Burks Falls, Ont. These samples consist of birch and other woods dressed for ceiling, wainscotting, siding, flooring, etc. The work is shown just as it came from the machine, and is certainly of a most excellent description. Messrs. Knight Bros., we understand, have built up a very large trade in this line of builders' supplies, and have adopted the name of the machine in describing their large output, designating it the "Eclipse" wainscotting, siding, etc.

We may mention in connection with the attachment for smooth planing, that it is the invention of Josiah Ross, of Buffalo, who has patents in the United States and Canada upon this device, and who receives from the manufacturers for Canada, The A. R. Williams Machinery Co., Ltd, a royalty on every machine to which it is applied. We are assured by the Canadian manufacturers of this machine that this device has been pronounced a decided improvement upon planing machines by all who have tested it practically.



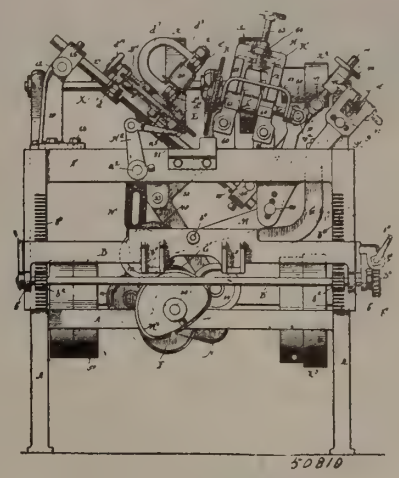
"Eclipse" Planer, Matcher and Moulder Combined.

We understand the manufacturers are meeting with very large sales of this machine, and when we consider the variety of work the machine is capable of performing, we do not wonder at their success.

The A. R. Williams Machinery Co. have completely outgrown their present quarters, and are erecting a warehouse that will not only provide suitable accommodation for their growing business, but will be an ornament to that portion of the city in which it is located, being directly opposite the west wing of the Queen's Hotel on Front street, and consisting of a building with 70 feet frontage and 150 feet depth, five stories high. This building is nearing completion and will shortly be ready for occupation, when the offices of the company will be transferred to the Front Street premises.

NEW WOODWORKING PATENTS.

The following patents have recently been granted for Canada :



Rotary Cylinder Planer.

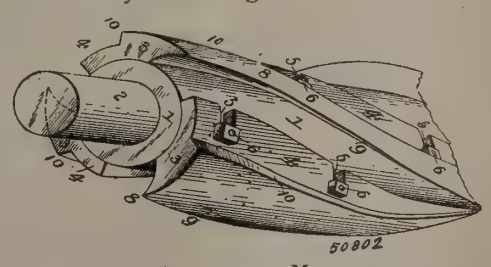
Patentee : Myron R. Hubbell and Wm. W. Cate, both of Wolcott, Vermont, U. S. A., patented 11th December, 1895 ; 6 years.

Claim.—The combination of the cylindrical body forming a true cylinder, and the spiral knives of sufficient thickness and so underground at their front edges as to provide clearance for the chips, having their inner faces curved to fit the surface of said cylinder, and removably secured thereon, and decreasing in thickness from their front to their rear edges. In a rotary cylinder planer, a blade formed with the inner face extending in an unbroken line to the front cutting edge of the blade, the curved outer face, and the outer edge running at an angle from the main outer face to the front cutting edge, substantially as set forth.

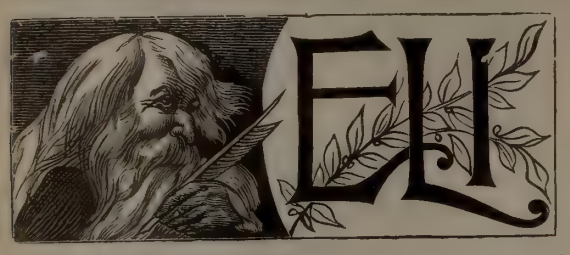
SAW SHARPENING MACHINE.

Patentee: S. H. Hawley and S. V. Rawlings, both of Marquette, Mich., U.S.A., patented 11th December, 1895; 6 years.

Claim.—In a saw grinding machine, the combination with suitable mechanism for advancing and holding the saw to the ground, of a throat grinding wheel and an independent wheel for grinding the backs of the saw teeth, and mechanism for operating the same and for sustaining said wheels in close proximity, and means whereby said wheels are caused to conjointly act upon the same tooth between the movements of the saw necessary to bring successive teeth in position to be ground. In a saw grinding machine, with mechanism for shifting grinding-wheel back and forth, comprising a pivoted and adjustable lever, and a cam for operating said lever, and with a vertical or adjustable frame or gate for sustaining said wheel.



Saw Sharpening Machine.



THE quantity of pine in the Georgian Bay district north of the Spanish river would seem to be somewhat limited. On this question Mr. Hale, of the firm of Hale & Booth, remarked to me that he had recently gone over that country and had seen but little pine. He said: "It is a big territory, but no such a pinery as the Ottawa valley. Indeed, I do not know where we are going for pine before long. Of the countries I have travelled through recently I have found none to talk about, and in my opinion, no time should be lost in taking some steps towards the better preservation of the forests."

* * *

SPEAKING of the probable imposition of a duty on lumber entering the United States, Mr. Whitney, president of the St. Anthony Lumber Co., of Whitney, Ont., said: "It is my opinion that it will never be imposed. Cleveland is a free trade man, and not in sympathy with a duty of that kind. The Michigan men are already making a big noise over it, believing that, if imposed it would lead the Canadian government to put an export duty on logs, and consequently hurt their trade materially. At any rate, I think that if the United States imposes a duty it will be a very small one, and would not be felt by Canadian manufacturers during brisk business; but in a dull spell it certainly would be."

* * *

As a proof that Canadian lumber manufacturers have not exhausted their bank accounts, I may quote the statement of a machinery manufacturer that during a recent tour through Ontario, he captured orders to the amount of $40,000. This not only shows that the lumber manufacturers are yet in funds, but also that they have sufficient confidence in the future of the business to be willing to spend their hard dollars on new equipment. This is an encouraging condition of affairs. It is the opinion of shrewd observers in the business that we are on the eve of more stirring times. If this be so, then it is good policy on the part of the manufacturer to look into the condition of his manufacturing plant, and to put his mill in order to produce in the most economical and satisfactory manner what the market demands.

* * *

To Professor Roentgen, the discoverer of the "new photography," this generation is greatly indebted. Its advantages are multifarious. By its application it is possible to photograph through wood or metal. Although the experiments are as yet in their primary stage, the results so far secured leave little room to doubt the ultimate success of the discovery. It has occurred to me that even those engaged in the lumbering and woodworking industries will await developments with some eagerness. When perfected, the lumberman will be enabled to tell just what standing trees are free from interior defects, which way to saw to secure the finest markings, and how to cut knots and burls to get the best effects. The saw-miller will also be enabled to locate spikes in his logs, which so often destroy the saw. In fact, there seems to be no end to the commercial applications of this new kink in photography.

* * *

MR. David Halden, a prominent lumberman of Saginaw, Mich., is credited with the following statement: "Americans now either own all the saw mills in Ontario or control their output. So there is practically no need for the law that Mr. George Macdonald, of Algoma, proposes introducing in the Dominion House providing for restrictions being placed on the towing of logs across the upper lakes. Last year 142,000,000 feet of logs were towed to Bay City from Canada, but henceforth very little lumber will go there in that shape—it will go in board form. Nearly all the mills on the north shore of Lake Huron will be running night and day to fill contracts for the American markets." It might be pertinent to enquire what Mr. Halden has been drinking of late. If Americans either own or control all the saw mills of Ontario, I have been kept in blissful ignorance of the fact. Certainly a large portion of the output of Ontario mills finds a market in the United States, but I draw the line at the statement that the ownership of most of the saw mills of Ontario has passed into the hands of Americans. As to the quantity of logs which will be rafted across to Michigan this year, I have heard various estimates, ranging from two hundred to five hundred million feet. It must be admitted, however, that the Americans are getting tired of towing logs, and more manufacturing is likely to be done this year on the Canadian side, provided an import duty is not imposed by the United States government.

BY THE WAY.

THE lack of snow in the state of Maine this winter is said to have driven one man insane. He was a prosperous lumber merchant of Sangerville. Last autumn he took large contracts for the cutting and delivery of timber. He had the logs cut, but from dearth of snow, an unexpected and unusual contingency, could not get them out of the woods. Having expended large sums of money, he became financially embarassed from inability to make collections, with the result that he became mentally deranged.

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As a result of the approach of the rafting season, many river improvement companies are seeking renewals and extensions for their charters. During the past two weeks the Ontario Crown Lands Department received four applications. The Pickerel River Improvement Co. applied for a limitation of their charter to fifteen years, in order that the company might establish a sinking fund under the statute. Their request was granted. The Muskoka Rivers Improvement Company recently purchased the assets of the Muskoka Slide, Dam, and Boom Co., whose charter had expired. Consequently, the former made application for a renewal of the charter for fifteen years, which was also granted. Application for incorporation was made by the Blind River Improvement Co, to construct slides, dams, etc., on the Blind River. This was opposed by Messrs. Cook Bros. and others, on the ground that the improvements were unnecessary and that a large portion of the work for which they proposed to collect tolls had been built by the Blind River Lumber Co. in connection with their own mill. In this case inspection was ordered, and the matter is not yet settled. The fourth application for a charter was from the Big East River Improvement Co., which was opposed by the Whaley Lumber Co., of Huntsville, and the Brennan Lumber Co., of Hamilton, who argued that the proposed tolls were excessive. This is also under investigation.

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The firm of Messrs. Davidson, Hay & Co., of Toronto, have announced their intention of retiring from the lumber business. This action has been brought about by the steady increase of their already extensive wholesale grocery business and the unprofitable conditions which have surrounded the lumber business during the past few years. This firm have been heavy operators in lumber for a number of years, employing between three and four hundred men in winter and one hundred and fifty in summer. Their market has been principally in the United States, and they report having found no difficulty in disposing of their output, which is principally white pine. Of late years they have mauufactured some red pine deals for the English market. They own extensive limits situated on Lake Nipissing and French River, consisting of 68 square miles, which they purchased some time ago at a figure reaching well up to $750,000. These limits, together with their steam saw mill, electric light plant, steamers and all equipments, will be offered for sale on the 23rd inst.

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A DEPUTATION, including representatives of the leading pulp manufacturers, waited upon the Dominion government a few days since, urging the imposition of a duty of $3 a ton upon pulp wood. Among the deputation were Messrs. John Foreman, of the Laurentide Pulp Co.; F. H. Clergue, of the Sault Ste. Marie Pulp Mills; W. H. Masterman, of Chatham, N.B.; Mr. Barber, of the Cornwall Pulp Factory; W. H. Rowley, of the E. B. Eddy Co.; C. Riordon, of the Riordon Pulp Mills; J. Davie, of the Niagara Pulp Mills, and others. Among other reasons for the imposition of the duty the following were given:—At the present time there is very little pulp wood in the United States, with the exception of a quantity in the State of Maine, which, however, is rapidly becoming exhausted. Enormous quantities are therefore being imported into the United States from this country for the use of almost all the paper mills there, but when the product of the Canadian mills enters the United States, it is met with a customs duty, which handicaps the Canadian manufacturers, and constitutes a serious interference with the business. While about 100,000 cords are manufactured into pulp in this country, about 600,000 cords are exported. An export duty, it is claimed, would lead to the manufacture of pulp wood for the United States market in this country, and result in the investment here of many millions of dollars, and the employment of from 15,000 to 18,000 men.

The Beck Lumber Company, of Penetanguishene, Ont., are considering the erection of a new mill on the shore of Trading Lake.

CANADA LUMBERMAN

WEEKLY EDITION

The Lumberman Monthly Edition, 20 pages } $1.00 PER YEAR { The Lumberman Weekly Edition, every Wednesday

THIS PAPER REACHES REGULARLY THE PRINCIPAL LUMBER MANUFACTURERS AND DEALERS THROUGHOUT CANADA, AND WHOLESALE BUYERS IN THE AMERICAN AND FOREIGN MARKETS.

VOL. II. TORONTO, ONT., FEBRUARY 26, 1896 No. 8

CANADA LUMBERMAN

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Branch Office:

NEW YORK LIFE INSURANCE BUILDING,

MONTREAL.

Weekly Lumberman, published every Wednesday. Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

Lumberman, Monthly. A 20-page journal, discussing fully and impartially subjects pertinent to the lumber and wood-working industries. Contains interviews with prominent members of the trade, and character sketches and portraits of leading lumbermen. Its special articles on technical and mechanical subjects are especially valuable to saw mill and planing mill men and manufacturers of lumber products.

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VEST-POCKET

INSPECTION BOOK

Containing Rules for the Inspection and Measuring of Pine and Hardwood Lumber in the leading markets of Canada and the United States. Embracing also many useful tables and calculations of everyday service to lumbermen.

Prepared by the Editor of the 'Canada Lumberman."

Toronto, Canada
C H. MORTIMER, Publisher
1895

THE above is a fac simile of the title page of the latest and most complete Lumber and Inspection Book published.

We shall be pleased to send you a copy on receipt of four 3 cent Canadian postage stamps ° ° ° °

THE CANADA LUMBERMAN,

Toronto, Canada

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue.

AUCTION SALE

OF

TIMBER LIMITS

Saw Mill Property and Plant

The undersigned, having decided to retire from the Lumber Business, will sell by Public Auction, at the

CITY OF TORONTO

ON

Monday, the 23rd Day of April, 1896

(The Place and Hour of Sale will be Announced Later.)

their entire Property and Plant in Separate Lots.

Circulars and full information regarding above may be had on application at our office.

DAVIDSON, HAY & CO.,
36 Yonge street, TORONTO.

NOTICE

Sale of White-Pine Timber

TENDERS WILL BE RECEIVED AT THE office of the undersigned up to and including **SEVENTEENTH DAY OF MARCH NEXT,** for the purchase of the Pine Timber (only) over seven inches on the stump, on the understated Townships in the District of Parry Sound, described as follows:

Township of Lount, Berth No. 4. Area, 14 square miles. Concessions 9 to 14 inclusive, Lots 21 to 35 inclusive.

Township of Pringle, Berth No. 3, 13½ square miles. Concessions 9 to 14 inclusive, Lots 1 to 15 inclusive.

Township of Pringle, Berth No. 4, 17¾ square miles. Concessions 9 to 12, Lots 16 to 35 inclusive; Concession 13, Lots 16 to 25 inclusive; Concession 13, Lots 27 to 35 inclusive; Concession 14, Lots 16 to 22 inclusive; Concession 14, Lots 28 to 35 iuclusive.

Township of Mills, Berth No. 2, 12 square miles. Concessions 9 to 14 inclusive, Lots 1 to 15 inclusive.

The above Berths are well watered, with excellent facilities for lumbering.

Tenders may be for each Berth separate, or for the whole Lot, and should state the amount the parties tendering are prepared to pay for the Pine Timber (only) on each Berth or on the whole Lot.

The timber when cut is subject to Crown dues of $1 per thousand feet board measure, and ground rent of $3 per square mile per year.

Terms of payment: One-half cash, balance in 6 and 12 months, good notes, with interert at 7 per cent. per annum. The highest or any tender not necessarily accepted. Parties intending to explore the above limits should get off at South-River Station G T Railroad, and thence by stage to Mecunoma Post Office, Nipissing Road, where Mr. A. Urquhart will be found after February 15th, and can give all informat on regarding the limits.

For further particulars apply to

BURTON & BRO.
Barrie, Ont.

Barrie, 25th January, 1896.

WANTED.

SOME POSITION OF TRUST BY SCOTCH-man who has had eight years' experience in the lumber business. Accustomed to handle a number of men. Capable of estimating timber limits. Best of references.

P. F. GRAHAM BELL,
58 Ossington Ave., Toronto.

JUDICIAL SALE OF LICENSES

FOR

CANADIAN TIMBER BERTHS

Pursuant to the judgment in an action in the Common Pl as Division of the High Court of Justice for Ontario of Beck v. Spohn, et al, there will be offered for sale at public auction (with the approbation of the Local Master of said court at Barrie), by Messrs. Dickson & Townsend, Auctioneers, at their rooms, No. 22 King Street West, in the City of Toronto, Ontario, at the hour of 12 o'clock noon, on

Thursday, the Twenty-Third Day of July, 1896;

(A) The following Ontario Government Provincial timber berth licenses:—

Parcel No. 1—License for berth No. 2 in the Township of Finlayson, in the District of Nipissing; area, including road allowances, about 10¾ square miles.

Parcel No. 2—License for berth No. 3 in the Township of McCraney, in the District of Nipissing; area, including road allowances, about 11½ square miles.

Parcel No. 3—License for b rth No. 19 in the District of Rainy River; area, about 11 44-100 square miles.

Parcel No. 4—License for berth No. 20 in the District of Rainy River; area, about 5 square miles.

Parcel No. 5—License for berth No. 21 in the District of Rainy River; area, about 4 square miles.

Parcel No. 6—License for berth No. 25 in the District of Rainy River; area, about 11 square miles.

Parcel No. 7—License for berth No 27 in the District of Rainy River; area, about 7 square miles.

Parcel No. 8—License for berth No. 65 in the District of Rainy River; area, about 7 square miles.

Parcel No. 9—License for berth No. 67 in the District of Rainy River; area, about 11½ square miles.

Parcel No. 10—License for berth No. 68 in the District of Rainy River; area, about 4 square miles.

ALSO—(B) The following Dominion of Canada Government timber berth license:—

Parcel No. 11—License for berth No. 292, situated on the north fork of High River, in the District of Alberta; area, about 47 8-100 square miles.

TERMS OF SALE.

Each parcel will be offered separately and subject to a reserved bid fixed by the said Local Master.

The biddings will be of a price per square mile.

The license of each berth will be sold subject to the various conditions contained or to be contained therein, and to the various statutes, orders in Council, regulations, dues and conditions now affecting or which may hereafter be passed or imposed affecting the same.

The price will be computed according to the areas stated above, and no allowance will be made for shortage or for water or for road allowances. No error in any of the above descriptions or in any map exhibited by the Vendor's Solicitors shall annul the sale, nor shall any compensation be allowed in respect thereof.

Ground rent and Government dues will be apportioned to the date of sale and assumed by the purchaser from the date of sale.

No timber on any berth shall be cut until the purchase money of the license thereof has been paid in full.

The purchaser shall at the time of sale pay down a deposit in proportion of $ 5 for every $100 of the purchase money, and shall pay the balance into court without interest to the credit of this cause, within thirty days after the sale.

The parties to the action, including the Vendor, shall be at liberty to bid.

The other conditions of sale will be the standing conditions of the court.

Maps of the berths may be seen at the offices of the Vendor's Solicitors.

Further particulars may be had from Messrs. BLAKE, LASH & CASSELS, Canadian Bank of Commerce Building, Toronto, Vendor's Solicitors, and Messrs. M'CARTHY, PEPLER & M'CARTHY, Solicitors, of Barrie.

Dated at Barrie this third day of December, A.D. 1895.

J. R. COTTER, Master.

WANTED.

A MAN IN CANADA, ACQUAINTED WITH the band saw trade, to sell on commission. Address, "BAND", Care CANADA LUMBERMAN, Toronto.

FOR SALE.

MAPLE LUMBER—FIFTEEN THOUSAND two inch, thirteen thousand one and one-quarter inch, all cut of 1893. Box 176, Listowel, Ont.

WANTED.

A CONTRACT OF SAWING ONE OR TWO million feet per year, with portable mill; twelve years' experience. Box 303, Creemore, Ont.

FOR SALE.

BILL LUMBER, 12 to 30 FT. LONG; WHITE and Red Pine. Mill running now. Orders filled at once.

D. O'CONNOR, Sudbury, Ont.

FOR SALE.

WE ARE OPEN TO CONTRACT AND CUT to order Hemlock (10 to 20 feet), Maple, Birch, Elm and Cedar, delivered on vessel Sauble Beach.

SAUBLE FALLS LUMBER CO.
Sauble Falls, Ont.

FOR SALE.

THE CLIFFORD PLANING MILLS—A GOOD chance for a live man; machinery mostly new and in good running order; some contracts in hand now which would be turned over to purchaser. Apply to

SAMUEL HOTEL,
Clifford, Ont.

CURRENT TRADE CONDITIONS.

ONTARIO.

There have been indications during the past week that the lumber trade is improving, although only to a limited extent. These indications, it is hoped, will develop into actual realities with the opening of spring. That such developments will take place in the spring, however, is not yet certain. The wholesale dealers report some inquiry for hardwoods from United States customers, but the orders are for small lots for immediate consumption. It would seem that American money is being gathered to meet the bond issue, and consequently there is little to invest in lumber beyond supplying the present requirements. For local consumption, barn stock, oak, elm, and white ash are meeting with some inquiry, at firm quotations. Mill men are holding firm to prices, and little cutting is reported. The outlook for staves and heading is of an encouraging character. The recent purchase by American firms of thirty million feet of box lumber in the vicinity of Ottawa has given the market in that section a healthy tone. This, together with an apparently good condition of trade in England, are regarded as satisfactory indications of a fair business during the coming season. The bulk of sales have consisted of coarse lumber, and have been made by the Hawkesbury Lumber Co., W. C. Edwards & Co., J. R. Booth, Gilmour & Hughson, and the Canada Lumber Co. These sales have so reduced the

stock of coarse grades that no difficulty is anticipated in disposing of the balance at fair prices. Of first-class lumber the quantity on hand in the Ottawa valley yet unsold is said to be the smallest for twenty years, due largely to the good demand from England. Little change has taken place in the white pine situation, although a few small purchases have recently been made by Buffalo wholesalers. The outlook for building operations, which consume considerable white pine, is not the brightest in several of the larger cities, but from the different towns and throughout the country a satisfactory report is received.

QUEBEC AND NEW BRUNSWICK.

Operations in the woods in New Brunswick are very active, being stimulated by an abundance of snow. With a few more weeks of favorable weather the output of logs will be of an average size. The latest reports from the British market are of an encouraging nature, stocks of N. B. and N. S. spruce being light and the demand good. During the past week some shipments have been made to the United States, but the demand from that source is not brisk. In the province of Quebec sufficient snow for hauling is also reported. There is a very moderate local demand, with a slight improvement for foreign shipment.

BRITISH COLUMBIA AND MANITOBA.

The export lumber trade in British Columbia continues to improve, and several new vessel charters are reported for foreign ports. The list of charters shows a large business well distributed, and the docks present an unusual scene of activity for the month of February. There is evidently a desire to purchase supplies before the combination lately announced shall be put into operation. From present indications the combine will not have all smooth sailing, it being announced that the Victoria Lumber Co. are about to re-open their mill at Chemainus, and fight the trust. The company owns 150,000 acres of timber land, and is composed principally of Americans. From a well-informed source it is learned that the combine only embraces four British Columbia mills, and is therefore not as strong as it was believed to be so far as that province is concerned. In Manitoba manufacturers are preparing for a good spring trade, but little movement is reported as yet. Better prices are anticipated this season, as the formation of the British Columbia combine will remove to some extent the keen competition from that source.

UNITED STATES.

Since our last report the American market has not brightened to the extent anticipated, and few indications are observable that the trade has made much headway as a result of the successful bond issue. In some features, however, there are promising signs, several of the larger consuming industries showing evidences of revival. It is a feature of note that manufacturers and dealers seem confident of a good lumber trade when the season has well set in. The movement of lumber at Tonawanda and Buffalo has slightly increased, while in Michigan a sale is reported amounting to 15,000,000 feet. In hardwoods red and quarter-sawed oak receives most inquiry. At New York there are indications of a lively season, the amount which will be expended in building operations this year being estimated at $100,000,000. A fair movement is reported at Boston and other eastern points. In white pine fields little buoyancy is experienced, but a year much more satisfactory than 1895 is confidently expected.

FOREIGN.

Of Canadian spruce in Great Britain the Timber Trades Journal says: "Prices are firm, but business seems quiet. Third spruce brings £6 12s. 6d. to £6 15s., with 10s. less for fourths. The over-winter stock is small, and there seems no likelihood of any retrocession in the market, as the demand must take an active turn when the season gets further advanced. The absence of wane in even the commoner kinds of spruce gives it the preference over other cheap kinds." Quebec birch is also reported to be again coming into request, owing to the high price of mahogany, and stocks on hand are small. Denny, Mott & Dickson's wood report, dated 4th February, says of Canadian timber: "The London demand for both waney and square yellow pine has been quiet, but the anticipation of activity on the shipbuilding rivers serves to keep prices very firm, and strengthens the hands of Canadian agents, who are booking orders for next season's supplies at a decided advance on the high prices of last year." At Liverpool there seems to be a steady demand for birch timber and planks. The spruce supply is also gradually diminishing, and prices are likely to advance. In South America the trade is decidedly quiet, and little demand is reported.

STOCKS AND PRICES.

CANADA.

Button & Fessaut, of Wingham, Ont., have purchased $6,000 worth of logs.

Large quantities of ties are being taken out in Manitoulin Island by the Rathbun Co.

30,000,000 feet of lumber are in stock in M. M. Boyd & Co.'s yards at Little Bob.

The steamer St. John City, now at St. John, N. B., will take 100 loads of birch and some deals to England.

The firm of Hale & Booth are getting out this winter about 300,000 cubic feet of timber, and 25,000,000 feet of logs.

J. F. Hamilton, of St. John, N. B., shipped last week to New York, per sch. Tay, 109,855 feet spruce plank, and 305,500 laths.

Large quantities of heavy hewn birch timber are being taken out at Sussex Station, N. B., which will be sent to England via the Beaver line.

The probable output of lumber of the St. Anthony Lumber Co.'s mills at Whitney, Ont., during the coming summer, will be about 50,000,000 feet.

The Commissioner of Crown Lands for Quebec will offer for sale at Hull, on the 18th inst., several miles of timber land in the Agency of Upper Ottawa.

It is said that Mr. Parson, of Golden Lake, Ont., has contracted with an Ottawa firm for some twenty-five cars of dimension timber to be delivered at different points in New York.

The Ottawa and Aylmer Railway and Bridge Co., Albert st., Ottawa, are asking tenders until the 10th of March for the supply of 12,000 good, sound, standard railway ties, of hemlock, cedar, and tamarac, to be delivered before April 10th next, at points between Hintonburg and Britannia. Dimensions, 8 ft. long, 6 in. thick, not less than 6 in. face.

S. Swanton, of Lindsay, is inspecting 25,000 cedar posts and a large quantity of pulp wood, ties, telegraph poles, etc., stored along the Haliburton and Coboconk railway lines. In all Mr. Swanton has contracted for 200,000 cedar posts, 30,000 of which will be supplied by M. A. Hopkins, of Kinmount, and 10,000 by Jos. Brisbin, of Rettie's Station. Shipping will start about the middle of March.

Mr. MacGrady, Crown timber agent for that portion of the Ottawa district in the province of Quebec, states that on the Gatineau river there will be a decided falling off in the output of logs this winter, as MacCracken & Boyle and Lague & Cox are not operating. Last year the former firm had two shanties working, and besides received logs from 71 jobbers, who had each two or three men employed. Messrs. Gilmour & Hughson and Messrs. W.C. Edwards & Co. are operating on about the same extent as last year on that river, the former taking out about 500,000 pieces, and the latter about 300,000. On the Temiscamingue and Kippewa rivers the operations are about the same as last winter, and on the Colonge they are more extensive, on account of Messrs. Bryson & Fraser working several new shanties.

UNITED STATES.

Col. A. T. Bliss will take cut 14,000,000 feet of logs to stock his Carrollton mill.

The Meiklejohn & Hatten Lumber Co., of New London, Wis., is receiving 15 carloads of white pine logs per day.

D. C. Pelton, of Cheboygan, Mich., has purchased 4,000,000 feet of logs from Hollister, Jewell & Co., of Oshkosh, Wis.

Penoyer Bros, of Bay City, Mich., report having sold 2,500,000 feet of lumber at $22 straight, and 1,500,000 feet of norway at a good figure. They expect to cut 40,000,000 feet of logs this winter.

A dispatch from Jackson, Ky., states that C. E. Smith, of Richmond, Ky., representing New York parties, is placing a contract for 40,000,000 feet of oak timber from the head of Kentucky Creek, a tributary of the Kentucky river.

SHIPPING MATTERS.

A ship, 1047 tons, has been chartered, Quebec to Liverpool, timber, 19s.; chartered abroad.

The ship Karoo has been chartered to load deals at West Bay, N. B., for west coast England at 40s.

The ship Indus has been chartered to load deals at Cambellton, N. B., for Ireland or Marseilles, at 40s. or 55 franks respectively.

Ship Z. Ring has been chartered to load deals at Grindstone Island, Herring Cove or West Bay for west coast England at 40s. spring loading.

The Beaver line boat Lake Winnipeg sailed from St. John, for Liverpool, Eng., on the 20th inst., with 10,000 maple blocks and 300 standards of deals.

The first steamer chartered to load deals at St. John, N. B., is the Palmas, 1,540 tons, by Wm. Thomson & Co., at 40s, to the west coast England.

From Digby, N. B., the schooner Shafner Bros. has cleared for Boston with wood and piling. Bark Ethel Clarke has finished loading lumber at Bear river for Cienfuegos.

The steamship Vancouver sailed from Portland, Me., on the 13th inst. The Canadian portion of her cargo was valued at $132,453, among which were the following: 2,439 wooden doors, 986 maple blocks, 50 bundles of staves, 605 deals, 1,610 packages of handles, 175 crates of pulleys, and 90 logs.

THE SITUATION.

REFLECTED THROUGH CORRESPONDENCE OF THE "WEEKLY LUMBERMAN."

A. S. Schryer, Ridgetown, Ont.: Car oak is in good demand, also white ash cut to sizes. Prices remain firm, and the output of logs will be of an average size.

W. Harris, Day Mills, Ont.: Stocks are moving actively at the local mills in this locality, the demand coming principally from farmers for hemlock stock.

R. H. Klock & Co., Klock's Mills, Ont.: Good strips and sidings are in most demand, and prices advancing. Stocks in hand are small, being mostly pine, mill run.

M. F. Beach & Co., Winchester, Ont.: Pine and ash have received most call. Large quantities of ash, with some elm, are in stock, medium quality log run. Prices show a tendency to decline, and large quantities of logs are being taken out.

McCall & Mason, St. Williams, Ont.: Red oak, chestnut, pine and basswood are in most demand. Have recently sold 80 M ft. elm, log run, at $9. Stocks are large and of an average class, being chiefly hardwood. We will saw this season about 600,000 ft. of pine and hardwood.

S. Gillies, Ailsa Craig, Ont.: Have recently sold $15,000 worth of bass. Our stocks consist of 200 M feet bass, 200 M ft. soft elm, 100 M ft. rock elm, 600 M ft. white oak, and 50 M ft. hard maple. There seems to be little improvement in prices, but we hope for an advance in the spring.

F. Deutschmann, Teeswater, Ont.: Soft elm is in most demand and good stocks scarce. Hemlock for barn order is moving freely. Have sold cedar for bridging at $12, but customers are slow contracting. Stocks consist principally of one and two inch maple, two-inch elm, one and two-inch hemlock, with some one-inch ash and basswood. Have many inquiries, but few sales are effected, everybody apparently waiting for a better movement in the spring.

J. Lawrence & Sons, Watford, Ont.: Our manufacture consists of staves, heading, etc., for which prices are very firm, and likely to advance, as stocks are light. Last year we cut over three million feet of elm logs into staves, which were sold at a good figure. Have made sales of three million staves at an advance over last year's prices. Should there be a good crop of fruit, it is doubtful if the supply of No. 2 staves will be equal to the demand, and mill men must get a considerable advance.

THE IMPORT LUMBER DUTY.

The developments of the past couple of weeks in regard to the threatened imposition of an import duty on lumber entering the United States have left little doubt as to the outcome of the proposed tariff. It now seems quite evident that the bill will not become law. Speaking of the question, the Northwestern Lumberman, of Chicago, says: "In Congress it is exceedingly evident that no remedial financial legislation will occur this session, late action in the Senate on the tariff bill pointing to that outcome."

BUSINESS DIFFICULTIES AND CHANGES.

W. H. Beardsley, lumber, Trail, B. C., has sold out to D. J. Mossman.

Efforts are being made by J. S. Atkinson, lumber merchant, of Albert, N. B., to secure a compromise at 40 cents on the dollar.

MILLS

Having Brown Ash 12, 14 and 16 ft. firsts and seconds, inch Bass firsts and seconds 12 feet, or any other Hardwood Lumber, can sell same for cash by addressing

H. D. WIGGIN,
No 89 State St., BOSTON, MASS.
Inspection at mill.

CANADIAN EXPORTERS AND WHOLESALERS

Thos. Meaney & Co. .

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103 Bay St. - Toronto, Ont.

LUMBER

MILLMEN—Send us list of dry hardwoods.

DONOGH & OLIVER

Wholesale Dealers in **Lumber, Lath and Shingles**

TORONTO: 204-205 Board of Trade Building. -:- BUFFALO: Dock foot of Hertel Avenue.

Huntsville Lumber Co., Ltd.

—: HUNTSVILLE, ONT. :—

MANUFACTURERS OF LUMBER LATH AND SHINGLES

WE are open to cut White Pine and Hemlock Bill Stuff. Have for Sale a Quantity of Dry Mill Stocks and Sidings, also 16 in. Pine Shingles and 4 ft. Lath 1½ in. wide.

CORRESPONDENCE SOLICITED

THE PEMBROKE LUMBER CO. LTD.

MANUFACTURERS AND WHOLESALE DEALERS IN

DIMENSION TIMBER OF ALL SIZES AND KINDS, JOISTS, CAR DECKING, CAR SILLS, SHIP DECKING, AND ALL KINDS OF ROUGH AND DRESSED LUMBER.

Write us for Quotations on all Bills PEMBROKE, ONT

FOR SALE

Red Pine Dimension Logs, can be any length up to 50 feet to suit purchaser, and would contract for two to three million for next summer delivery at Spanish River. Special long lengths could be loaded on cars at Rayside, C. P. R. Will have five to six million feet of WHITE PINE, first cut on limit at Spanish River. And have about five million feet at mouth French River which could be delivered at opening of navigation . . . . . .

ADDRESS

BOOTH & GORDON - Sudbury, Ont.

WM. MASON & SONS . . . Manufacturers of..... and Dealers in

LUMBER and DIMENSION TIMBER LATH and SHINGLES

We have the largest and best equipped Dimension Saw Mill in Eastern Canada. All our machinery is of the latest and most improved pattern, and we are prepared to quote prices on and supply at the shortest notice any orders that may be submitted to us.

Address, P. O. Box 1020, OTTAWA, ONT.

WHOLESALE LUMBER

OFFICE: 20 Aberdeen Chambers

Jas. G. CANE & Co.

HARDWOOD a Specialty

TORONTO

JAS. PLAYFAIR & CO.

Manufacturers and Wholesale Dealers

LUMBER • LATH • SHINGLES

Contractors for Railway Supplies
BILL TIMBER a Specialty . . . MIDLAND, ONT.

THE REID CO., of TORONTO, Ltd.

Handle all kinds of Pine and Hardwood Lumber
LONG OAK BILLS A SPECIALTY

LUMBER WHOLESALE AND RETAIL **COAL**

Office, Corner King and Berkeley Sts. DOCK, FOOT OF BERKELEY ST.

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WHOLESALE LUMBER, LATH, SHINGLES, ETC.

Write for Stock List

PACIFIC COAST LUMBER CO.

MANUFACTURERS OF . . . . . .

British Columbia Red Cedar Lumber and Shingles
Kiln-Dried Bevel Siding, V Siding, Ceiling, Wainscotting
Door Stock, Base, Casings, Mouldings, etc.

We do accurate work and make reasonably prompt shipments. NEW WESTMINSTER, B.C.

ONE DOLLAR

will pay your subscription to the weekly and monthly CANADA LUMBERMAN for

ONE YEAR

KILN-DRIED BIRCH FLOORING SHEETING .. and .. CEILING **$20.00** SAMPLES BY MAIL **KNIGHT BROS.** Bulk's Falls, Ont.

FOREIGN EXPORTERS AND IMPORTERS

WE want to buy FOR CASH the following kinds of Lumber : : : : :

Red Oak, Soft Elm
Basswood (all thicknesses)

Write us promptly, stating what you have to offer in each kind and quantity of each thickness, also dryness, etc., with lowest prices.

Empire Lumber Co. - Buffalo, N. Y.

POOLE & HOTCHKISS

Pine and Hardwood Lumber

We Want: 1 in. and 1 × 5" and 6" Clear and Picks
10 ft. Cedar Posts . . . . .
1 in. Good Basswood . . . . .

270 W. Genesee St. • BUFFALO, N.Y.

To Saw Mill Owners

WANTED FOR CASH: PINE SQUARES, SIDINGS, &C.

Address— JOHN ASHWORTH & CO. Timber Importers
Established 1856 WATERFOOT, MANCHESTER, ENGLAND

WILLIAM B. YOUNG Successor to Young & Keeler Co.

WHOLESALE DEALER AND MANUFACTURER

Elm, Basswood, Birch and Maple

Canadian mill men invited to offer stocks. -:- 54 South Street, NEW YORK.

SCATCHERD & SON 1053 Seneca Street, BUFFALO, N.Y. . .

—: WANT :—

ROCK ELM

COMMUNICATE AT ONCE.——7, 8, 14 and 16 feet, firsts and seconds

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A MILL PROPERTY
SECOND-HAND MACHINERY

An Advertisement in the "Wanted" and "For Sale" Department of the . . .
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Will secure for you a Buyer or Seller, as the case may be. Address,
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CANADIAN POINTS, NEW YORK CITY AND ALL POINTS REACHED BY WATER FROM ALBANY
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TORONTO, ONT.

TORONTO, Feb. 26, 1896.

CAR OR CARGO LOTS.

1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	17 00
1x10 and 12 common	13 00	14 00
1x10 and 12 spruce culls	10 00	11 00
1x10 and 12 mill culls	10 00	11 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	12 00	13 00
1 inch siding ship culls	11 00	12 00
1 inch siding mill culls	9 00	10 00
Cull scantling	8 00	9 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 inch strips 4 in. to 8 in. mill run	14 00	15 00
1 inch strips, common	12 00	13 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		2 30
XX shingles 16 inch		1 35
Lath, No. 1		1 70
Lath, No. 2		1 40

HARDWOODS—PER M. FEET CAR LOTS.

Quality, 1s and 2s unless otherwise specified.

Ash, white, 1 to 2 in.			$26 00	$28 00	Cherry	1	" 1½ 50 00 60 00
" " 2½ to 4			30 00	32 00	"	2	" 4 60 00 65 00
Ash, black, 1sts and 2nds, 1 to 1½ in.			21 00	23 00	Elm, soft	1	to 1½ $14 00 $15 00
Ash, black, 1sts and 2nds, 2 to 4 in.			23 00	25 00	" "	2	" 3 15 00 16 00
"sh, M. R., 2	"	1½	18 00	20 00	" rock	1	" 1¾ 16 00 18 00
" 1	"		20 00	24 00	" "	1½	" 3 20 00 22 00
Birch, 2	"	½	22 00	24 00	Hickory	1½	" 2 28 00 30 00
" 1	"		24 00	26 00	Maple	1	" 1¾ 16 00 18 00
" sqrs. 4x4	"	8x8	24 00	26 00	Oak, red, p'n	1	" 1½ 28 00 30 00
Basswood	1	¼	16 00	18 00	" "	2	" 4 30 00 32 00
"	1½		19 00	20 00	" white "	1	" 1½ 28 00 30 00
" m. r.	1	¼	14 00	16 00	" " "	2	" 4 30 00 35 00
Butternut	1	½	23 00	25 00	" quart'd	1	" 2 48 00 52 00
"	2		25 00	28 00	Walnut	1	" 3 85 00 100 00
Chestnut	1		24 00	2 600	Whitewood	1	" 2 32 00 36 00

OTTAWA, ONT.

OTTAWA, Feb. 26, 1896.

Pine, good sidings, per M feet, b.m.	$30 00	35 00
Pine, good strips, " " "	26 00	30 00
Pine, good shorts, " " "	18 00	25 00
Pine, No. 1 dressing sidings, per M feet, b.m.	17 00	20 00
Pine, " " strips, " " "	15 00	18 00
Pine, " " shorts, " " "	13 00	14 00
Pine, 10 s.c. and better stock, " " "	13 00	16 00
Pine, 8 s.c. " " "	11 00	12 00
Pine, " sidings " " "	13 00	15 00
Pine, " strips " " "	9 00	12 00
Pine, " shorts " " "	7 00	9 00
Pine, box culls " " "	9 00	11 00
Pine mill culls " " "	9 00	10 00
Lath per M No. 1	1 00	1 25
Lath per M No 2	80	1 00
1x10 No. 1 barn	18	20
1x10 No. 2 "	16	18
1x8 & 9 No. 1 "	16	18
1x8 & 9 No. 2 "	15	

QUEBEC, QUE.

QUEBEC, Feb. 26, 1896.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For inferior and ordinary according to average, quality etc., measured off	16 @	22
For fair average quality, according to average, etc., measured off.	20	26
For good and good fair average " " " " "	25	30
For superior " " " " "	32	40
In shipping order " " " " "	36	42
Waney board, 18 to 19 inch " " " " "	36	42
Waney board, 19 to 21 inch " " " " "	38	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	40	49

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	22	30

BIRCH.

16 inch average, according to average and quality	21	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $40 to $43 for 3rd quality.
Bright spruce, according to mill specification, $40 $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality. F.O.B. batteau.

SAGINAW, MICH.

SAGINAW, Mich., Feb. 26, 1896.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$45 00	Selects, 1in., 8in. and up wide	$39 00
1¼, 1½ and 2 in.	45 00	1¼, 1½ and 2 in.	41 00
2½ and 3 in.	53 00	2½ and 3 in.	47 00
4 in.	56 00	4 in.	50 00

FINE COMMON.

1 in., 8 in. and up wide	33 50	2½ and 3in., 8in. and up wide	40 00
1¼, 1½ and 2 in.	35 00	4 in.	45 00

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	23 50	2½ and 3in., 7in. and up wide	35 00
1¼, 1½ and 2 in.	35 00	4 in.	38 00

STRIPS. A AND B (CLEAR AND SELECTS).

1¼ in., 4, 5 and 7 in. wide	34 00	1 in., 4, 5 and 7 in. wide	32 00
6 in. wide	30 00	6 in. wide.	36 00

FINE COMMON OR C.

1¼ in., 4, 5, 6 in. wide	30 00	1 in., 6 in. wide	30 00
1 in., 4, 5 in. wide.	25 00		

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24 00	1 in., 4, 5, 6 in. wide	22 00

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in	16 00	1 in., 4, 5 and 7 in.	15 00
1 in., 6 in.	17 00	1 in., 6 in.	17 00

NO. 2 FENCING OR NO. 4 FLOORING.

1 in., 4, 5 and 7 in.	13 50	1¼ in., 4 to n.	14 00
1 in., 6 in.	14 00	No. 3 fencing, 1 in., 6 in.	12 00

SHELVING.

No. 1, 1 in., 10 in. stocks	25 00	No. 2, 1 in., 7 and 8in. stocks	19 00
1 in., 10 in. and up wide	26 00	1 in., 10 in. stocks	21 00
1 in., 12 in. stocks	29 00	1 in., 12 in. stocks	24 00
1 in., 12 in. and up wide	30 00	1 in., 10 in. and up wide	23 00
1¼ in. 1½ and 2in., 8in. and up wide	29 00	1 in., 13 in. and up wide	25 00

BARN BOARDS OR STOCKS.

No. 1, 12 in.	20 00	No. 2, 9 in.	14 00
10 in.	16 50	8 and 7 in.	14 00
9 in.	16 50	No. 3, 12 in.	12 50
8 and 7 in.	16 50	10 in.	11 00
No. 2, 12 in.	16 00	9 in.	11 00
10 in.	14 00	8 in.	11 00

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$ 9 00	1 in., 13 in. and up wide	$11 50
1 in., 6 in. wide	10 00	1¼, 1½ and 2 in., 7 in. and up wide	11 50
1 in., 7 in. wide and up	10 50		

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9in. wide	17 00	1 in., 10 in. and up wide	18 00
1 in., 6 in. wide	18 00	1¼, 1½ and 2 in., 8in. and up wide	20 00

COFFIN BOARDS.

No. 1, 1 in., 13in. and up	20 00	No. 1, mill culls	8 00
No. 2	17 00	No. 2, or red horse	6 50

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23 00	No. 2	19 00
No. 1 (nearly clear)	21 50	No. 3	15 00

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16ft.	$ 8 50	Hemlock, 2x4 to 10, 12 to 16 feet	8 00
18 ft.	10 50	2x12	8 50
20 ft.	11 50	Add $1 to each additional 2ft. in length.	
22 and 24 ft.	12 50		

SHINGLES, 18-IN.

Fancy brands, XXXX	3 00	Standard brands, river made, XXXX	2 75
Clear Butts	1 90	Clear Butts	1 75

WHITE PINE LATH.

No. 1	1 75	No. 2	1 35
		Hemlock	1 25

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA N. Y., Feb 26, 1896.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in.	$45 00	47 00	No. 3, 1¼ to 2 in.	15 00	17 00
2½ and 3 in.	50 00	53 00	Shelving, No. 1, 13 in and up, 1 in.	30 00@31 00	
4 in.	54 00	56 00	Dressing 1¼ in.	24 00	25 00
Selects, 1 in.	39 00	40 00	1¼ x 10 and 1		26 00
1¼ to 2 in.	39 00	42 00	1½ in.	24 00	25 00
2½ and 3 in.	47 00	50 00	2 in.	25 00	28 00
4 in.		52 00	Mold st'ps, 1 to 2 in.	31 00	33 00
Fine common, 1 in.	35 00	37 00	Barn, No. 1, 10 and 12 in.	19 00	21 00
1¼ and 1½ in.	34 00	36 00	6 and 8 in.	18 50	20 00
2 in.	34 00	36 00	No. 2, 10 and 12 in.	15 00	16 00
3 in.		45 00	No. 3, 10 and 12 in.	13 00	14 00
4 in.		45 00	6 and 8 in.	12 50	13 50
Cut'g up, No. 1, 1 in.	28 00	30 00	Common, 1 in.	15 00	16 00
1¼ to 2 in.	32 00	34 00	1¼ and 1½ in.	17 00	18 00
No. 2, 1 in.	15 00	17 00	2 in ...	18 00	20 00
No. 2, 1¼ to 2 in ..	22 00	24 00			

WHITE ASH.

1st & 2nd, 1 inch,	32 00	33 00	2½ to 4 in.	28 00	30 00
1¼ to 2 in.	33 00	34 00	Strips	17 00	18 00
			Culls	9 00	10 00

BLACK AND BROWN ASH.

1st & 2nd, 8 inch up,	20 00	22 00	Com. & good culls	10 00	12 00

BIRCH.

1st & 2nd, 6 inch & up, red	28 00	30 00	1st & 2nd, white, 6 in. & up,	18 00	
			Com & good culls	10 00	12 00

ELM.

1st & 2d, rock, 8in. & up,	18 00	22 00	1st & 2d, soft, 8 in. & up,	16 00	18 00

MAPLE.

1st & 2d, hard, 6in. & up	18 00	20 00	1st & 2d, soft, 6in. & up,	17 00	19 00

WHITE OAK.

1st & 2nd, plain, 8 in & up	26 00	28 00	Clear squares, 5x5 to 8x8	35 00	
Good common	15 00	17 00	1st & 2nd quartered, 6 in. up	45 00	50 00
Good culls	10 00	12 00	Common quartered	25 00	30 00

RED OAK.

1st & 2nd	25 00	27 00	Quartered 1st & 2nd	42 00	44 00
Common	14 00	16 00	Common	22 00	26 00
Cull	9 00	10 00			

NEW YORK CITY.

NEW YORK, N. Y., Feb. 26, 1896.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$40 00 @	50 00	Building orders	$28 00 @	40 00
Decking	45 00	55 00			

SPRUCE.

6 to 9 in.	14 00	15 00	10 to 12 in.	16 00	16 75
6 to 12 in.	14 50	15 50	Lath	1 85	1 90
9 to 12 in.	15 50	16 00			

HARDWOOD.

4/4 and thicker, No. 1 and 2					Black Ash, 10 to 16		23 00
4/4	"	"	"		Soft Elm,	"	17 00
"	"	"	"		Hard Maple,	"	21 00
"	"	"	"		Basswood,	"	20 00
"	"	"	"		Birch,	"	23 00
"	"	Black Ash, Com. and Shipping Cull, M.C.O.					14 00
"	"	Soft Elm,		"	"	"	12 00
"	"	Hard Maple,		"	"	"	14 00
"	"	Basswood,		"	"	"	12 00
"	"	Birch,		"	"	"	14 00

ALBANY, N.Y.

ALBANY, N. Y., Feb. 26, 1896.

PINE.

Uppers, 3 in. up	$50	$52	Dressing boards, narrow	$19	$21
2½ in.	50	52	West India shipping boards	16	17
1 to 2 in.	45	48	Box boards	12	14
4 inch uppers	50	52	10-in. dressing and better	26	30
Selects, 2½ in. up	40	42	10-in. common	14	15
1 to 2 in.	36	40	12-in. dressing and better	26	32
Fine common, 2½ in. and up	38	40	Common, 1x12	14	16
1 to 2 in.	34	38	No. 1 barn, 1x12		20
No. 1 cut, 1 to 2 inch	25	35	1x10	18	21
No. 2	18	25	1x8	16	18
No. 3	17	20	No. 2 barn, 1x12	17	19
No. 1 molding, 1 to 2 in.	33	36	1x10	17	19
No. 2 molding, 1 to 2 in.	25	28	1x8	17	19
Stained saps		20	Shaky or star clear, 1 to 2 in.	19	21
Bracket plank	30	35	Dressing	16	18
Shelving boards, 12-in. up	28	30	Common	11	15

LATH.

Pine	$2 25	Spruce	$2 00

SHINGLES.

Sawed Pine, ex. XXXX	$4 25	$4 30	Bound butts, 6x18	$6 00	$6 15
Clear butts	3 25	3 35	Hemlock	2 15	2 30
Smooth, 6x18	5 40	5 50	Spruce	2 20	2 30

OSWEGO, N.Y.

OSWEGO, N. Y., Feb. 26, 1896.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$45 00@46 00
Pickings, " "	36 00 38 00
No. 1, cutting up, " "	31 00 33 00
No. 2, cutting up, " "	24 00 25 00
In strips, 4 to 8 wide, selected for moulding trips, 14 to 16 ft.	30 00 32 00

SIDING.

1in siding, cutting up 1icks and uppers	32 00@39 00	1¼ in selected	38 00@43 00
1in dressing	19 00 21 00	1¼ in dressing	20 00 22 00
1in No. 1 culls	14 00 15 00	1¼ in No. 1 culls	15 00 17 00
1in No. 2 culls	13 00 14 00	1¼ in No. 2 culls	14 00 15 00
		1 in. No 3 culls	11 00 12 00

1X12 INCH.

12 and 16 feet, mill run	21 00 24 00
12 and 16 feet, No. 1 and 2, barn boards	19 00 20 00
12 and 16 feet, dressing and better	27 00 31 00
12 and 16 feet, No. 2 culls	15 00 16 00

1¼X10 INCHES.

Mill run, mill culls out.	$22 00@25 00	No. 1 culls	17 00 18 00
Dressing and better	27 00 35 00	No. 2 culls	14 00 15 00

1X4 INCHES.

Mill run, mill culls out	17 00 21 00	No. 1 culls	14 00 15 00
Dressing and better	24 00 30 00	No. 2 culls	12 00 13 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20 00 25 00	6, 7 or 8, No. 1 culls	16 00 17 00
6, 7 or 8, drsg and better	25 00 30 00	6, 7 or 8, No. 2 culls	14 00 15 00

BOSTON, MASS.

BOSTON, Feb. 26, 1896.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$11 50	12 00	¾ inch	$ 9 25	9 50
Coarse No. 5	15 00	15 50	11-16 inch	8 50	8 75
Refuse	13 00	13 25	⅝ inch	8 00	8 25
Outs	9 00		Clapboards, sap ext.	45 00	46 00
Boxboards, 1 inch	10 75	11 00	Sap clear	41 00	42 00
⅞ inch	9 75	10 00	Sap, 2nd clear	34 00	36 00
			No. 1	23 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in.	$50 00@52 00		Fine com., 3 and 4 in	46 00	50 00
1¼, 1½ and 2 in.	52 00	53 00	No. 2, 1 in. Fine com.	28 00	30 00
3 and 4 in.	58 00	62 00	1¼, 1½ and 2 in.	29 00	31 00
Selects, 1 in.	44 00	45 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in.	45 00	47 00	No. 2	36 00	37 00
3 and 4 in.	52 00	55 00	No. 3	28 00	30 00
Moulding boards, 7 to 11 in. clear	37 00	39 00	Cut ups, 1 to 2 in.	24 00	32 00
60 per cent. clear	32 00	34 00	Coffin boards	19 00	22 00
Fine common, 1 in.	40 00	41 00	Common all widths	22 00	26 00
1¼, 1½ and 2 in.	40 00	42 00	Shipping culls, 1 in.	15 00	15 50
			do 1¼ in.	15 50	16 50

SHINGLES.

Spruce	1 30	1 50	Second Clear	1 75	2 00
Cedar, extra	2 65	2 90	Extra No. 1	1 25	1 50
Clear	2 25	2 50			

HEMLOCK.

Boards, rough	11 00@11 50	No. 2	8 00@ 10 00
Planed	11 75	12 00		

LATH.

Spruce		By cargo.	1 80@ 1 90
By car	1 80@ 2 00		

OTTAWA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

Mr. Alexander Fraser, the well known lumberman of Westmeath, who recently took up his residence in Ottawa, has commenced to invest capital in enterprises that will tend, no doubt, to build up the city. He is the leading figure in the erection of a $20,000 vault in the central portion of the city for the storing by the public of valuable documents and articles.

Mr. J. R. Booth has decided to begin the sawing of dimension timber at his Chaudiere mill. Machinery suitable for this work is being put in. The timber will be cut in the new addition to the mill built on the west end of the site of the old mill.

The completion of the Ottawa, Arnprior and Parry Sound Railway will prove of considerable benefit to Ottawa Valley lumbermen, passing, as it will, through a well timbered section of the country. Upwards of one million dollars will be spent during this year on its construction.

Mr. H. K. Egan returned recently from a trip to his limits on the Pittawawa, where a steam log roller is about to be operated. When Mr. Egan left, the roller was only being taken from the railway station to the woods. The result of its operations is regarded as a matter of importance by the lumbermen here, and will be eagerly sought.

After returning from a trip through the Ottawa lumbering district, Mr. R. Hurdman stated that the winter was very favorable for work in the woods. There were not so many men engaged in that district as last winter, and as a result the output would not be so large. He calculated that the output would be about half a million logs less than last year. This would not curtail the manufacture of lumber, however, as the leading mill-owners had large quantities of reserve logs in the rivers.

It is understood that the deputation of pulp mannfacturers which waited upon the Government with the view to having an export duty imposed on pulp-wood, received every assurance from the Government that the matter would receive their earnest consideration. A number of gentlemen composing the deputation expressed themselves highly pleased with the favorable manner with which the ministers received the representatives. Mr. F. H. Clergue, of the Sault Ste. Marie Pulp Mills, submitted a strong argument why the Government should impose the export duty. He pointed out the great natural resources Canada had in spruce, and the big advantage Americans were taking by its free entry into their country. About 15,000 men were employed in the United States in manufacturing into pulp the wood taken from Canada, and there was no reason why nearly all this employment should not be given to men in this country, and with an export duty this would be gradually accomplished.

Ottawa, Ont., Feb. 24, 1896.

NEW BRUNSWICK LETTER.

[Regular correspondence CANADA LUMBERMAN.]

LOG DRIVING CONTRACT.

A LARGELY attended meeting of the log owners along the St. John river was held at Fredericton, on the 29th of January, to consider the contract with Messrs. Moore for log driving from Grand Falls to Fredericton. Among those present were: W. H. Murray, C. F. Woodman, Henry Hilyard, H. R. McLellan, James Holly, J. Fraser Gregory, C. P. Baker, Geo. B. Dunn, Geo. Cushing, A. P. Barnhill, W. C. Purvis, Horace King, St. John; John A. Morrison, Donald Fraser, jr., R. A Estey, Allen Randolph, Fredericton; Fred H. Hale, Woodstock; G. R. Burtt, D. H. Nixon, David Keswick, J. E. McCallum, Hartland; John McSweeney, B. W. Mallett, W. H. Cunliffe, Fort Kent; L. W. Pond, Edmunston; A. J. Beveridge, Andover. Henry Hilyard was appointed chairman, and J. Fraser Gregory secretary.

The meeting was a lively one, and much discussion took place, some of the up-river lumbermen complaining of the manner in which their lumber had been treated the past season, and expressing the opinion that the up-river districts were not sufficiently represented on the board. It was pointed out by the St. John directors that they were doing the work without remuneration of any kind, and having their private business to look after, they could not be expected to give the matter as much attention as its importance desired.

After considerable discussion the following resolution, moved by B. W. Hallett and seconded by J. A. Morrison, was unanimously adopted: "It is the opinion of this meeting that the log owners regret that Messrs. Moore did not satisfactorily perform their driving contract during the season of 1895, and would therefore be glad to relieve the Messrs. Moore of further performance by cancellation of the contract."

Another resolution, moved by A. H. F. Randolph and seconded by F. H. Hale, was adopted: "Inasmuch as it is the opinion of this meeting that the Messrs. Moore did not satisfactorily perform their driving contract for 1895; therefore, resolved, that the directors of the Log Driving Co. be authorized to negotiate with them for the surrender of their contract."

The contract held by Messrs. Moore is for a period of three years, and cannot be withdrawn without their consent. Several claims for damages have been made, which will be considered at the annual meeting of the St. John Log Driving Company, who hold bonds from the contractors for $10,000 for the faithful performance of the work.

THE MASTERMAN PULP MILL.

The extensive pulp mill recently erected on the Miramichi, at Mill Cove, N. B., by Mr. William Masterman, cost upwards of $100,000. It consists of seven buildings, and is one of the most complete establishments in the province. The walls of the digesting building, which is 84 by 32 feet, are built of free stone to a height of 30 feet, while the structure, 60 feet above, is of wood. The storeroom is 100 by 50 feet, and the paper mill rooms adjoining 150 by 50 feet, while to the rear of these is the engine and boiler buildings, 100 by 40 feet in extent. There are two other buildings, measuring 20 by 100 and 50 by 40 feet. The large digester building has a tank house of one storey, adjoining, measuring 84 by 30 feet. This last is connected with the waters of the Miramichi by a slip 240 feet in length. The new mill will be as large as any similar establishment on the continent. The largest in the United States will turn out 50 tons of wet pulp per day, while this one will make 30 tons of dry pulp in the same time, wet pulp being 30 and 40 per cent. moisture. Some two million feet of logs have already been contracted for, in connection with the mill.

BITS OF LUMBER.

Hon. Mr. Tweedie has submitted to the Provincial Paliament his annual report on Crown Lands.

Mr. Benson, the representative for the Waterous Company in this province, is meeting with good success in the sale of band mills.

Mr. Cushing's new mill at Pleasant Point will commence operations about the last of March. The band saws and shafting are now being placed in position.

The machinery is now being placed in W. C. Purves' new mill at Carleton. He is putting in a single gang, and expects to have the mill running early in the spring.

St. John, N.B., Feb. 24, 1896.

BRITISH COLUMBIA LETTER.

[Regular correspondence CANADA LUMBERMAN.]

DURING the past month the lumbermen of this province have experienced a revival of trade, which, for the season of the year, is most encouraging. There has been considerable local demand, but the export trade has furnished the basis for congratulation. At the time of writing, thirteen vessels are loading lumber at the various ports for foreign countries, four being destined for Australia, three for the United Kingdom, one for South Africa, one for South America, three for China and one for Chili. The local lumbermen anticipate that quite an extensive foreign trade will be done during the present year, and present conditions would seem to justify their anticipations.

A number of our mill men have become members of the recently-organized Central Lumber Company, which proposes to take such steps as will place the lumber business of the coast on a more satisfactory basis as regards prices. It is probable that, at an early date, an advance in prices will take place. It is held that employers will pay higher wages as a result thereof, and that the timber men will get better prices for their logs.

The Victoria Lumber and Manufacturing Co. held their annual meeting in Victoria a fortnight ago. Directors were elected as follows: J. A. Humbird, E. J. Palmer, W. J. Macaulay, John E. Glover and W. H. Phipps. The new officers are: President, J. A. Humbird; vice-president, W. J. Macaulay; secretary, W. H. Phipps; assistant secretary and general manager, E. J. Palmer; treasurer, D. C. Fulton. It is said that the company, in view of a good foreign trade, have decided to reopen the Chemainus saw mill, which has been closed for three years.

COAST CHIPS.

Messrs. Tingley and Wilband recently purchased the Silverdale saw mill.

The Buckeye Lumber Company, of Spokane, is said to be backing E. H. Ragland in building a saw mill at Rossland.

The Royal City Mills, of New Westminster, recently shipped to Nova Scotia the second lot of big fir spars, for which this company has long been famous. This lot are 75 feet in length, and square 19 inches at the butt.

The Pacific Coast Lumber Co., of New Westminster, recently put in new wood-working machinery, which is said to be giving first-class satisfaction. By its use cedar lumber is being manufactured into various shapes.

A number of improvements have recently been made to the Royal City Planing Mills, of Vancouver, including a new iron dry kiln and a new boiler. The mill will now cut 100,000 feet per day. Upwards of 200 men are employed at the mill.

The Brunette saw mills, which were burned last year, have been rebuilt, and recently commenced cutting. Mr. John Wilson, president of the company, says that he intends engaging once more in the foreign export trade, and, if shut out of the United States markets by tariff changes, will find a market for the surplus output of the mill in other foreign countries.

New Westminster, B. C., Feb. 20, 1896.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

Mr. E. D. Cowles, an acknowledged authority on lumber matters, has completed figures showing the output of the Saginaw river mills during 1895. The cut for the season aggregated 433,683,083 feet, the smallest since 1868. In 1894 it was 481,000,000 feet. At the close of last year manufacturers alone had on hand 271,531,851 feet of lumber, of which only 30,090,400 feet were reported sold for future delivery. Adding the amount estimated to be carried by retail yards, the total stocks would reach about 550,000,000 feet. Because of the dullness of the market, many saw mills were permitted to remain idle. Shingle manufacturers experienced much the same conditions during last year, prices ranging about $1 per thousand lower than usual during the entire season. The total amount manufactured during the season was 52,845,000, the amount on hand at the close of the season being 26,211,250.

The organization of the Michigan Maple Lumber Company was effected on the 5th ultimo. Over fifty hardwood firms are represented, and nearly every operator in northern Michigan has consented to join the Association. The membership represents an annual output of 125,000,000 feet of hardwood. The Association will have permanent offices in Traverse City, and members will make sales through the main office, which will be in charge of the secretary and president, under control of the board of directors. The board will appoint a chief inspector, who will appoint local inspectors. Every member must make monthly reports of stock on hand, sales and cut, and when sales are made 2½ per cent. goes to the general fund.

INDIFFERENT LENGTHS.

Three train loads of logs per day are being hauled from Montmorency county to Alpena.

Arrangements are progressing favorably for the third annual meeting of the National Wholesale Lumber Dealers' Association, to be held at Saginaw on the 4th and 5th inst.

Messrs. Alger, Smith & Co., of Saginaw, are winding up the business of rafting long timber from Black river. The firm began rafting in 1882, the annual output ranging from 70,000,000 to 90,000,000 feet annually until last year, when it dropped to 47,000,000 feet. They have large holdings in the Georgian Bay district.

Mr. F. W. Gilchrist, of Alpena, will engage extensively in the manufacture of hardwood lumber. He is making large purchases along the line of the Detroit and Mackinaw railroad, principally of maple, birch, elm and basswood. This timber will be cut at Alpena and shipped to Gilchrist & Co.'s planing mills at Cleveland, Ohio, where it will be worked into flooring, inside finish, etc.

Saginaw, Mich., Feb. 24, 1896.

MR. ALEXANDER GIBSON.

IN the issue of the CANADA LUMBERMAN of September, 1894, we gave a biographical sketch of the renowned lumber king of New Brunswick, Mr. Alex. Gibson, accompanied by a bird's eye view of the village of Marysville, the home of Mr. Gibson. By the accompanying portrait our readers may observe the countenance of Mr. Gibson, who enjoys the distinction of being prob-

MR. ALEXANDER GIBSON.

ably the best known man in the Maritime provinces.

Mr. Gibson is the owner of thousands of acres of timber lands, five saw mills, a large cotton mill and the Canada Eastern railway. He is the shipper annually of upwards of one hundred million feet of lumber to different markets, chiefly to Great Britain. Over a thousand persons are directly in his employ in summer, and upwards of two thousand in winter, in connection with his lumbering operations. About six hundred men are employed steam driving in the spring, and about the same number in the cotton mill constantly.

At Marysville he owns three saw mills, one cutting long lumber, another shingles and another lath. This winter 35,000,000 feet of logs will be cut to be sawn at the mills. The spruce is cut into deals for the English market, being towed down the St. John river to the harbor of St. John for loading on steamers. The cedar logs are cut into shingles, the clears and extras for the United States market, and the other grades for the provincial market. The laths and hemlock also go to the United States market.

He has two mills at Blackville, one cutting hemlock and the other spruce. Last year the cut was 5,000,000 feet each of spruce and hemlock, and about 3,000,000 feet of cedar.

Besides the cut of his own mill Mr. Gibson buys large quantities of lumber for shipment to the British market. His cut averages about 40,000,000 feet annually, while the amount of his shipments to the British market alone exceed 80,000,000 feet per year. Since he began operations on the Nashwaak he is said to have marketed fully a thousand million feet of lumber from his own mills there and at Blackville.

In the management of his extensive business, Mr. Gibson is ably assisted by his two sons, Mr. Alex. Gibson, junior, and Mr. James Gibson.

CORRESPONDENCE

Letters are invited from our readers on matters of practical and timely interest to the lumber trades. To secure insertion all communications must be accompanied with name and address of writer, not necessarily for publication. The publisher will not hold himself responsible for opinions of correspondents.

NEW MARKETS FOR CANADIAN HARDWOODS.

TORONTO, Jan. 25th, 1896.

To the Editor of the CANADA LUMBERMAN:

DEAR SIR,—I notice with pleasure that Mr. J. T. Schell, Alexandria, sets the ball rolling re. our export trade of hardwood lumber to Great Britain. He is quite right in his contention that the most of our hardwood goes as American, and is sold as such in the English market. Canada is not enough known in Europe, and the resources it has are known still less, and I think it the duty of either the Dominion or the Provincial governments to see that the buyers in that market are informed of the resources of Canada, and what can be got in this country.

If the government would appoint some practical man for a couple of years, and send him over there to point out to the consumers and buyers in the motherland what can be got here, and if necessary let him look after the interest of the shippers from here for the time being, you will find that it will make a marked difference in our export trade to England.

The Canadians have a very good reputation as to their straightforward and honest business methods, and the Americans are always looked upon as being too sharp. The preference will therefore be given to Canadians in nine cases out of ten.

I cannot see why we should allow the Americans to make a profit by exporting our lumber; surely we can attend to that ourselves, and keep the money in the country. I say Canada first in every instance.

Should any of our friends think of sending lumber over direct, let them beware of "sharks;" there are lots of them, especially in London. They will promise lots of things, but as a rule will end with the promise. I have proof of one instance where a lumberman sent over a carload of maple; the price realized was a good one, but the bill for expenses was still better. The amount received was $593.61, the expenses $578.95, which left the magnificent sum of $14.66 for the shipper. Anyone desiring to get information about the items of this bill of expense can have them by applying to the editor.

If there was a representative of the government to look after the interests of our lumbermen, such glaring frauds could not occur.

Respectfully yours,

KAROLUS.

It is stated that in Cuba, on an area of some 50 square miles, there are in round numbers 2½ million banana trees. No less than $3,500 persons and 26 steamers are engaged on the crop, which is said to pay better than cane.

OWEN SOUND STEAM SAW AND PLANING MILLS.

ONE of the most enterprising men of Owen Sound is Mr. John Harrison, the proprietor of the Owen Sound Steam Saw and Planing Mills, a view of which is presented on this page. There are manufactured at his mills all kinds of dressed and undressed lumber, sash, doors, frames, blinds, laths, mouldings, shingles, pickets and hollow battens, besides other special manufactures.

The premises comprise three buildings, one being a two-story brick, 83 × 53 ft., with engine room and drying kiln attached; one two-story brick store room, 60 × 33 ft.; one frame building 80 × 20 ft., and a frame saw mill 108 × 40 ft. The yard covers about fifteen acres, but the whole premises cover an area of thirty acres. The business has been in existence for forty-five years, and gives employment to thirty hands. The trade extends all over Canada, and considerable exporting is done as well. Mr. Harrison cuts about two million feet of lumber annually, but handles, all told, something like four times this amount. He has recently overhauled his dry kiln, and claims to have one of the best kilns in the country. Recently he took out twenty thousand feet of three inch pine that had been put in the kiln eight days previous, grim from the saw and partially covered with ice, and the plank was found to be dry and checked very little.

During this winter an addition to the mill has been erected, in which has been placed patented machinery for the manufacture of butchers' skewers, for which a ready market is being found. These skewers are made of hard maple, the machine being capable of turning out 20,000 per hour and of making six different sizes.

Mr. Harrison is an Englishman by birth, but has resided in Owen Sound for over forty-five years. He served in the council for several years, but of late has withdrawn from public life, devoting his spare time to his several large stock farms. He has done much towards the building up of Owen Sound, and is honored by all its inhabitants.

OWEN SOUND STEAM SAW AND PLANING MILLS.

British Columbia logs go to New Whatcom, a tow of 300 miles, while logs cut there are hauled to Tacoma, 150 miles away. Strange condition of affairs!

THE NEWS.

CANADA.

—Jas. Richardson has erected a saw mill at Kerwood, Ont.

—Gibson's shingle mill at Andover, N. B., has resumed operations.

—R. Pallister is running D. F. Brown's saw mill at Moe's River, Que.

—M. M. Boyd & Co.'s saw mill at Bobcaygeon, Ont., closed down for the season a fortnight ago.

—John and R. E. Butler have leased Peacock's saw mill and yard at Woodstock, Ont., for five years.

Sumner & Co., of Moncton, N. B., have purchased a heavy saw mill engine of 250 h. p. for their new mill at Bathurst.

—Canada shipped some 18,000,000 feet more spruce to South America points during 1895 than during the previous year.

—The new planing mill of McIntyre, Reinke & Boland, at Eganville, Ont., has started operations. The motive power is electricity.

—The village of Goderich, Ont., recently voted the sum of $100,000 for new industries, a saw mill, bicycle factory, knitting mill and furniture factory.

—David Ransom, formerly a resident of North Burgess, Ont., is reported to have made a rich deal in pine lands in Michigan, clearing thereby upwards of $50,000.

—During the year 1895 the losses by fire in Canada were as follows: Saw mills, $390,000; woodworking factories, $113,000; paper and pulp mills, $10,000.

—The improvements to Mr. Peter's mill at Parry Sound, Ont., have been completed. Mr. Peters has now one of the best equipped mills in the Georgian Bay district.

—H. Maxwell, a chopper with T. E. Titus, in King's County, N.B., recently felled sixty trees and topped them off in nine hours, making a total of 9,000 superficial feet.

—Messrs. William Grier, Wm. Embury, and M. S. Madole, have formed a joint stock company for the purpose of starting a new sash and blind factory at Napanee, Ont.

—Albert Phillips has started his shingle mill at Coboconk, Ont., and intends running day and night. J. R. Phillips will look after the buying of the shingles, bolts, logs, etc.

—Of three pine logs recently cut on the Dungarven river, N. B., the shortest was one hundred and thirty feet, and the longest 145 feet, making in all twenty-six pieces and scaling over 3,000 superficial feet.

—It is reported that Beckler & Co., of Sarnia, Ont., are preparing to build a large saw-mill on the bay shore. They are now running in temporary sheds and cutting lumber to suit the demands of the market.

—Twelve grinders, fourteen screens, fourteen wet machines and four barkers are at work in the new pulp mill at Sault Ste. Marie, Ont. Farmers are drawing large quantities of pulp wood to the mill.

—Mr. Tessier, of Penetangushene, Ont., has made alterations and improvements to his sash and door factory.. He reports sufficient orders on hand to keep the mill running for the next three months.

—It is reported that a pulp mill will be erected in the spring on the Sissiboo river, Digby County, N. S. There is said to be ample water power to run the mills, and large quantities of pulp wood near at hand.

—Bonuses are being asked from the Ontario and Dominion Governments for the Lindsay, Haliburton, and Mattawa Railway. The road, if constructed, will open up a territory rich in pine and hardwood timber.

—Isaac Abbott, of Mosa, Ont., drew a soft elm tree to Oldrieve's mill, Glencoe, which scaled 4,644 feet of lumber. The tree made three 14-ft. logs and three 12-ft. logs, the smallest log being 31 inches in diameter.

—George St. Pierre & Co., of Frazerville, Que., have recently started their shingle mill at St. Honnore, where they own a large tract of timber land. The mill runs night and day, is lighted by electricity, and contains a rotary saw, two shingle mills, planer and matcher, lath machine and gang saw.

—One of the peculiar industries of Kingston, Ont., is the making of shavings, for use in the vinegar factories in vats. Lumber of a peculiar class is bought in quantity and reduced to shavings by simple machinery. Recently an order for 2,500 bushels was received by the Carnovsky Company from Montreal.

—Alex. Crawford, lumber operator on the Tobique River, N. B., vouches for the truth of the following: On the 13th ultimo, Benjamin Finamore started at daybreak to beat the chopping record; by dark he had felled and topped off fifty-seven spruce trees, which scaled 7,000 sup. feet. This, he claims, beats the record, and wants to hear from others.

—Kennedy, Davis & Co., of Lindsay and Bobcaygeon, contemplate making extensive repairs to their mill on Pigeon Lake. This firm do a large retail trade in Lindsay, besides shipping largely. Mr. Kennedy has charge of the Lindsay branch, while Mr. Davis looks after the cutting of the logs in the winter and their manufacture during the summer months.

UNITED STATES.

—Wheeler, Osgoode & Co., of Tacoma, Wash., report the sale of a car load of doors to an English firm. The same company have received inquiries respecting their doors from northern China.

—An official statement places the total receipts of lumber at Chicago for last year at 1,637,389,000 feet, and shipments out of the city at 771,994,000 feet. This is to be compared with 1,566,150,000 feet and 639,199,000 respectively in 1894.

—A carload of redwood for use in making lead pencils was shipped the other day from California to Nuremburg, Germany. The forests in Europe, from which the supply of wood for leadpencils has hitherto been obtained, have become exhausted.

—The largest walnut tree ever hewn in Pike County, Pa., was cut down recently near Milford, by Willith Angle, of Washington, N. J., for gun stocks for the United States government. The first sixteen feet will make about 2,000 feet of lumber and will furnish enough gun stocks to supply a regiment.

—A dispatch from Jackson, Miss., states that E. Smith, of Richmond, Ky., representing New York parties, is placing a contract for 40,000,000 feet of oak timber from the head of Kentucky creek, a tributary of the Kentucky river. The company will build saw mills on the Kentucky, and prepare the timber there. About ten years will be taken to work up all the timber.

—A large deputation of representatives of the shipping interests on the great lakes recently appeared before the House Committee on rivers and harbors at Washington, in the interests of legislation, to restrict the size of raft tows in the rivers tributary to and connecting the lakes. Complaint was made that the large rafts often completely filled the channel of the rivers and made navagation dangerous.

CASUALTIES.

—Colin McEachren, of Parry Sound, Ont., had his leg broken by a tree falling on him.

Raymond Melanson had his leg broken while loading logs in the woods at Port Elgin, N. B.

By the falling of a tree in the woods, Alex. McPherson, of Clyde, Ont., had his leg broken above the knee.

—While sawing in the woods near Ailsa Craig, Ont., James Smith was struck on the head by a tree, making a cut about six inches long. Hopes are entertained of his recovery.

—Samuel Cooper, of Toronto, who was working for J. W. Howry & Sons, lumbermen, is in the hospital at Fenelon Falls, suffering from the effects of falling from a skidway in the woods.

Jerome Dalaire was killed recently while lumbering at the shanties of Mr. Euchariste Mont, Riviere aux Rats, Que., by the fall of a branch of a tree, which broke his neck. He was 47 years old, and a native of Tadousac.

While loading logs in Long's camp of J. W. Howry & Sons, of Fenelon Falls, Ont., Oscar Winters, of Saginaw, Mich., received a compound fracture of the left leg, both bones being broken. The accident happened about 30 miles from Haliburton.

—A man named Martin McNulty, of Douglas, Ont., working for Munroe & Gordon, at Pogamasing, was killed on the 19th ultimo. While carrying a skid down hill he slipped and fell, the skid striking him on the head and breaking his skull.

—Moore & Wallace's sash and door factory at Chesley, Ont., was recently wrecked by a boiler explosion. The building was torn into atoms, parts of the boiler being found 100 yards distant. Fortunately the employees had left the building a few minutes previous.

—Joseph Dechatlets, aged 26, in the employ of the W. C. Edwards Lumber Co., was murdered by a fellow-workman in the woods in Ripon township, north of Nation Mills. The two men had been on unfriendly terms, which resulted in the stabbing which caused death.

—A sad accident is reported from Aroostook county, Maine. Neil Campbell, a native of Bass River, N.B., was going to his work with his axe on his shoulder, when his feet slipped on the ice and he fell backwards. His axe in some manner turned edge up and the young man fell on it, cutting his head open and killing him almost instantly.

PERSONAL.

Mr. F. W. Gilchrist, lumberman, of Alpena, Mich., recently paid a visit to Toronto.

Sir H. G. Joly de Lotbiniere has been elected vice-president of the American Forestry Association.

Mr. Thos. Kelly, lumber merchant, has been elected mayor of Somerset, Que., for the eighth term.

A recent cable despatch announced the arrival at Liverpool, Eng., of Hon. J. B. Snowball, of Chatham, N.B.

Mr. Wm. Gillies, of the well-known lumbering firm of Gillies Bros., Braeside, Ont., has gone on a visit to the Southern States.

Mr. W. H. Pratt, President of the Conger Lumber Co., Parry Sound, Ont., is a Liberal candidate for the House of Commons.

Mr. Wm. Margach has received his official appointment by the Ontario Government as Crown Lands Timber Agent at Rat Portage.

Mr. Beck, lumber merchant, of Penetanguishene, Ont., is spoken of as a probable candidate to carry the Reform banner at the Dominion elections.

The employees of Buell, Hurdman & Co., of Hull, Que., presented their foreman, Mr. James Rochester, with a gold chain and locket in honor of his recent marriage.

Joel Leduc, one of the wealthiest lumbermen in the province, died at Montreal on the 31st of January, at the age of 72 years. He left an estate valued at $500,000.

Mr. David McLaren, the Ottawa lumberman, has gone to England with a view of getting the British government to secure the release of Mr. Lingham, at present serving a long term of imprisonment in South Africa.

Rufus Deering, one of the largest lumber dealers of the state of Maine, U. S., died at Portland on the 4th of February, at the age of 78 years. He had been in business for over 50 years, and was several times a candidate for governor of the state.

Hon. J. W. Longley, Attorney-General and Commissioner of Crown Lands for Nova Scotia, has accepted the Liberal nomination for Annapolis county for the Dominion Parliament. Mr. Longley has ably represented the county in the Provincial Legislature for a number of years.

One of Toronto's veterans has passed away in the person of Mr. Thos. McCracken, whose death occurred early in February. Mr. McCracken was born 61 years ago in Eastern Canada, and came to Toronto in 1870. He engaged in the lumber business with Mr. John Oliver, and afterwards as senior partner in the firm of McCracken, Gall & Co. Subsequently he became manager of the Royal Canadian Bank, and was a well-known figure in financial circles.

A very novel method of getting rid of scale in a boiler is credited by a Boston paper to an engineer in that city. The scale came from the use of well water. The feed pipe enters the front of the boiler just above the water line, and has slots cut in it about an eighth of an inch wide, instead of the ordinary spraying method of distributing the water, and surrounding the feed pipes in the larger pipe, about six inches in diameter and cut away at the top; the feed water enters the boiler and discharges through the slot in the feed, discharging all the foreign matter in the water into this catch-pipe instead of into the boiler—the success of the plan depending upon having a high temperature of feed at about the boiling point, when the solids held in suspension of or solution in water will be deposited.

PUBLICATIONS.

The twenty-first annual special issue of the Timber Trades Journal, of London, Eng., just issued, bears evidence of much attention and no lack of expenditure in its preparation. With a liberal advertising patronage the publishers have been enabled to produce an unusually interesting number. Although consisting of over three hundred pages, it is sold in London for one shilling. The above remarks apply also to the special new year number of "Timber."

"Timber" is the title of Bulletin No. 10 of the Division of Forestry of the United States Department of Agriculture, issued by Professor Fernow, chief of that division. It is a brief but comprehensive discussion of the characteristics and properties of wood in general, and should prove of great service to engineers, architects, lumbermen and woodworkers. The information contained therein is based on actual experiment and scientific observations, and will no doubt remove erroneous notions and lead to a more rational use of our forest resources.

TRADE NOTES.

We have received from the Pacific Coast Lumber Co., of New Westminster, B. C., several samples of their ex cellent red cedar siding, which may be seen at this office by anyone interested.

P. Payette & Co., of Penetanguishene, Ont., have closed a large contract with Wm. Peter, of Parry Harbor, for mill machinery. They have also completed a circular rig and carriage for H. Delts, Powassan.

The annual meeting of the Lawton Saw Company was held at St. John, N.B., a couple of weeks ago. Mr. W. H. Thorne was elected president, and Mr. E. B. Ketchum secretary-treasurer. The directors for the ensuing year are Messrs. W. H. Thorne, T. C. Lee and E. B. Ketchum.

The Beaver Saw Works, of Hamilton, have been sold to the W. R. Gardner Tool Company, of Brockville. The plant and machinery have been moved to Sherbrooke, Que., where the business will be conducted under the old name of the Beaver Saw Works.

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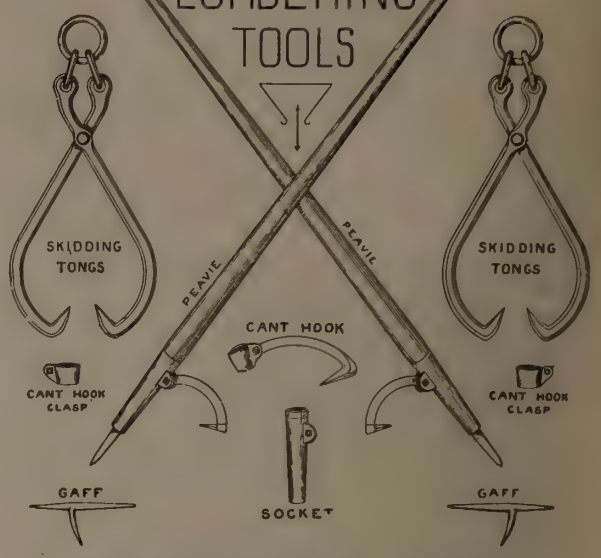

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ATTACK ON THE MAGNOLIA METAL COMPANY.

The Magnolia Metal Company, at No. 74 Cortlandt street, has had to defend itself against several peculiar attacks by rival corporations, which have wanted to get control of its patents, and the latest attack is in the form of an attachment, which has been served in advance of the trial of a suit for $35,000. Charles B. and Edward C. Miller organized the company eight years ago, and the corporation is incorporated under the laws of West Virginia. As the company mannfactures the finest grades of metal used in journal bearings, its patents are of great value and several capitalists have vainly tried to get control of them.

Recently a discharged employe in Chicago made a claim against the company for $7,000, and the claim was assigned to James Shanks of this city, who brought a suit. The company settled the claim for $1 and caused the arrest of Shanks for alleged perjury in the proceedings. Now an attachment has been issued against the company in a suit brought by a man named Lawlor, as the assignee of a claim of $35,000 made by an English construction company. As Lawlor is a New-Yorker and brings the suit against a foreign company having an office in this city he has been able to get the attachment before the trial of the suit. Although the suit is for $35,000 he has been obliged to give a bond for only $1 000, and ex-Dock Commissioner Phelan is on the bond.

Charles B. and Edward C. Miller said last evening that the English construction company, which had made the claim for $35,000, really owed them about $80,000, and they would be able to show that by the contract if the suit of the assignee could ever be brought to trial. The suit was an American suit, they declared, and had been brought in order to secure the attachment as a club to compel them to sell their patents cheaply. They declared that they would dispose of the suit in short order and show the animus of it when the case could be brought to trial. Instead of being liable to a judgment, they said, they had made about a million of dollars in the manufacture of magnolia metal and only late y passed $150,000 of the company's surplus to the capital account.—New York Tribune.

The Magnolia Metal Co., of New York, has given bond for $36,000 in this matter, and has brought suit for $100,000 against the parties who instigated these attachment proceedings for money actually due from them to the Magnolia Metal Company and for attempted damage by the attachment proceedings.

A beautiful pr. spectus is being sent around to friends of the Magnolia Metal Co. offering stock in this company with a 10% guaranteed dividend payable semi-annually.

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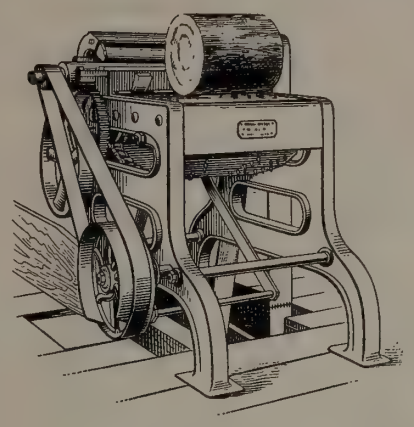

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It will do double the work of any other.
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It will peel dirty blocks without taking the edge off the knives as they cut from the clean bark or block out.
It is a self-feeder, and very easy to operate.
It requires less power than a face wheel.
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It occupies about the same space as an ordinary planer.
You can have a chance to try a machine before buying it.

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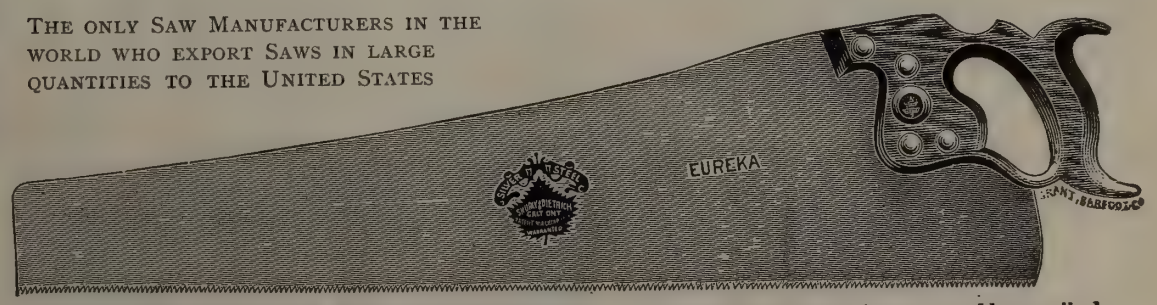

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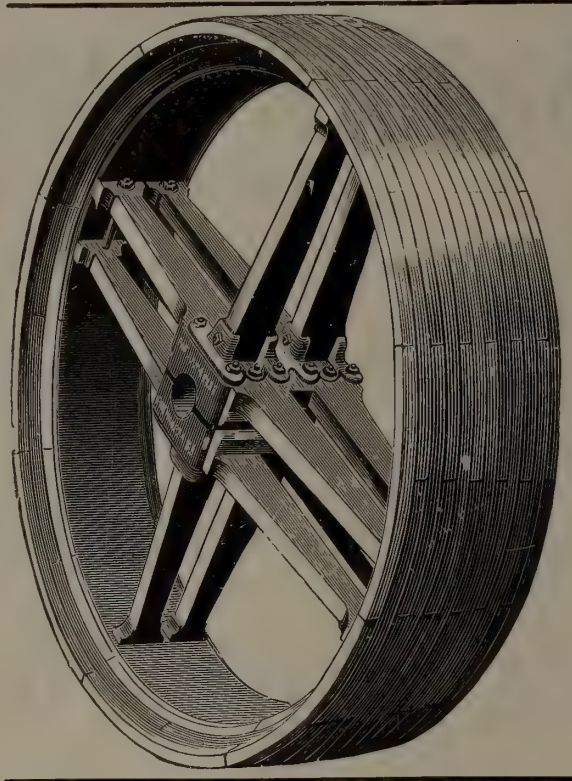

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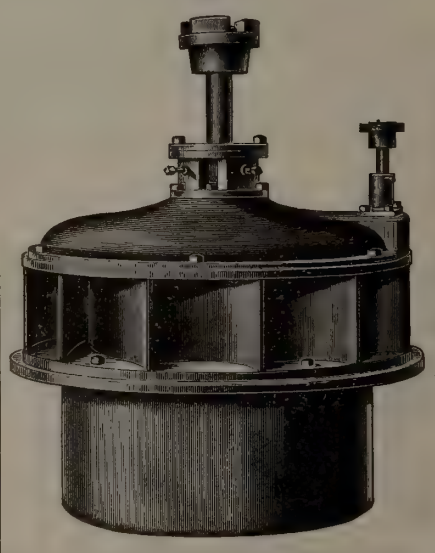

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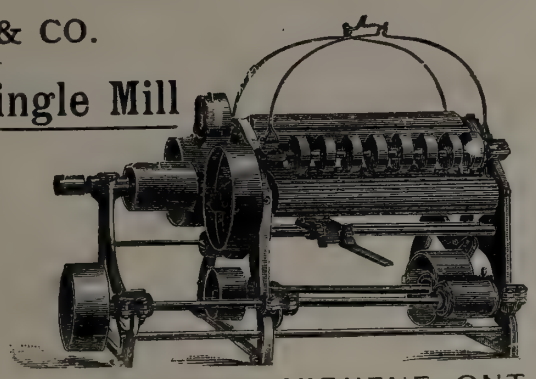

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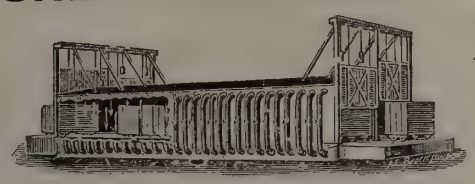

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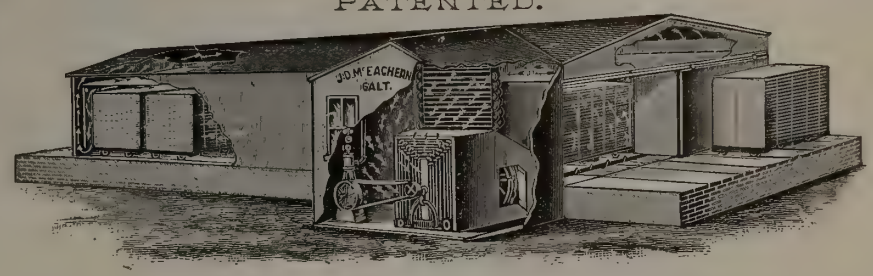

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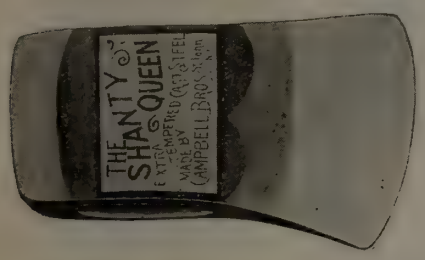

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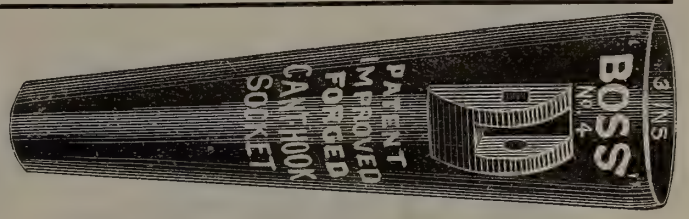

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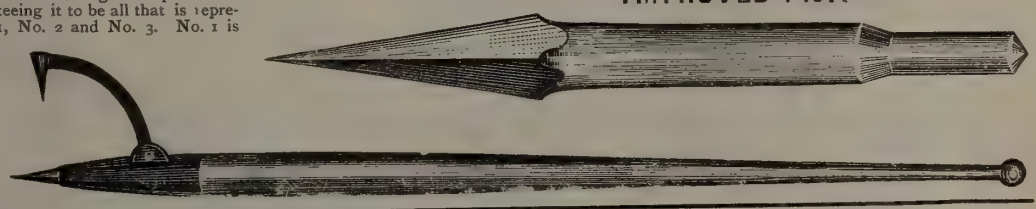

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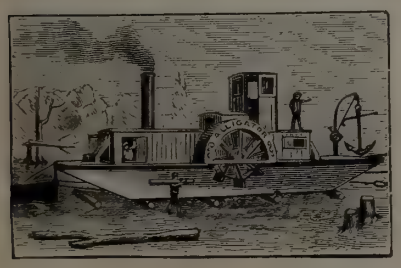

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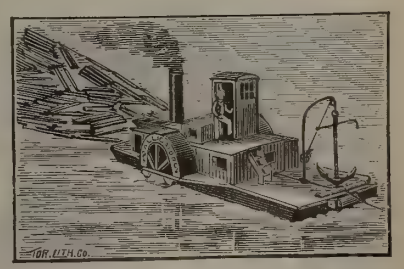

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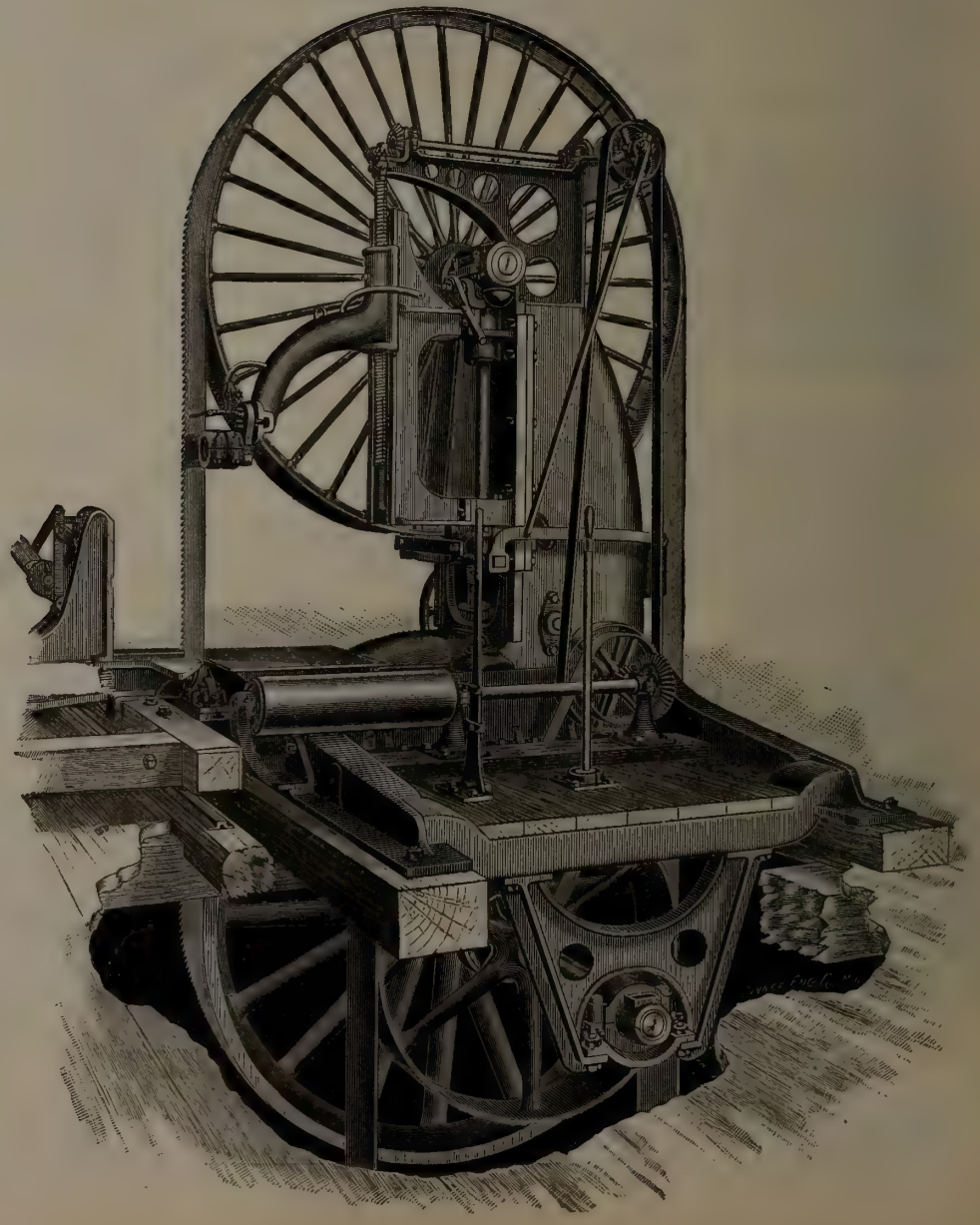

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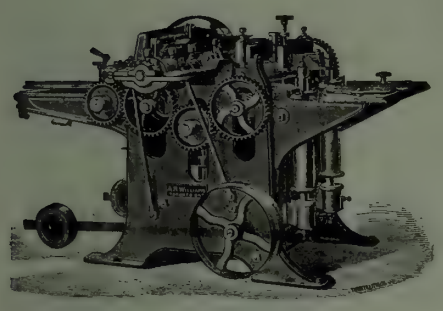

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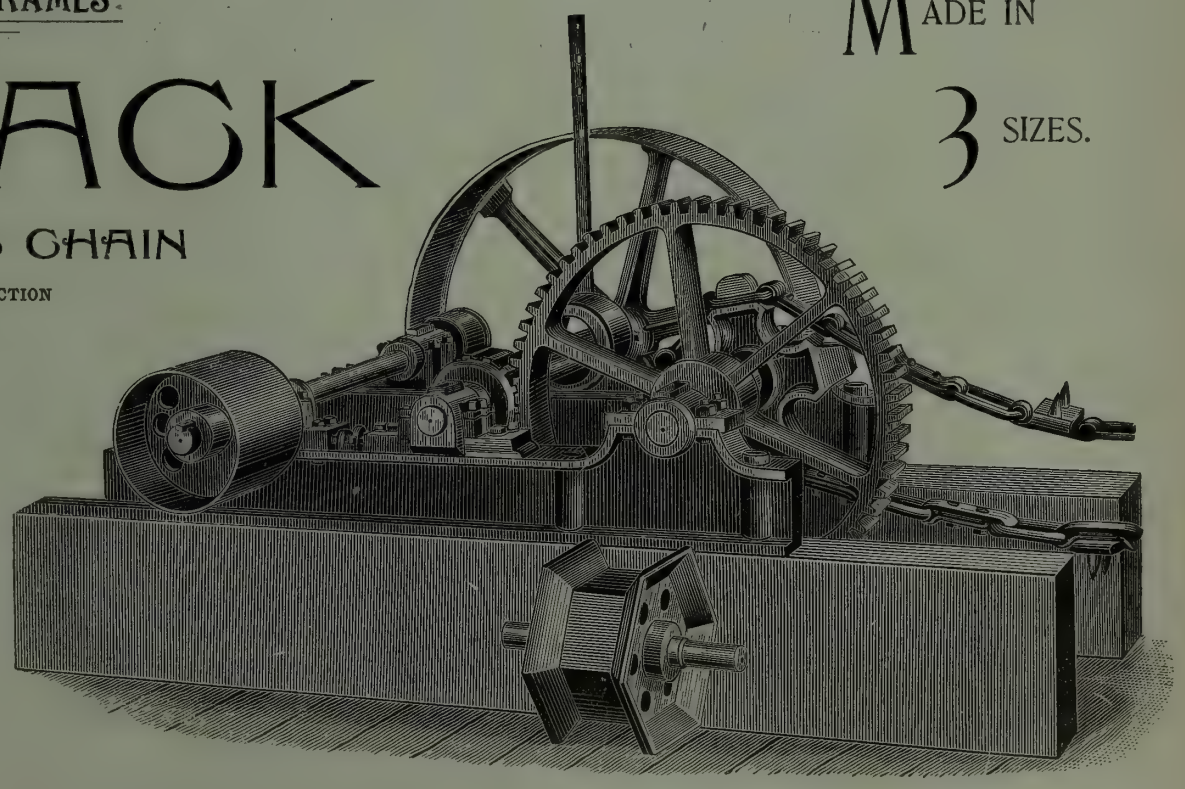

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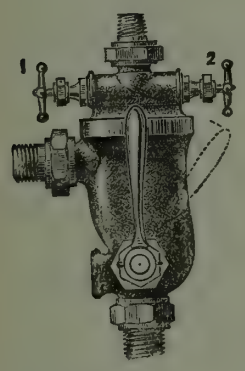

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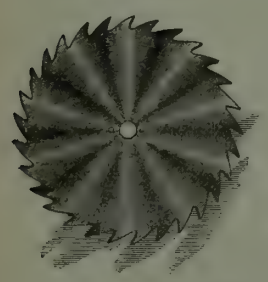

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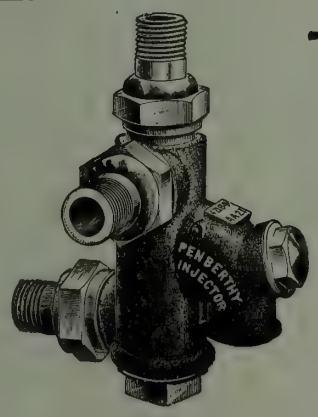

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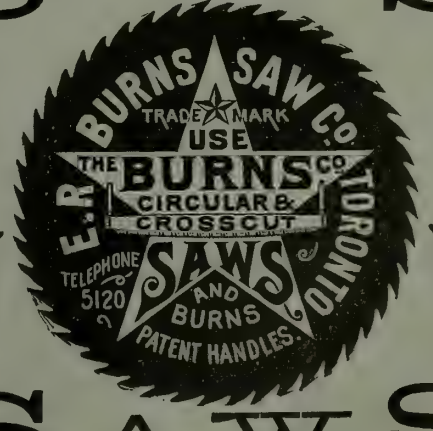

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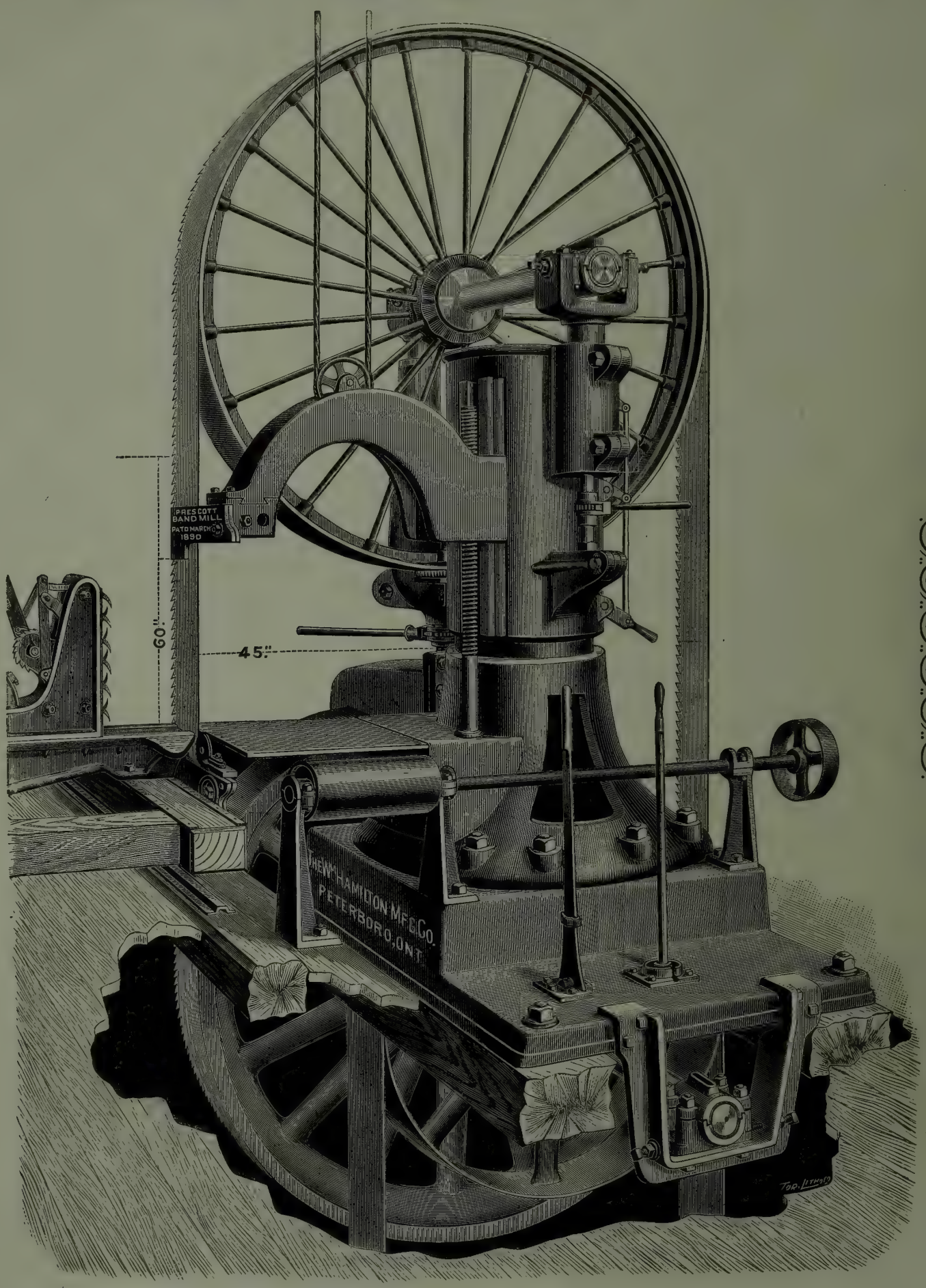

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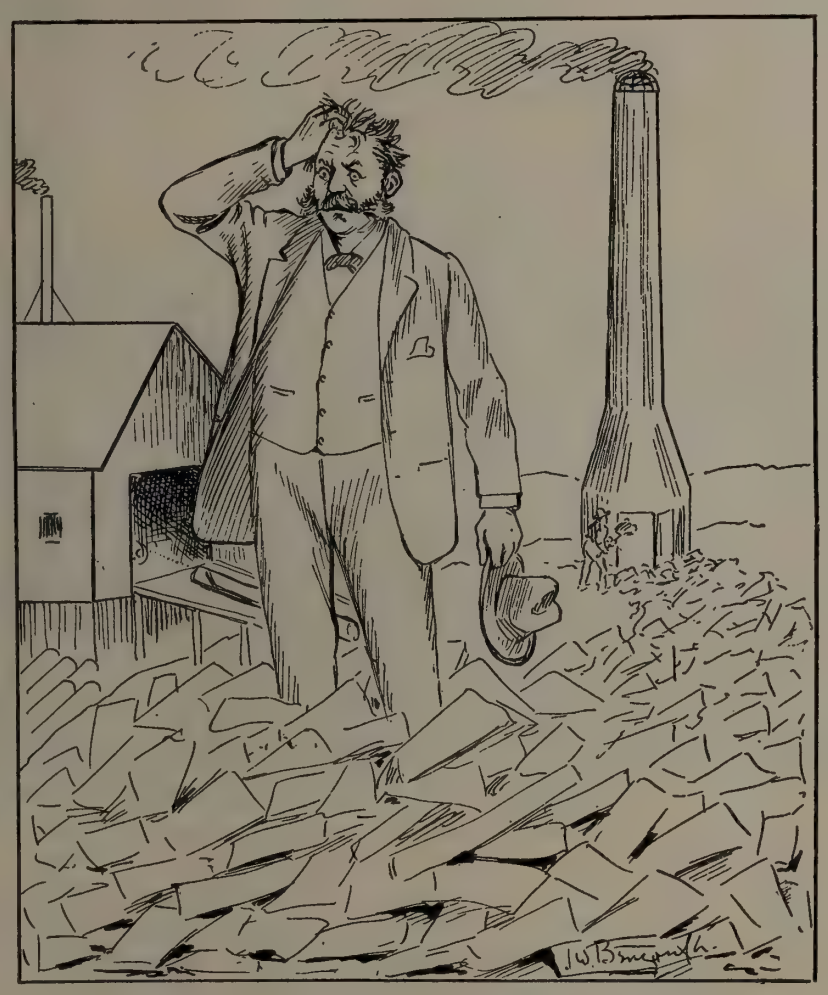
ONTARIO WOODS AND FORESTS.

THE report of the Commissioner of Crown Lands for Ontario, presented to the Legislature a fortnight ago, gives the total collection from woods and forests for the year as $853,179.86, in which there is included $76,579.73 on account of bonuses and $61,493.49 on account of ground rents, leaving the net revenue from timber dues, $715,106.64.

The sawn lumber market it is stated, has during the past year been in an inactive state, and there was a distinct break in the prices of all but the superior grades of lumber, which constitute not more than twenty to twenty-five per cent. of the total quantity of lumber produced at the present time in Canada and the north-western States. The English market for board timber and deals has been fairly satisfactory and prices remunerative, but this is a very limited and conservative market, easily overstocked and demoralized, and takes only the very best qualities of timber and lumber.

The principal market for Canadian sawn lumber is in the United States, and any overstocking or depression in that market is immediately felt by Canadian lumbermen. In the early part of the year there appeared to be an improvement in the general business of the country, and, in sympathy with that, a hope arose that trade would be better on the opening of navigation. Very soon after navigation opened it was seen that there would be no improvement, but that things were going to remain in the unsettled and unsatisfactory position in which they had been during the previous year. As a consequence all but the upper grades of lumber moved slowly during the summer, with a decreasing demand and lowering of values.



THE QUESTION OF THE DAY FOR SAW-MILL MEN.

"Can't I make something out of mill waste more profitable than smoke."

The markets have become enormously overstocked with inferior grades of lumber, and it is this which has caused the present unfavorable condition of the trade. The circumstances which have led to this plethora of coarse, rough lumber are easily understood, and some of them may be noted. First, the removal of the duty on Canadian lumber passing into the United States enabled the coarse Canadian lumber to get into that market and thus stimulated cutting closer, the consequence of which was that a largely increased percentage of coarse logs was taken out. Secondly, the prices which have recently been paid for limits have rendered it necessary, if a profit was to be obtained, that every log which could be got out with any expectation of a return, should be cut and taken to the mills. Thirdly, during the summer of 1894 disastrous bush fires occurred in Michigan, Minnesota and Wisconsin and enormous quantities of pine timber were so badly scorched that in order to realize anything from it the timber had to be cut last winter. Accordingly, the western market, which in an ordinary year consumes a very large percentage of the cut of the north-western States, was flooded with coarse lumber of an inferior quality largely in excess of what it could use as its normal supply. The consequence was that this coarse lumber overflowed in large quantities into the markets of the eastern and middle States, overstocking and demoralizing them, until coarse lumber was a drug everywhere and prices broke. Fourthly, large quantities of southern pine are being cut each year, and it is finding a market further and further north until now it is actually competing with Ontario coarse lumber in the United States as far north as the south shore of Lake Ontario.

It will be easily understood, therefore, from what has been stated that during the past year the lumber trade has been in an unsatisfactory and depressed condition. It is a matter of congratulation, however, that under such unfavorable circumstances the revenue collected from woods and forests has been so large.

With respect to the future, it is difficult to forecast what may happen. There does not appear to be any grounds upon which to base expectations of immediate substantial improvement in the condition of the trade. The western lumber markets are overstocked with large quantities of inferior grades of lumber, which will have to go east, and there does not appear to be any material decrease in the output of logs this present winter, besides which large stocks of last year's logs are still on hand, more than sufficient to equal any possible decrease that may take place in the output this season.

TIMBER SLIDE COMPANIES' ACT.

A BILL has been introduced in the Ontario Legislature by Hon. Mr. Hardy to amend certain sections of the Timber Slide Companies' Act. Among the amendments the following are of most importance:

Section 20 is amended by adding thereto the following: A detailed description of any repairs or renewals that may require to be made after the 31st day of December in the year to which said report relates and before the time of settling the tolls, together with an estimate of the cost thereof, and in case such repairs or renewals are actually made before the settling of the tolls, the cost therefor may be taken into consideration in fixing such tolls and such estimated cost of such repairs or renewals shall be advertised along with the schedule of tolls as provided in section 8a of this Act.

The amendments to section 42 are intended to protect the companies from mis representation as to the quantity of logs to be floated in order to reduce the rate of tolls and read "And in case any owner or person in charge shall, knowingly or wilfully, falsely return a larger quantity than it is his intention or the intention of such proprietor or person in charge to pass over any of said sections, the company shall be entitled in addition to any other remedies it may have, to collect tolls on the difference between the quantity so falsely estimated and the quantity actually passing over the works."

Section 46 is amended by adding thereto the following words, to provide for payment for the advantages derived from the holding dam: "But in case of a holding dam where it is made to appear that the use of the water held therein is necessary to enable parties to drive their logs or timber through or over other parts of the works, and that such logs or timber could not be driven through or over such other parts of the works or some of them without such holding dam, then the Commissioner of Crown Lands may fix such tolls for the use of the waters of the holding dam as shall appear adequate and reasonable."

The amendment to section 54 provides that such companies shall within two years from the date of incorporation complete the works required by their charter, unless further time is granted by order of the Commissioner of Crown Lands or by a by-law of the county in which the works are situate.

CORRESPONDENCE

Letters are invited from our readers on matters of practical and timely interest to the lumber trades. To secure insertion all communications must be accompanied with name and address of writer, not necessarily for publication. The publisher will not hold himself responsible for opinions of correspondents.

A PLEA FOR ORGANIZATION.

OWEN SOUND, March 11th, 1896.

To the Editor of the CANADA LUMBERMAN:

SIR,—Owing to the depression in the hardwood lumber trade in the States, it is necessary that the lumbermen look to the English market for the disposal of their lumber. A good deal of Canadian lumber at present goes to the English market by way of New York. In order to have a direct market for our lumber, it would be to our advantage to send a representative from here with samples of our different kinds of hardwoods in the rough and smooth. To do this it would be necessary for the lumbermen of each county to send a delegate to a convention in Toronto, at which a delegate should be appointed to represent them in the Old Country.

If the mill men and dealers would take this matter up in each county, there would not be any difficulty in raising sufficient funds to defray expenses, irrespective of any government assistance.

With the assistance of the CANADA LUMBERMAN we might, next fall, during Exhibition time, have a meeting of all the lumbermen in Ontario, which would greatly assist to advance the interests of the trade.

Yours truly,
WM. FOSTER.

"CUT-OFFS."

HEPWORTH STATION, ONT., 2nd March, 1896.

To the Editor of the CANADA LUMBERMAN:

SIR,—I have read your article entitled "Cut-offs." There is a sinful waste of timber by all saw millers who are endeavoring to manufacture 1st and 2nd hardwood lumber. Unless an outlet can be found for culls and common, manufacturers will have to continue facing a deficit on the output of their hardwood saw mills. I will be pleased to obtain an order for piece stock to be cut from 4/4 and 5/4 maple, birch, beech, ash and rock and soft elm if prices can be obtained to cover labour and leave something for the stock. I am now cutting from dry maple and birch boards, pieces from 1×4 to 1×7, 4′ to 6′ long, and stacking them up in anticipation of an order.

In your illustration in the March LUMBERMAN you have scarcely put the rock elm matter correct. I enclose you statement as I think I presented to you recently in a letter you printed over my signature in a former issue:

To 5 000 ft. rock elm logs @ $5.00	$25.00	
To Cost of mant'g. 5,000 ft. with interest on capital @ $2.25 per M	11.25	
	$36.25	
By 1,000 ft. clear stuff in U.S		$ 18.00
By Loss to be made up from 4,000 ft. of coarse stock		18.25
		$36.25

Yours truly,
J. E. MURPHY.

IMPORTATION OF LUMBER IN FRANCE.

BORDEAUX, LE., February 28th, 1896.

To the Editor of the CANADA LUMBERMAN:

DEAR SIR,—I enclose you an extract from the Bordeaux custom records of importations at this port, showing importations of spruce, pine and all construction lumber and timber from 1890 to 1895, inclusive. This will give you an idea of the importance of this market, and show the source of our supply, in which Canada has heretofore played a very small part. You will note the falling off of importations from Norway and Germany and the augmentation of the Russian and Swedish, the former having for the last three years had the major share of our business. You will also note our importations of hardwoods fell off last year; this is owing to an important stock being left over from 1894, and a general depression in the hardwood market during 1895. I hope to have in hand very soon a similar table for other ports of France; meantime I ask your attention to the enclosed.

Our market continues firm and quiet, and buyers are holding off for concessions in prices; but as English markets are paying better prices than those offered here, it makes your sellers temporarily indifferent. The uncertainty of freights has prompted shippers not to speculate. For the moment all proposed deals are in abeyance. Few if any transactions have been consummated. One of your big shippers offered here recently a cargo of say, 400 to 500 stds., 25% 3×9, 75% 3×7 and 3×8, @ 160 francs, C. and F. Bordeaux. As buyers maintain their ideas at 150 to 155 francs per std. C. and F., there were no takers for this offer. Hardwood remains inactive, with a small inquiry for Canada elm in dressed logs.

IMPORTATION OF WOOD FOR CONSTRUCTION, BORDEAUX.

	1890	1891	1892	1893	1894	1895
	Cubic Metres	Cubic Metres	Cubic Metres	Cubic Metres	Cubic Metres	Cubic Metres
Spruce, Pine, Pitch Pine and other construction woods from: Belgium		11			83	
Russia	30,230	82,758	23,477	43,774	64,132	55,597
Norway	7,268	2,450	2,949	3,046	1,409	100
Sweden	48.370	68,837	21,594	30 114	40,129	33,705
Germany	2,05[illegible]	5,728	150	170	406	
Various others, principally U.-S.A. & Canada	13,209	27,280	6,855	8,050	10 460	20,905
Totals	101,127	187,064	55,025	85,154	116,859	110,307
Oak & other hardwood for construction purposes principally oak, however, from all countries	2,396	3,783	3,438	5,756	6,205	1,781

The above figures were taken from the Bourse by myself, and are an exact extract of the official Custom House record of importations.

Yours truly,
GEO. ALFRED MAGIE.

THE LATE JOHN BRYSON, M.P.

WE are enabled to present in this issue to the readers of the LUMBERMAN a portrait of the late

THE LATE JOHN BRYSON, M. P.

Mr. John Bryson, statesman and lumberman, whose sudden death has already been recorded in this journal. Mr. Bryson, in partnership with Mr. Alexander Fraser, carried on extensive lumbering operations on the Upper Coulogne, under the style of Bryson & Fraser, which firm were also the owners of large timber limits.

The deceased was the second son of the late Hon. George Bryson, and was born at Fort Coulogne, Que., on November 30th, 1849. He received his elementary education in his native village, afterwards attending the British American Business College, Toronto, and also taking a course in the military school at Montreal. He entered his father's office as clerk at an early age, and became a partner in his business in 1870. Two years later he started on his own account, and in 1873 formed a partnership with his brother George, which lasted twenty years. At that time the partnership was formed which existed up to the time of his death.

Mr. Bryson entered public life as Mayor of Mansfield in 1882, and in the same year was elected to the Dominion House of Parliament as the representative for Pontiac county in the Conservative interest. At the general elections of 1887 he was again successful, defeating the Liberal candidate by a large majority. In 1891 there was a three-cornered contest, and by a division of the Conservative vote Mr. Bryson was defeated, the constituency falling into the hands of Mr. Thomas Murray, Liberal. Mr. Murray, however, being unseated, Mr. Bryson defeated him at the bye-election the following year, and has since that time represented the county.

In the year 1874 Mr. Bryson married Miss Mary Bryson, daughter of the late Thomas Bryson, M. P. P., who died seven years later. About two years ago he married Miss White, of Montreal, who, with two children, survive him.

In his private life the subject of our sketch enjoyed the reputation of being an honest, upright and charitable man. The riches which he had emassed were won by personal industry and hard work, he being a business man of recognized merit and standing. In religion he was a Presbyterian, and will be much missed in the courts of that body.

The estate of Mr. Bryson is valued at half a million dollars, and includes real estate, bank stock, mortgages, etc. In his will he provides amply for his wife and children, and requests that his share of the timber limit held with Mr. George Bryson, jr., shall be sold within a reasonable time.

For a photograph of Mr. Bryson we are indebted to the courtesy of Mr Geo. B. Campbell, who has been intimately connected with his lumbering interests for some time.

UNITED STATES FOREST RESOURCES.

SOME valuable statistics regarding the extent, condition and consumption of the forest resources of the United States have recently been compiled by Mr. B. E. Fernow, Chief of the Division of Forestry. The forest area of that country is placed at slightly less than 500,000,000 acres. On the Pacific Coast and in the Rocky Mountains hardwoods are rare, the growth being mainly spruce, fir and bull pine. In the Southern States are found hardwoods and pine, with spruce, fir and hemlock in small quantities. Large quantities of hardwood are found in the Northern States, while spruce is predominant in the Eastern States. A rough estimate of standing timber places the amount at 2,300,000,000,000 feet, and the total annual cut is given as 40,000,000,000 feet B. M., 12,000,000,000 feet of which is pine, 5,000,000,000 spruce and fir, 3,000,000,000 oak, and 7,000,000,000 other hardwoods. The consumption increases from decade to decade in greater proportion than the population, and new industries like the wood pulp industry, add constantly to the demand.

The imports of wood and other forest products amounts to between twenty and thirty million dollars annually, and the exports between twenty-five and thirty million dollars. The average price per thousand feet of the various woods is: White oak, $30.70; other oaks, $34.90; hard pine, $24.40; white pine, $34.70; fir, $21.00; spruce, $20.00; cedar, $40.00; cypress, $31.60. The annual loss by fire is in the neighborhood of $25,000,000.

John Reid has the contract of cutting and hauling lumber for Penber Bros., of Hiberni, N. B., who own a portable saw mill at Summer Hill. They will cut about 100,000 feet.

LUMBERING IN THE NORTH-WEST.

Manitoba and the Northwest Territories, although famous for their grain production, are not without considerable timber resources. In the northern and eastern portions of Manitoba large quantities of spruce are to be found, while bordering on Manitoba to the east is a large timber country, extending for hundreds of miles. A large portion of Saskatchewan and Alberta territories are covered with timber, and farther north again in the unorganized regions there are vast forests.

The principal source of lumber supply for Manitoba and the eastern portion of Assiniboia territory is the Lake of the Woods region. The mills of this district are located at and near Rat Portage, on the main line of the C.P.R. At this point the railway touches the lake, thus affording shipping advantages for the lumber, while the lakes and streams running into it afford facilities for gathering in the saw logs to the mills. The lumber cut at Lake of the Woods is principally white pine, with some red pine. About two years ago the mills at this point were amalgamated into the Ontario and Western Lumber Company, a description of whose mills appeared in the Canada Lumberman for January last. The company owns six mills at Rat Portage and Keewatin, and lately have established a sash, door and box factory in connection with their business. They employ about 500 men.

At Keewatin a large mill is operated by the Keewatin Lumber Company, an illustration of which is herewith presented. The capacity of the mill is fifteen million feet per annum. Mr. Richard Fuller, of Hamilton, Ont., is president of the company, Mr. John Mather, of Ottawa, managing director, and Mr. R. A. Mather, local manager.

Keewatin Lumber Co.'s Mills, Keewatin, Ont.

The mills have been running since 1880, cutting from 10 to 12 millions annually, the whole of which is shipped to Manitoba and the Northwest. The saw mill has a rotary and band mill, with the necessary edgers, trimmers, etc., and has a capacity of about one hundred thousand feet per day. The planing mill is supplied with the latest machinery for making flooring, siding, ceiling, mouldings, etc. The motive power is water, of which there is an unlimited supply from the Lake of the Woods, and the planing mill is run all winter. The supply of logs has been chiefly obtained for some years from Minnesota, being driven down streams tributary to Rainy River, and thence towed across the Lake of the Woods to the mills. The company have also large limits on the Lake of the Woods and adjacent country.

Tributary to Lake Winnipeg is a large area of timber country, and a portion of the Manitoba supply is drawn from this region. Spruce is the principal timber cut there.

Winnipeg has one saw mill of considerable capacity, which cuts logs brought down tributaries of the Red river, from a timber district in south-eastern Manitoba. The timber is white and red pine, spruce, etc. Another mill is located at Whitemouth, on the C. P. R., east of Winnipeg, and still another mill is at Brandon, the latter supplied with spruce timber brought down the Assiniboine river from the Riding Mountain district. These comprise the principal mills of Manitoba, though there are a number of smaller mills at other points engaged in sawing for local trade.

In the northern portion of the organized territories, Prince Albert and Edmonton are the principal lumbering points. Both these towns are situated on the North Saskatchewan river, though a long distance apart. At Prince Albert, particularly, the lumber industry has assumed considerable importance.

In Western Alberta, comprising a portion of the Rocky Mountains and bordering country, there is abundance of timber, and there are several mills on the line of the C. P. R. in the Bow river valley, in Alberta, principally at Calgary. The western portions of the territories draw their supply of lumber principally from these Alberta mills, or from British Columbia. There are several mills on the main line of the C. P. R. in the eastern portion of British Columbia, which ship lumber eastward into the prairie country, but they cannot ship as far east as Manitoba to advantage.

The large coast mills of British Columbia also send considerable lumber into the prairie country, but only special classes of lumber are shipped as far east as Winnipeg. Lumber from the British Columbia coast mills which comes to Winnipeg is principally cedar siding and fir flooring. In common boards, dimension, etc., they cannot compete with the pine and spruce cut so much nearer to the Manitoba consuming markets. British Columbia red cedar shingles, however, have come into general use in Manitoba, owing to their superior quality as compared with the native pine.

J. W. HOWRY & SONS, FENELON FALLS, ONT.

The above firm are making preparations for a greatly increased business, and are erecting an addition to their mill 20 × 100 feet, besides providing additional office room. Private offices will be afforded for Mr. Howry, Mr. Swan, Mr. Perrin, and Mr. Lee.

An illustration and brief description of their planing mill and box factory at Fenelon Falls appeared in our issue of September, 1895.

Hitherto the firm have run what are technically called two mills, that is to say, there are two saws, two carriages, two steam feeds and two "niggers," etc.; and the addition mentioned above is to cover a "third" mill, which will increase the capacity fifty per cent.

An Allis bandsaw, 48 feet long, is to be put in, and three steel carriages, two of which are to replace those used last year. The Prescott saws now in use are to be retained. The additional machinery will necessitate additional power, and a 56-inch wheel, made by Paxton, Tate & Co., of Port Perry, is to be put in to run the planing mill and box factory. The work is nearing completion, and it is expected that the machinery in all the buildings will be running night and day early in April. The firm have logs enough in Cameron lake to make about 15,000,000 feet of lumber, and in the vicinity of their nine shanties at different points out north enough logs to make about 40,000,000 ft. are skidded up. In 1894 the mill cut about 9,000,000 feet, and 25,000,000 feet in 1895, while nearly that amount is piled in the extensive yards. The firm had 250 names on the pay-roll last year, and this season they expect to be able to get along with 325, as the improved machinery that has been introduced will enable them to cut fifty per cent. more lumber with an increase of less than fifty per cent. in the labor. Their books show that in the last two years they paid out $106,879 in wages alone to men employed in Fenelon Falls, and they estimate that it will take $100,000 to pay the 325 to be employed this season. Mr. Swan is general manager, and Mr. John Thompson superintendent of the mills. Mr. C. L. Perrin is head bookkeeper and cashier, Mr. F. W. Stewart has charge of the planing mills, Mr. D. Lee is timekeeper and billing clerk, and Mr. W. S. Perry has charge of the timber yards.

The Sutherland Innes Co. will make large additions to their works at Munusing, Mich. They will put in a two band saw mill and two factories, a slack barrel factory and a syrup barrel factory. One mill is almost built, two more have the machinery in and will be completed shortly, and the foundation is being laid for a fourth mill. The head office of the company is at Liverpool, Eng

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS AND MILLERS' GAZETTE

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ADVERTISING RATES FURNISHED ON APPLICATION

THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

TARIFF LEGISLATION.

TARIFF legislation, however carefully framed, is prone to cause dissatisfaction, and the most that the authors can hope for is to promote the welfare of the majority. Every industry has at some time felt the effects of what has been considered an unjust duty. That the lumber industry of Canada has been a great sufferer from tariff changes all will admit. Under the McKinley tariff which operated in the United States prior to September, 1894, an import duty on lumber entering that country was imposed, which, coupled with a general financial depression, well nigh crippled that industry in most provinces of the Dominion. By the Wilson bill which passed the United States Senate in the fall of 1894, lumber became a free import, but the advantages to be derived therefrom were greatly lessened by a ruling of the Board of General Appraisers as to what constituted dressed lumber. Again, the Dominion government imposed an export duty on saw logs, which operated unfavorably for American manufacturers, who finally succeeded in having the duty removed.

At the present time, when the lumbering industry in Canada shows signs of revival, a request has been made to the Dominion government by the pulp manufacturers, to impose an export duty on spruce wood, in the hope of developing pulp manufacture in Canada. On another page will be found the opinions of several interested persons. The expediency of such a move is open to question. While it might result in developing the manufacture of pulp in Canada, the general effect of such a duty upon the entire lumber interest of the Dominion should be carefully considered.

Mr. Rowley, of the E. B. Eddy Co., speaks of retaliatory measures, and quotes the statement of Mr. Whitney that the United States government will not impose an import duty on Canadian lumber. Mr. Rowley has evidently forgotten the wording of the Wilson bill, paragraph 683 of which reads as follows: "Provided that all the articles mentioned, when imported from any country which lays an export duty or imposes discriminating stumpage dues on any of them, shall be subject to the duties existing prior to the passage of this Act." It will be clearly seen that in the event of an export duty on pulp wood, the duty imposed by the McKinley bill immediately comes into force, which would not only affect spruce lumber, which is principally used for pulp wood, but also pine, hardwood, shingles, and other lumber products.

It is claimed that eighty per cent. of the spruce wood of North America is to be found in Canada, and that American pulp manufacturers must look to Canada for their supply. No statistics are available to verify this statement, but it is known that vast quantities of spruce are yet to be found in Maine, and a few years ago the eastern markets of the United States were so flooded that it was found necessary to organize the Northeastern Lumbermen's Association to control prices. And who can foretell what changes a few years may bring? Poplar has already been used with success as a pulp wood, and ere many years have passed the demand for our spruce may have materially diminished.

It is improbable that any action will be taken by the government in the matter at the present session. Before another session is called a general election will have taken place, the result of which will have a bearing on the question. In the lumber industry in Canada there is an invested capital of nearly $100,000,000, the annual wage list is $30,000,000, and the annual output is valued at $110,000,000. These figures and the circumstances above mentioned should be carefully considered before action is taken.

THE ECONOMICS OF LUMBERING.

WE had something to say last month under the heading of "Cut-Offs" on the subject of the utilization of the bi-products of the mill which are now to a large extent destroyed. This is a subject to which mill owners should turn their attention. Years ago when raw material was abundant, there did not exist the same necessity for studying the economics of the business. With rapidly disappearing forests and steadily increasing competition among manufacturers of lumber, it has become necessary, in order to secure profit out of the business, that use should be found for every part of the tree. Some of our mill men have already come to recognize this fact, and are turning their attention to specialities, out of which they are making a satisfactory profit. Some of these specialities might, at first glance, appear insignificant, but on closer investigation it will be found that the demand is sufficiently large to warrant a certain number of manufacturers in devoting particular attention to them. We know at least one firm in Ontario who are making a specialty of butcher's skewers. They have invented special machinery for the purpose of manufacturing these skewers in the most perfect and economical manner, and we believe are doing a prosperous trade. There are doubtless specialties of like character for which an equally profitable demand might be found.

We had a conversation with a mill man not long ago who was endeavoring to organize a company for the manufacture of cloth boards, that is, boards from 7" to 10" wide and from 27" to 33" long, and rounded on the sides and ends, used by cloth manufacturers to place in the centre of rolls of cloth. This gentleman had inquired into the matter and found that a large demand exists for these boards, principally from the cloth manufacturing districts of England. The boards at present in use are principally made of basswood, and are imported largely from the United States. It is believed that spruce would be quite as suitable a wood for this purpose, and if machinery could be obtained which would manufacture the boards at one operation, no doubt a profitable business might be done.

These illustrations are given to show that our manufacturers should investigate the openings for specialties such as those we have mentioned, in the manufacture of which less competition and a greater amount of profit might be met.

FOREST PRESERVATION.

IT is pleasing to observe the increased agitation for forest protection which comes from almost every province of the Dominion. That the better protection of our forests from the ravages of fire is absolutely necessary is becoming more apparent each year. It is earnestly to be hoped that this increased interest in the matter will result in some action being taken by the local governments.

The detrimental effects of forest destruction upon water supplies, vegetable growth, crop results, etc., have already been proven, and require no further verification. Frequently fishermen and prospectors are largely to blame for these fires. The former, after kindling a fire, do not take the necessary precautions to prevent its spread, while the prospectors start fires to remove the wood from the land in order to facilitate the search for minerals. Dr. Bell, in his recent lecture at the Canadian Institute, on "The Forests and Forest Trees of Canada," advanced the opinion, based upon his experience, that many of the fires which occur in pine forests are caused by lightning. This opinion refers especially to red pine, the resinous nature of which makes it very susceptible to ignition by lightning stroke, and which, when ignited, burns so fiercely that the fire travels at a remarkable speed, even jumping rivers in its course, and destroying countless thousands of dollars worth of timber in a few hours of time.

The division of the province into districts with a fire commissioner over each, on the lines of the system in operation in Algonquin Park, would seem to be the most feasible means of preventing the spread of fire. It would entail the expenditure of a few thousand dollars by each province, but this would be repaid with interest by the preservation of a large amount of valuable timber. Complaint is also made that large quantities of small timber are wasted by the practice of lumbermen cutting every small tree found within their limits. This is a matter which might also be remedied by the government by more strictly enforcing the laws governing the

size of trees to be cut. The government of the United States at the present time is considering the question of forest conservation, and has requested the National Academy of Sciences to suggest means to that end.

EDITORIAL NOTES.

In reading the reports of foreign markets, some dealers are probably at a loss to understand the technical terms used. As a rule, in Great Britain lumber is sold where it is over an inch in thickness by the cubic foot, and where it is one inch or under without regard to its thickness. A "load" is equal to 40 cubic feet, or 600 feet board measure. A St. Petersburg "standard" is equal to 1,980 feet, and a Quebec "standard" to 2,750 feet of plank one inch thick.

As will appear by our advertisement pages, there are a number of Canadian timber berths in the market at the present time. Our advices are that there is little or no demand from the United States at present for Canadian timber lands. This is believed to be attributable in a measure to the financial stringency which has prevailed across the border. If this has affected the situation, the new American bond issue which has just been disposed of on such favorable terms, will doubtless tend to stimulate demand.

To Mr. J. R. Booth, the well-known lumberman of Ottawa, is due the credit of having opened up one of the most valuable timber sections of the province of Ontario, by the construction of the Ottawa, Arnprior and Parry Sound Railway. The road, as the name indicates, extends from Ottawa to Parry Sound, and passes through a portion of the province which is heavily timbered, and which formerly was devoid of railway facilities. The contract for the last forty-seven miles has recently been awarded, and when completed, the road promises to be a keen competitor for the traffic of the upper lakes.

The Lumberman has recently been asked for particulars regarding the log cullers' examinations which are held by the Ontario government. We are informed by Mr. White, Deputy Commissioner of Crown Lands, that it is the intention in future to hold only one examination each year, unless the number of applicants should necessitate a second examination. The most convenient point for the largest number of applicants is selected as the place of writing. We have endeavored to secure a copy of the last examination paper for publication, but as many of the questions are fundamental, it is not considered just to place it within reach of intending applicants.

It is generally conceded that the outlook for the lumber business is brighter at the present time than for several years past. This is due partly to the fact that business conditions have somewhat improved, and also that it is now apparent that no injury is likely to result to the business by reason of tariff changes either on the part of the Canadian or American government. It is now conceded even by the Americans, who are most anxious that the United States government should re-impose an import duty on lumber, that such action will not be taken during the life of the present administration at least. This means that for two years at least we shall enjoy settled conditions. The knowledge of this fact will have an important influence upon the business. It is impossible for trade to be satisfactory as long as uncertainty exists regarding the tariff. Now that this uncertainty is at an end, we may reasonably expect that business will steadily improve.

We have frequently referred to the attempts made by lumbermen to raft logs on the Pacific ocean. Several of the early undertakings in this direction proved disastrous, and resulted in large financial loss, the rafts going to pieces in storms. The advantage to be gained is a considerable saving in freight. But lumbermen are not easily discouraged, and last summer a large raft which was towed from the Columbia river to San Francisco, proved an unqualified success. The report now comes to hand that preparations are being made for building another immense log raft at Puget Sound, to be towed by sea to San Francisco. The success of the venture will be watched with interest.

We had occasion recently, for the benefit of a subscriber, to obtain some data relative to the cost of towing logs. As this is a subject on which there does not seem to be much information available, we deem it advisable to publish such data as we were able to obtain. From one of the largest Michigan lumber firms who bring their logs from the Georgian Bay district, we learn that the cost of towing is $1.25 per M to East Tawas and $1.50 per M to Bay City. It is difficult to accurately estimate the average percentage of timber lost in passage, as the logs are estimated when put into rafts, and the only way of getting at the loss is to accept the report of the man on the tug towing the raft. Estimating in this way, the loss usually runs from 25 to 1,000 pieces. A great deal depends on the weather. During the months of June, July and August, the loss is nominal. Unless booms are broken, it is always the small logs that get out, and in a great many cases red pine, on account of their floating so low in the water. As long as the tugs can hold strain on the booms, or chains do not break, experience has shown that rafts will stand as much rough water as the boats.

Canadian manufacturers of dressed lumber, whose interests are affected by the recent United States Customs decision that dressed lumber entering the United States is dutiable, will be interested in knowing that Messrs. Howry & Son, of Fenelon Falls, Ont., have appealed to the Supreme Court of the United States against this decision. Messrs. Howry & Son hope to be able to upset the decision on American evidence. For example, Mr. J. W. Hotchkiss, United States expert, said with regard to this question: "This is the first time in an experience dating from 1847 that I have ever heard it claimed that flooring and the like was not properly classed as 'dressed' rather than 'manufactured' lumber." Judge Daniels has also put his opinion on record as follows: "When the Wilson bill was in conference I endeavored to get them to put an ad valorem duty on planed, matched, grooved and tongued lumber, but they did not pay the slightest heed to the arguments." All this goes to show that the interpretation now put upon the tariff is the result of an afterthought, and is directly contrary to the views expressed at the time the Wilson bill was under discussion in Congress. It is well known that Messrs. Howry & Son and other Canadian firms invested large amounts of money in machinery plant to enable them to manufacture dressed lumber for the American market, which investments will be almost entirely valueless if the present interpretation of the tariff should be upheld. Messrs. Howry & Son are deserving of credit for having undertaken to fight this question single-handed, and it is to be hoped that other Canadian manufacturers, whose interests are similarly affected, will see it to be their duty to bear a share of the legal expenses incurred in bringing the matter to a final decision.

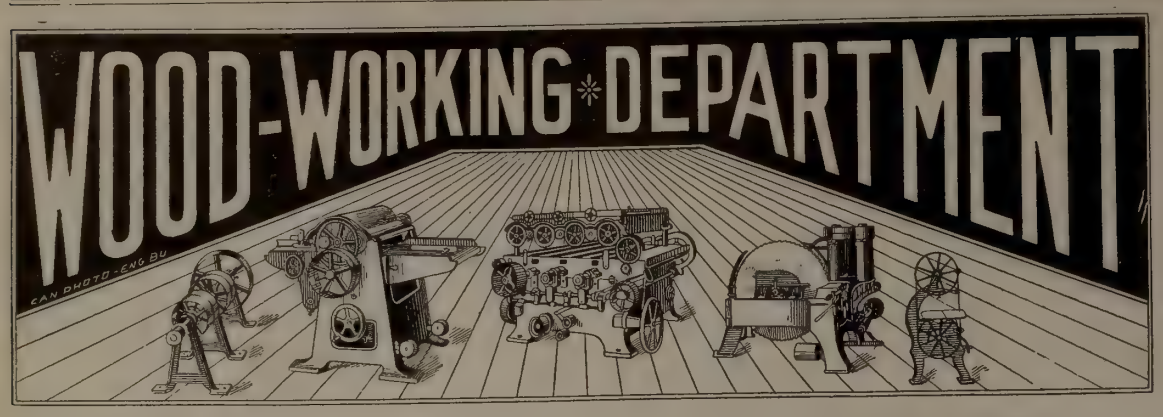
ALGONQUIN PARK.

An interesting lecture was delivered at the Canadian Institute, Toronto, on the 29th of February, by Mr. W. Houston, M.A., on "Algonquin Park." As most of our readers know, this park was set apart by the Ontario Government about three years ago as a reserve for fishing, hunting, and forestry purposes, its extent being 44 miles from north to south, and 40 miles from east to west, and containing an area of little less than one and a quarter million acres, about one-fifth of which is water. The country in which the park is situated contains numerous small rivers and streams, which were known to remain dry from May to September as a result of forest destruction. It is therefore intended to make the park an object lesson in forestry. Its forest resources are of considerable value, the land being well timbered with pine and hardwoods. The hardwood will be preserved, but the Government has granted licenses to lumbermen to cut the pine timber, and operations are now being actively carried on. Some idea of the quantity of pine timber in the park may be gathered from the fact that bonuses amounting to one and a quarter million dollars have been paid by lumbermen to the Ontario Government.

Among the principal operators are Messrs. Gilmour & Co., of Trenton, who are cutting at the mouth of the Trent river, and the Whitney Lumber Co., who are operating the old Perley & Pattee limits on the south side of the park. The latter company have erected a large saw mill at Long Lake, where they have purchased 700 miles of timber limits. The Gilmour Company have heretofore floated the logs to their saw mill at Trenton, and have spent upwards of $100,000 on a plant to overcome the difficulties encountered in getting logs from the Muskoka river to the Trent river. In Trading Lake the logs are raised by an endless chain 60 or 70 feet, and dumped into an aqueduct, by which they are carried one and a quarter miles, from whence they are towed by alligator boats to the river. But this process of towing the logs is proving unsatisfactory, and the company are said to have made arrangements to erect a mill in the park.

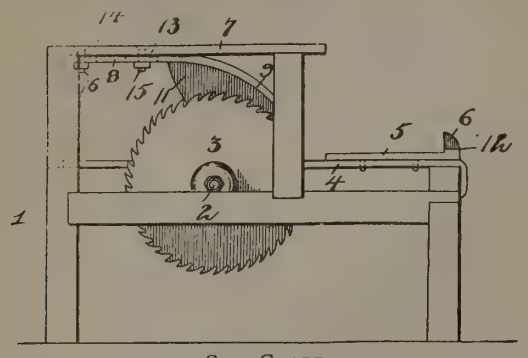
To protect the timber a staff of rangers is employed, whose duty it is to patrol the park. The superintendent is Mr. John Simpson, who succeeded the late Peter Thomson.

"One Hundred Years of American Commerce" is the title of a special centennial edition of the Shipping and Commercial List and New York Price Current, edited by Chauncey M. Depew, L.L.D., now in course of preparation. An article on "American Lumber," by B. E. Fernow, Chief Division of Forestry, Washington, D.C., will be one of its prominent features.



RECENT WOOD-WORKING PATENTS.

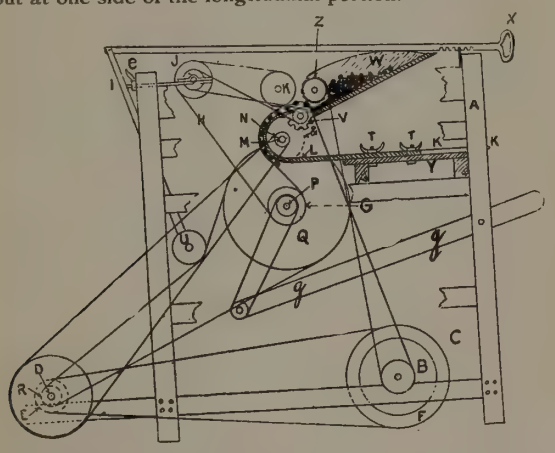
Patents for wood-working machinery have recently been granted in Canada as follows:



Saw Guard.

Patentee: L. C. Ringuette, Rhinelander, Wis., U. S., patented 15th January, 1896; 6 years.

Claim.—The combination with a knot-sawing machine, provided with a circular saw and a receiving table located directly above said saw, of a saw guard capable of being swung laterally away from the saw for giving access to the latter, and comprising a horizontal portion, a curved downwardly and forwardly extending portion, a pendant vertical flange arranged upon one side of the saw and extending downwardly to the forward end of the guard, the horizontal portion of said guard being provided with a pair of longitudinally elongated slots providing for the longitudinal adjustment of saw guard, one of said slots being closed and constituting a pivot slot, and the other being T-shaped, or provided with a lateral branch opening out at one side of the longitudinal portion.



Machine for Pointing Butchers' Skewers.

Patentee: Frederick Harrison, Owen Sound, Ont., patented 24th January, 1896; 6 years.

Claim.—In a skewer pointing machine, a table having the form of an ellipse and made adjustable endways and sideways, a combination of the hopper W, the roller Z, the short corrugated feeding roller V, the table L, L, the cutter head S, S, journalled inside the ellipse of said table, the belts H, H, and the carriers g, g. A combination of an elliptical table such as L, L, the cutter head S, S, carried by a shaft, journalled within the elliptical table, and the belts H, H, substantially as shown and for the purposes set forth. A cutter for a skewer pointing machine having a head with bevelled sides, a set of curved and bevelled knives b, b, and a set of straight bevelled knives c, c, substantially as shown and for the purposes set forth.

George Long, manufacturer of sashes and doors, Sherbrooke, Que., is about to rebuild his factory.

NOTES ON WOOD-WORKING.

By Job, in Lumber World.

The dust-collector is the salvation of the modern worker in wood.

Wood-working establishments of the latest model are great improvements over those of five, ten or fifteen years ago. The newer plants are better lighted, better ventilated, better and more solidly built, freer from dust, and more scientifically arranged than the older plants. The result is apparent in greater production, better production and cheaper production.

There are great possibilities in the development of the beauties of different woods by the simple process of sawing. A visit to a furniture factory will convince a wood-worker that the effects in the way of grain and figuring obtained by sawing are varied and beautiful, and that each furniture wood can be made to show new and attractive effects if manipulated by men who know more than the a b c of their business.

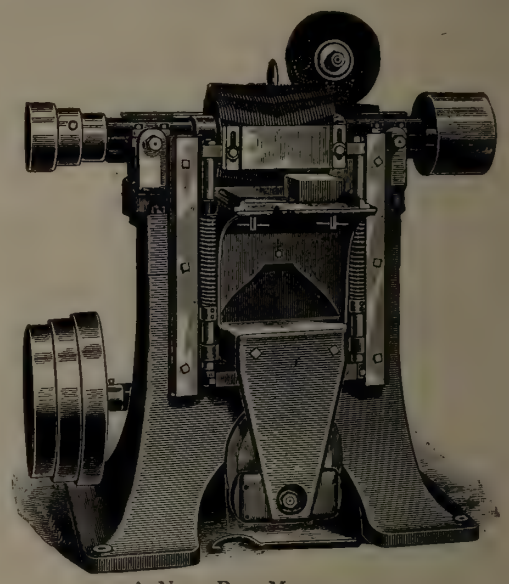
Among the curiosities in wood-working is the amount of work that is expended in making one of the lighter, cheaper woods resemble one or another of the heavier and more expensive woods. One late German process of making pine look like ebony is so long, employs so many handlings, calls for so many dyes, necessitates so much time, labor, material and other elements of production that the "ebonized pine," when finished, would cost more than a similar quantity of real ebony. Furthermore, the German counterfeit ebony could never be mistaken for real ebony by any person who had ever seen ebony. Is it not a waste of material and skill to produce such things?

So old and so highly developed is the planing-machine that one would hardly expect to find in use a planer in these days that does not do at least passable work. Yet one does find such planers here and there. In company with a rival highwayman I visited last month a mill in which three planers were at work, or, rather, at play or riot. All three were being "rushed," and all were turning out stock that was called "planed," but it was really corrugated stock, quite fit for use as washboard material without further treatment. Could we two experienced highwaymen convince the infatuated owner of those three corrugators that he really needs three real planers? Not a bit of it! He is satisfied. His patrons have to be satisfied, for there is no competitor within reach, and thus the situation is fixed and will remain fixed until some competitor drops into that town, builds a mill, puts in some real planers, and shows the natives what real planed lumber is.

Some don'ts: Don't place your boiler, your engine, or a single machine in your shop until you have a complete diagram to indicate the best possible disposition of your equipment. Don't leave anything to chance, but lay out a plan according to your best judgment. Don't put in dark places machines that are intended to do fine and accurate work. Don't accept machines which the manufacturers are not willing to let you test fairly. Don't buy equipment on the "cheap" plan. Don't expect the $600 machine bought for $350 to do the work of the $600 machine bought for $600. Don't expect the "great reduction in price" to go unaccompanied always by a corresponding reduction in the actual working power and value of the machine. Don't ignore every law of common sense and expect to come out successful in the end.

A NEW BOX MACHINE.

We present herewith an illustration of an improved box-corner grooving machine, which has lately been placed upon the market. Owing to the increasing demand for wood boxes of all kinds, some valuable inventions have recently



A New Box Machine.

been brought out. It is claimed for this machine that, while it decreases the cost, the production is increased and the quality of the work maintained.

It is designed especially for making the lock corner for boxes and similar work, and does this rapidly and perfectly. It has a patent power feed and automatic or self-clamping and releasing device for holding the work or pieces to be grooved firmly, and bringing it up past the saws, and on returning releases the work immediately, soon as through saws, ready for operator to reverse ends, or to put in another piece of work.

The machine is simple in construction, having no intricate or complicated parts, and has an emery-grinding device attached for keeping the cutters in good condition.

This machine will cut from thin stock one-sixteenth of an inch thick to twelve inches thick in the block; or it will take any number of thin pieces up to twelve inches. This allows of the work being done either in the block or after it has been resawed into thin pieces. It is also suitable for use on either large or small box work, and can be operated by a boy.

The highest trees in the world belong to a species of eucalypti found in Australia. Single specimens have grown to a height exceeding four hundred feet.

NOVA SCOTIA LETTER.

[Special Correspondence of the Canada Lumberman].

The winter, generally speaking, has been above the average for carrying on lumber operations, although the snow came rather late and went off to soon to suit the most of the operators. The hard weather during December and January enabled lumbermen to make excellent preparations for work, and when the snow did come, about the 25th of January, the quantity was just right for carrying on the work to the best advantage, and there was no lost time on account of broken weather. Every day was such as to permit of work, until the rain came about the 4th of March, when the most of the large operators decided to close the principal part of their operations, and only work a small number of men where they could do so to advantage.

The prospect in the early part of the winter was that considerably more than the usual cut would result, especially if the weather ran pretty well through March, but as the fourth of March nearly closed operations, a cut of about three-quarters is all that can be counted on.

The feeling generally amongst lumbermen is for a fairly good market this season. Some of the principal commission houses of Boston and New York have sent their men through the lumber sections of the province soliciting consignments, and they report the outlook for the year better than for some years past.

The advance in price in the English markets for deals, together with the comparative light supply for the season, prompts the mill men who have gang mills to cut for that market. The old rule in whist, "Lead trump when in doubt," can be applied with a slight change, thus: "When in doubt, saw deals"—they always sell.

The portable saw mills along the line of the I. C. R. from Westchester towards Halifax have been fully employed sawing deals to be shipped via Halifax, which are now being forwarded by rail for early shipment. Below are some of the principal men in this business:

T. G. McMullen & Co., of Truro, ship from twenty five to thirty million feet. This firm built a new mill at Ellershouse, on the Dominion Atlantic Railway, last fall. The machinery was supplied and put in by the Waterous Engine Works Co., of Brantford, Ontario; the power is water, and the mill is the celebrated "Allis" band, with all the modern appliances for taking logs into the mill and hauling the sawn product. The firm expect to have five million feet sawn there this season. Every Canadian Province has its "lumber king," and Mr. McMullen enjoys that title for this province—although it is said he is hard pressed to retain it by several other lumbermen, prominent among whom are J. W. Hickman, Amherst, and E. D. Davison & Sons, of Bridgewater.

W. J. Kent, Truro, ships from eight to ten million feet of deals, sawn principally by portable mills in the vicinity of Truro, Debert and Shubenacadie.

L. R. Rettie, Truro, runs two portable mills in Hants Co., sawing about two and a half million feet.

R. C. Ervin, Shubenacadie, has a portable mill a few miles out, and saws one and a half million feet.

Lantz & Co., with a steam mill at Milford Station which saws, in the summer season, one million feet, also have a portable mill which they run in the winter near Enfield Station. Their cut is about seven hundred and fifty thousand feet in this mill, a part of which is hardwood.

There are a number of portable mills in other sections along the I. C. R. and a few miles back, which also run in the winter, sawing lumber for different parties who sell to the principal shippers.

There is one industry in Truro which it would not be fair to pass with a word, as the firm use a large quantity of logs that is not otherwise of much value. The firm is John Lewis & Son. The principal wood they use is white birch, from which they make shoe pegs, shoe sole stiffeners, lasts, and capsules for bottles, besides a variety of small wares along these lines. The white birch is valuable for spool wood, and a few years ago there were several mills making spool squares, but latterly the supply was not sufficient to keep the mills going, and they removed to other places. The Messrs. Lewis buy the white birch along the line of railway in small lots from the farmers. They employ about thirty hands, some of whom are girls, said to be better for some of their work than the sterner sex.

The largest mill in this section of country is at Stewiacke, owned by Alfred Dickie. The mill is steam power, gang and rotary, capacity, seventy-five thousand ft. per day of ten hours. Mr. Dickie's intention was to get out twelve million feet this season, but the early breaking up of winter has resulted in reducing it to ten million feet. He cuts deals and ships from Halifax. T. N. McGrath is the superintendent of Mr. Dickie's logging and milling operations, and the results in both branches of the business prove him to be a very efficient man. Mr. Dickie owns large areas of timber land on the Stewiacke river, and keeps adding to it whenever opportunity occurs. The logs are driven about forty miles. The mill is at the head of tide water alongside the I. C. R. The deals are loaded directly from mill onto cars, so the extra handling is saved, and he certainly gets the "maximum of work at the minimum of cost" in his lumber operations.

Douglas Fir Trees along Burrard Inlet Road, near Vancouver, B. C.

William Chisholm, of Halifax, has mills at Sheet Harbor, about eighty miles east of Halifax, on the Atlantic coast. He is a successful lumberman. The mill is water power, gang and rotary, and saws principally English deals, ships in schooners to Halifax, thence by steamer or sailing vessel as opportunity offers. His cut this year is about five and a half million feet. He controls all the timber tributary to the East river, Sheet Harbor, and has facilities for dressing lumber for any market. Mr. Daniel Chisholm is superintendent.

Hill & French, Musquodoboit Harbor, thirty miles east of Halifax, on the Atlantic coast, are also good examples of successful lumbermen. Their mill is water power, gang, with lath, box, stave and heading machines. The output this year will reach five million feet. They, with Mr. L. Hill, formerly owned the Ship Harbor property, but dissolved lately, Mr. L. Hill taking the latter. The mill was burned last summer. Mr. Hill is now cruising the Liscombe lands, and if satisfactory will build a mill there, and let Ship Harbor rest a while.

The Young Bros. Co., Ltd., Parrsboro, purchased the N. L. Todd & Co. property at St. Margaret's Bay, twenty miles west of Halifax, on the Atlantic coast. They are getting out about five million feet there, and will saw for the best market, English, American or South American. They are also logging extensively at River Hubert and Newville, Cumberland Co. Mr. D. P. Young superintends the two latter mills, and Mr. B. F. Young is moving his family to St. Margaret's Bay, and will superintend the mill there.

The Gold River Lumber Co., Gold River, N. S., are putting in about the usual quantity of logs—four million feet. They sawed all their logs out last year and will not start up until the new logs come in, about the 1st of June. Mr. T. G. Nichol, of Mahone Bay, is one of the principal owners and the manager. He has a rotary mill at Mahone bay, which saws half a million feet, and is also lumbering at Mitchell Brook, Queens Co., N. S., getting out one million feet, with a portable mill to saw it.

E. D. Davison & Sons, Ltd., Bridgewater, are the largest operators in Nova Scotia. They control all the lumber on the La Have River, with two gang mills at Bridgewater, and one gang and rotary mill at Alpena, on the Nova Scotia Central Railway. They also buy lumber from small mills along this line of railroad, shipping their lumber from Bridgewater in the summer and Lunenburg in the winter. They saw largely for South America, Canary Islands and other places not so well-known to the ordinary mill man, and have the reputation of getting good prices.

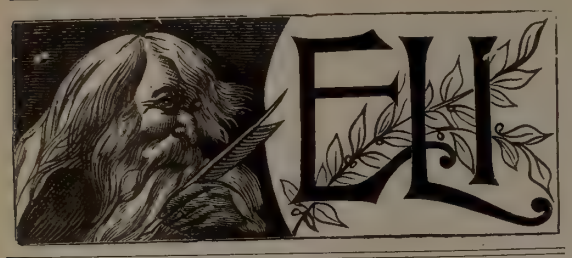
Lunenburg county has more saw and shingle mills within its borders than any county in the Dominion. A mill owner has been known to take his team of oxen, working with head yoke such as is seen in very few places outside the county, go to the woods, get a log, haul it to the mill, saw it into shingles, load on his waggon, and go to Bridgewater or Liverpool, trade the shingles for a barrel of flour and take it home, taking three to four days' time in the operation. This he would call "business." While it may not be business in the ordinary acceptation of the term, it is getting comparatively quick returns. Lumbermen are proverbially hospitable, and Lunenburg lumbermen are no exception to the rule.

W. J. P.

There is an absolute necessity for advertising; there is great eagerness to compete for attention, and no one gets it unless it is by giving, as it were, so many strokes of the hammer, one after the other, to compel the people to notice what is going on.—W. E. Gladstone.

In New York, it is said, there are 500 men who make a living selling sawdust. They have invested a capital of over $200,000, and are now doing a business of $2,000,000 annually. Forty years ago the lumber mills were glad to have sawdust carted away; 25 years ago it could be bought for 50 cents a load; now it brings $3.50 a load at the mills.

London, England, receives more deals from Sweden than from any other country, and half as many from Russia as from Sweden. She receives more from Russia than from the St. Lawrence and more from Norway than from New Brunswick. More than four times as many spruce deals are shipped to London from the St. Lawrence as from the Lower provinces, while the shipments to London of pine deals from the St. Lawrence is nearly equal to the aggregate of spruce deals thus shipped. London receives two-thirds as many deals from Finland as she does from New Brunswick.



I imagine that I am not the only individual who has more than once since the opening of the new year asked himself the question: "What is the meaning of the long list of business failures we see chronicled week by week in the newspapers? Does it mean that, instead of experiencing improved conditions, as many have told us we shall, things are going from bad to worse?" After having revolved this question in my mind for a month or more without being able to arrive at a satisfactory solution, I fired it without warning at the manager of one of our leading banks, whom I chanced the other day to meet. His answer was reassuring, and therefore I have thought it advisable to quote it here. He said, "I think this batch of failures is the last we shall see for some time to come. It is, I think, the wind-up of that class of people who were caught without sufficient capital in the recent commercial depression. Without the means to weather the storm, they have one after another gone to the wall. I think, as I have said, that we are now seeing the last of them. So far as my observation goes, I am led to believe that the business situation is undoubtedly improving, and those who have managed to pull through the gale may now expect smoother sailing." So mote it be.

* * *

Slow trade conditions, such as have prevailed in the lumber business during the past year or two, if of no other advantage, certainly cause men to think. I have recently been wondering what is to be the future of white pine in Ontario, and must confess to being somewhat puzzled on the subject. While talking along this line a few days ago, Mr. J. H. Eyer, lumber merchant, of Toronto, remarked to me: "It appears to me that white pine, which was some years ago the rich man's lumber, is now the poor man's lumber. What I mean by this is, that hardwoods are to some extent replacing white pine in the construction of many of our best buildings. And as to prices, I would not be surprised if a further decline should take place, as I do not believe we have struck rock bottom yet. Why, Michigan is full of lumber, while at Duluth I hear there are three hundred million feet. But we are becoming quite familiar with hard times, and are learning to regulate our expenses accordingly." I do not hold quite as pessimistic a view of white pine prospects as Mr. Eyer, but nevertheless, it certainly would seem that when prices for pine reached the point where a living profit was made, tariff changes, slow building operations, keen competition, or some other drawback, prevented the possibility of any further advance.

* * *

Messrs. Clark Bros., of Digby, N. S., are extensive lumber exporters, one of their markets being in Cuba. When asked what effect the war had upon trade in that country, one of the firm said: "So far as we are concerned, we find very little difference as yet on lumber in a direct way. The market is uncertain, and we make it a point to be sure of our bearings before we start. But we are finding a difference in the way freights are affected. It is becoming hard to pick up a profitable return freight. We have a letter now, six days old, from our captain in port, in which he says he can see the fields of cane burning as he looks from his vessel. This, of course, is taking some of the profits off the business, and the end is not yet. We also ship largely to the West Indies, but are working into the South American markets. We have of late years shipped quite extensively to Argentine, and will also this season. A great deal depends upon how matters in Cuba will end."

* * *

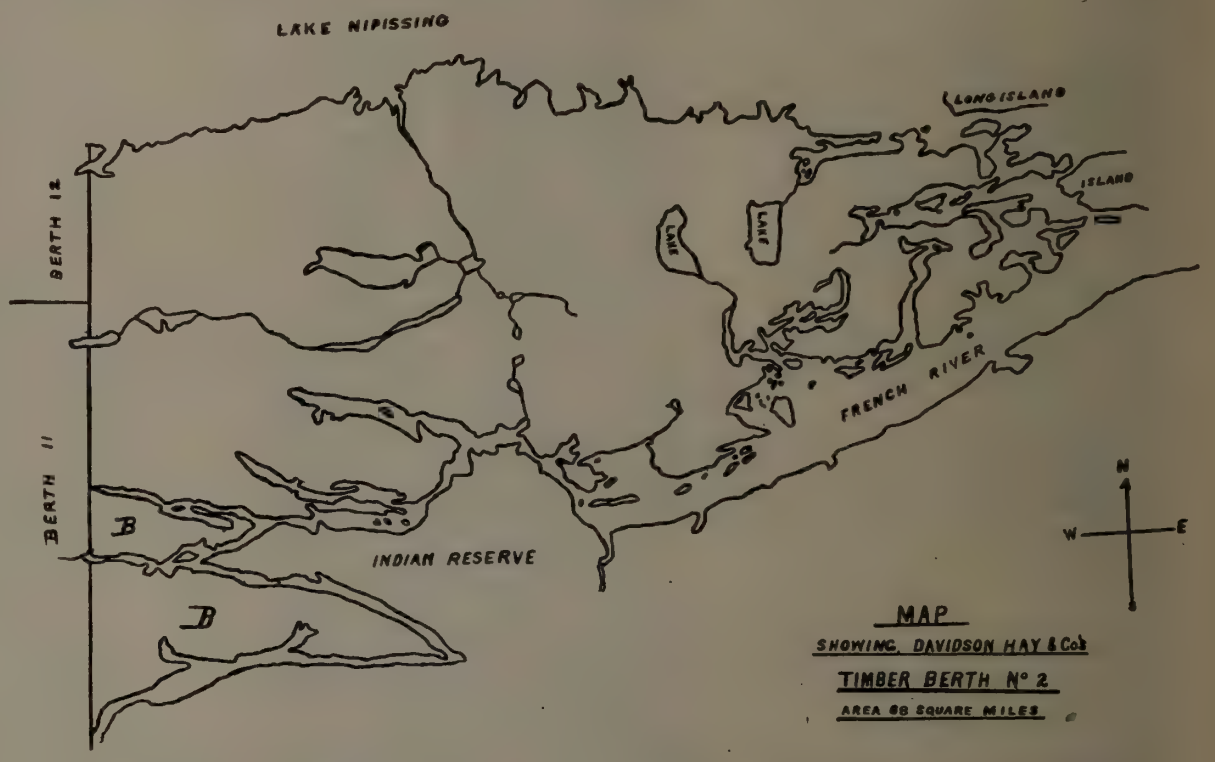
As a rule, things in this world even themselves up pretty fairly, if they are given time enough in which to do it. A case in point is the present condition and prospects of the shingle trade. For several years things went from bad to worse with the shingle manufacturers, until finally the point was reached when everybody admitted that the bottom had completely fallen out of the business. Nobody seemed to want shingles no matter what the price at which they were offered, and just here let me remark that in not a few cases they were offered at next to nothing. The British Columbia shingles found their way into eastern Ontario, and added greatly to the embarrassment of the local manufacturers. Then the time came when prices got so low that shingles could not be sold here at a profit. As a result of this condition of affairs the local manufacturer "shut up shop," and his British Columbia competitor greatly reduced his output. What shingles were required were supplied from stocks on hand. These have now been reduced by the local and foreign demand to such a point as to force prices upwards, and once more the shingle manufacturer feels that he has something to live for other than to pay interest on idle plant.

The boiler in Wm. Curtis' saw mill near Waterdown, Ont., exploded recently, causing considerable damage to property, and fatal injuries to Thomas Smiley. The boiler had been guaranteed to carry 120 pounds of steam, but when the explosion occurred the pressure is said to have been only 75 pounds. The mill was badly wrecked.

DAVIDSON, HAY & CO.'S TIMBER SALE.

Upwards of fifty persons were present at Suckling & Co.'s warerooms in Toronto on the 23rd ultimo, when the entire timber limits and saw mill property of Messrs. Davidson, Hay & Co. were offered for sale by auction. Among these were noticed several prominent lumbermen who might reasonably be considered probable buyers. The property offered consisted of timber berth No. 2, containing 68 square miles of timber limits, on Lake Nipissing and French river, the location of which may be clearly seen by the accompanying map, a steam saw mill, an electric light plant, about 3,000 white and red pine saw logs, steamers, boom chains and boom timber, bush plant, etc.

The timber berth was divided into two sections, A and B, the latter being first offered. It contained 7½ square miles, or 4,710 acres, of virgin pine. The bidding was started at $10,000, and after some slight competition finally reached $27,000. This figure was considerably below the reserve bid, consequently the limit was withdrawn.



Section A was then offered. It contained 60½ square miles, and is heavily timbered with pine, hardwood and pulp wood. An estimate of the pulp wood thereon places the amount at 105,000 cords. For this limit, although admittedly a valuable one, no one could be induced to make an offer, and it became apparent that few anxious purchasers were present.

The balance of the property was placed in the market with the same result, no bids being received, and the sale was foreclosed without a purchaser being found for any of the property.

The result of the sale would seem to evidence an indisposition on the part of lumbermen to invest in timber limits at the present time. This may be attributable to the unsatisfactory condition of the lumber trade for the past few years; or it may be that the approach of a general election and the possibility of a change of government is having its effect.

Mr. E. C. Grant, of the Ottawa Lumber Co., was a guest of the Tonawanda Lumber Co. at the annual meeting of the Wholesalers' Association of the United States, which was held recently at Saginaw, Mich.

CANADA LUMBERMAN

WEEKLY EDITION

The Lumberman Monthly Edition, 20 pages } $1.00 PER YEAR { The Lumberman Weekly Edition, every Wednesday

THIS PAPER REACHES REGULARLY THE PRINCIPAL LUMBER MANUFACTURERS AND DEALERS THROUGHOUT CANADA, AND WHOLESALE BUYERS IN THE AMERICAN AND FOREIGN MARKETS.

VOL. II. TORONTO, ONT., MARCH 25, 1896 No. 12

CANADA LUMBERMAN

PUBLISHED BY

C. H. MORTIMER

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NEW YORK LIFE INSURANCE BUILDING, MONTREAL.

Weekly Lumberman, published every Wednesday. Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

Lumberman, Monthly. A 20-page journal, discussing fully and impartially subjects pertinent to the lumber and wood-working industries. Contains interviews with prominent members of the trade, and character sketches and portraits of leading lumbermen. Its special articles on technical and mechanical subjects are especially valuable to saw mill and planing mill men and manufacturers of lumber products.

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VEST-POCKET

INSPECTION BOOK

Containing Rules for the Inspection and Measuring of Pine and Hardwood Lumber in the leading markets of Canada and the United States. Embracing also many useful tables and calculations of everyday service to lumbermen.

Prepared by the Editor of the "Canada Lumberman."

Toronto, Canada
C H. MORTIMER, Publisher
1895

THE above is a fac simile of the title page of the latest and most complete Lumber and Inspection Book published.

We shall be pleased to send you a copy on receipt of four 3 cent Canadian postage stamps

THE CANADA LUMBERMAN,
Toronto, Canada

JUDICIAL SALE OF LICENSES

FOR

CANADIAN TIMBER BERTHS

Pursuant to the judgment in an action in the Common Pleas Division of the High Court of Justice for Ontario of Beck v. Spohn, et al, there will be offered for sale at public auction (with the approbation of the Local Master of said court at Barrie), by Messrs. Dickson & Townsend, Auctioneers, at their rooms, No. 22 King Street West, in the City of Toronto, Ontario, at the hour of 12 o'clock noon, on

Thursday, the Twenty-Third Day of July, 1896;

(A) The following Ontario Government Provincia timber berth licenses:—

Parcel No. 1—License for berth No. 2 in the Township of Finlayson, in the District of Nipissing; area, including road allowances, about 10¾ square miles.

Parcel No. 2—License for berth No. 3 in the Township of McCraney, in the District of Nipissing; area, including road allowances, about 11½ square miles.

Parcel No. 3—License for berth No. 19 in the District of Rainy River; area, about 11 44-100 square miles.

Parcel No. 4—License for berth No. 20 in the District of Rainy River; area, about 5 square miles.

Parcel No. 5—License for berth No. 21 in the District of Rainy River; area, about 4 square miles.

Parcel No. 6—License for berth No. 25 in the District of Rainy River; area, about 11 square miles.

Parcel No. 7—License for berth No. 27 in the District of Rainy River; area, about 7 square miles.

Parcel No. 8—License for berth No. 65 in the District of Rainy River; area, about 7 square miles.

Parcel No. 9—License for berth No. 67 in the District of Rainy River; area, about 1½ square miles.

Parcel No. 10—License for berth No. 68 in the District of Rainy River; area, about 4 square miles.

ALSO—(B) The following Dominion of Canada Government timber berth license:—

Parcel No. 11—License for berth No. 292, situated on the north fork of High River, in the District of Alberta; area, about 47 8-100 square miles.

TERMS OF SALE.

Each parcel will be offered separately and subject to a reserved bid fixed by the said Local Master.

The biddings will be of a price per square mile.

The license of each berth will be sold subject to the various conditions contained or to be contained therein, and to the various statutes, orders in Council, regulations, dues and conditions now affecting or which may hereafter be passed or imposed affecting the same.

The price will be computed according to the areas stated above, and no allowance will be made for shortage or for water or for road allowances. No error in any of the above descriptions or in any map exhibited by the Vendor's Solicitors shall annul the sale, nor shall any compensation be allowed in respect thereof.

Ground rent and Government dues will be apportioned to the date of sale and assumed by the purchaser from the date of sale.

No timber on any berth shall be cut until the purchase money of the license thereof has been paid in full.

The purchaser shall at the time of sale pay down a deposit in proportion of $25 for every $100 of the purchase money, and shall pay the balance into court without interest to the credit of this cause, within thirty days after the sale.

The parties to the action, including the Vendor, shall be at liberty to bid.

The other conditions of sale will be the standing conditions of the court.

Maps of the berths may be seen at the offices of the Vendor's Solicitors.

Further particulars may be had from Messrs. BLAKE, LASH & CASSELS, Canadian Bank of Commerce Building, Toronto, Vendor's Solicitors, and Messrs. M'CARTHY, PEPLER & M'CARTHY, Solicitors, of Barrie.

Dated at Barrie this third day of December, A.D. 1895.

J. R. COTTER, Master.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue.

SAWYER WANTED.

APPLY TO LOCK BOX 95, OWEN SOUND, stating wages and references.

WANTED.

A MAN IN CANADA, ACQUAINTED WITH the band saw trade, to sell on commission. Address, "BAND", Care CANADA LUMBERMAN, Toronto.

FOR SALE—20 H. P. BOILER, $100; 16 H. P. engine, $50. Also planer and matcher, shaper, power mortiser, and tenoner. Address F. BETTSCHEN, Palmerston, Ont.

FOR SALE.

10 CARS DRY 8-QUARTER BROWN ASH lumber, common and better, and other hardwoods.

H. H. SHAVER,
Quinn, Ont.

FOR SALE.

ONE CAR NO. 1 AND 2 DRY WHITE OAK, 2 inch, 12, 14 and 16 feet; two cars good cut up dry white oak, 12 and 14 feet.

ELDORAS TODD,
Brantford, Ont.

WANTED.

WOULD BUY PINE TIMBER OR LOGS, OR take an interest in saw mill in territory tributary Lake Superior or Georgian Bay, and exchange $30,000 worth improved Detroit property. Address, "PINE," care of CANADA LUMBERMAN.

FOR SALE—CHEAP

3 TUBULAR BOILERS: 4 FEET DIAMETER, 13 ft. 6 in. long, 54 three-inch tubes.
1 Horizontal Engine: 10¾ in. bore, 15 in. stroke.
1 Horizontal Engine: 14 in. bore, 24 in. stroke.
1 Horizontal Engine: 18 in. bore, 30 in. stroke.
1 Westinghouse, 3 Cylinder Engine: 7 in. bore, 9 in. stroke.

THE RATHBUN COMPANY,
Deseronto, Ont.

DRY STOCK FOR SALE.

60 M ft B. Ash, log run, culls out.....$11.00
30 " " R. Elm, common and better, 1½ in..... 11.00
8 " " " " " 2 " 12 00
15 " " Pine, " " " 1 " 13.00

I am also getting out a large stock of fresh cut hardwood and hemlock dressed flooring, broom handles, cedar shingles, etc. Second hand engine and boiler for sale, in first-class order, Fisher's make, Kincardine; boiler 48 in. diameter, 12 ft. long, fifty 3 in. tubes; engine slide valve; 12¼x16 stroke. For particulars apply to ISAAC RUTHERFORD, Dobbington, Ont.

BUSINESS DIFFICULTIES AND CHANGES.

Curie & Clenes, lumber, Sandon, B.C., have sold out.

Fraser & McKernan, lumber dealers, Edmonton, N. W. T., have dissolved partnership.

The assets of J. D. McDiarmid, stave and heading factory, Aylmer, Que., are offered for sail by tender up to the 15th of April.

Van Wart & Livingston, lumber, Calgary, N. W. T., have dissolved partnership. The business will be continued by Mr. Van Wart.

S. P. Benjamin & Sons, of Wolfville, N. S., are applying for incorporation, with a capital stock of $100,000, to manufacture lumber, etc.

CURRENT TRADE CONDITIONS.

ONTARIO.

The situation in Ontario as regards white pine cannot truly be said to be improving. The trade which should reasonably be expected at this season of the year is materializing only in a small degree, while the number of eager purchasers of lumber are few. A large portion of the stock which is now being shipped was contracted for last fall or during the early winter. The orders now being placed are for small lots, indicating a decided apathy on the part of purchasers to secure stocks beyond those for immediate wants. Nevertheless, it must not be considered that no favorable prospects exist for spring trade, as inquiries are being received which, it is believed, will develop into actual business at a later date. Allowance must also be made for the unseasonable weather which prevailed during the past week, by which communication with the commercial centres was shut off for several days. The report from the Ottawa valley states that limited orders are being placed for the United States market. The hardwood trade shows a slight improvement over that of pine, there being a greater local demand from consuming industries, as well as some call from the American market. In each line some inquiry is noted. Lumbermen are gradually closing operations in the woods, and many of the camps have already broken up. Anxiety now exists as to when the drive will commence, which, it is generally believed, will be at an early date.

QUEBEC AND NEW BRUNSWICK.

The markets for New Brunswick lumber continue in good shape. The shipments to the United States have increased slightly within the past week, while an average quantity of lumber has gone forward to the English market. The prospect for getting the logs out is improving, and reports from various sections are quite encouraging. Advices from Quebec state that the demand for square timber for England is improving, and promises a largely increased business during the present year. Quebec houses are said to be feeling the influence of the improvement. Some sales are also reported of cedar, shingles and sleepers.

BRITISH COLUMBIA AND MANITOBA.

The demand for export lumber continues to be of a satisfactory character, and shipments are going forward regularly. The Central Lumber Combine has gone into operation, by which the price of lumber has been advanced $1 per thousand feet.

The basis of the list is $8 for rough merchantable at the mill for foreign shipment. It is said to be the strongest lumber association ever formed on the coast, and will affect, directly or indirectly, the entire trade. In British Columbia there is a movement to organize a rail shippers' association on similar lines. The price list of British Columbia lumber at Winnipeg shows an advance on some grades, principally on cedar stuff, but the increase is not as great as was expected.

UNITED STATES.

The past week has been governed by unfavorable conditions, and consequently there has been a backwardness on the part of buyers of lumber to place orders. The demand for white pine for building purposes which should come with the approach of the spring season has been restricted as the result of stormy weather, in fact, the situation as regards white pine is such that the trend of trade is affected by the slightest change in conditions. Reports from the retail trade at large indicate no expectation of an unusual spring demand, but the requirement will certainly be increased by building operations. As to hardwoods, a firm market is reported in oak, ash, basswood, mahogany, and rock elm. At many distributing points an improved demand is experienced, with oak leading both as to volume and demand. The situation at Buffalo is set forth in our regular monthly letter in another column. At Boston the market is firmer, and prices may probably advance. Spruce clapboards are the main feature of the market. The building outlook there is also good, and shingles are improving. Some yard trade is being done at Saginaw, nearly every dealer reporting an increase, but the wholesale business is dull. From the Pacific coast the report comes to hand that the red cedar shingle trade is slowly picking up, and the mills have more orders than for some time past. The demand for lumber for eastern shipment is also good, and indications point to the fact that the year will be an exceptionally good one for western lumbermen.

FOREIGN.

The latest reports from the British market tell of a quiet free-on-board trade, as most of the merchants have purchased all they require for immediate wants. Prices are nevertheless being well maintained, and any sales made are at figures which show no tendency to decline. American oak and mahogany are meeting with some demand, and although the imports are not generally large, an average amount of spring trade is developing. The general belief seems to be that, with the increased consumption likely to arise, the trade of the approaching season will be satisfactory. At a recent sale at Cork, 12,000 pieces of red and pitch pine boards, deals, planks and scantlings realized good prices. The spruce market remains unchanged, a parcel of spruce deals being sold at Liverpool at advanced prices. The supply of Canadian goods in Australia is small, and the market is firm. Fraser & Co., of Melbourne, Aus., say: "A steady business has been done during the past four weeks, and nearly every description of imports has been in demand, while rates have ruled for stocks on hand fully sustaining late valuations. A little business has been done in spruce deals, and an improved inquiry may shortly be anticipated."

SHIPPING MATTERS.

Steamship Micmac has been fixed to load deals at West Bay, N. B., for the U. K.

Sch. Fred H. Gibson, at Pascagoula, from St. Jago, will load lumber for Port Spain.

Ship Favonius has been chartered to load deals at New York for Montevideo, at $6.50.

Steamship Bawtry has been fixed to carry deals from Sheet Harbor, N. S., to Liverpool at 38s.

The schooner Pefetta has been chartered at St. John, N. B., to load shooks for Bermuda.

The American barkentine C. F. Crocker has been chartered to load lumber at Moodyville, B. C., for Shanghai.

Bark Cognan will load deals at Campbellton or Pugwash, N. B., for Ireland, at 40s., or Marseilles at 55 francs.

STOCKS AND PRICES.

Alexander Gibson, of Marysville, N. B., will cut upwards of 25,000,000 shingles this season.

The steamship Scotsman sailed from Halifax last week, for Liverpool, with 300 standards of deals.

Vigars Bros. have commenced sawing at Fort William, Ont. They are taking out 3,000,000 feet of logs.

The Nanaimo, B. C., saw mill has completed an order for 250,000 feet of lumber for an Alaska cannery.

L. Pardo, of Blenheim, Ont., has received large orders for staves to be shipped to Monte Video, South America.

J. W. Howry & Sons, of Fenelon Falls, Ont., have sold eight million feet of lumber to Buffalo dealers. It will be shipped at once.

Geo. Thomson, of Wingham, is taking out a large stock of logs on the shore of Lake Huron, which he will raft to Goderich for sawing in his new mill.

The Keewatin Lumber Co., of Keewatin, Ont., have purchased a million and a half feet of logs, principally white pine, from Beatty Bros., of Tower, Minn.

The British ship General Gordon has finished loading lumber at the Moodyville, B. C., saw mill. She has a cargo of 25,159 superficial ft. of dressed lumber, 1,183,973 ft. of rough lumber, and 336,780 laths.

At a sale of timber limits at Hull, Que., on the 18th inst., a limit situated near Quyon, some eleven square miles, was bought by Gillis Bros., of Braeside, Ont., for $225 a square mile, or a total of $2,475. One near the Coulonge river, six miles square, was bought by Mr. Thacray, Ottawa, for $95 a square mile. One near Lake Temiscamingue, thirteen square miles, was withdrawn; no bidders.

The following exports of lumber are reported from St. John, N. B., to the United States, for the week ending the 21st inst.: For Salem, per schooner Vado, 36,236 ft. plank, 73,363 ft. boards by J. E. Moore. For Boston, 7,025 ends, 55,500 spruce boards, 31,285 hemlock boards, and 500,000 cedar shingles, by Stetson, Cutler & Co. For Newport, 93,000 sp. ft. boards, by S. T. King & Sons. For Salem, 79,499 sp. ft. scantling, 67,083 sp. ft. plank, by Stetson, Cutler & Co. For Vineyard Haven, 810,000 laths, by Stetson, Cutler & Co. For New York, 320,950 ft. deals, by Miller & Woodman. For City Island, 262,097 ft. deals, by Stetson, Cutler & Co. For Boston, 33,700 ft. hemlock boards, 110,162 ft. scantling, by Stetson, Cutler & Co. For City Island, 218,033 ft. deals, by Stetson, Cutler & Co. For New York, 320,950 sp. ft. deals, by Miller & Woodman.

BUFFALO AND TONAWANDA.

Expectations in the lumber trade are badly dashed on account of the continuation of winter so long after some sign of spring is due. This will account for the slow sales, at least in part, though it is doubtful if there would have been a satisfactory movement if March had proven to be an open month. As it is business is nothing more than fair, and the indications of a rapid improvement are not positive. The pine dealers who have sent their men on the road are getting fair orders, and that is as much as the situation ought to warrant.

There is less said of the price of pine than for a long time. There does not appear to be as much cutting as there has been, and yet the condition of the trade is not such as to warrant an attempt to get any more. There is still a large amount of the low grades on hand, and if the reports of the condition of the pine that was left over at the mills are correct, there will not be less of them this season. Still there is not so much complaint of low grades as there was, and it may be that the trade will return to better things by next year.

Lumbermen are buying only in small lots at the mills as a rule. There is an increased disposition to obtain lumber by rail from Canada. Several firms are bringing in good pine from various points in the direction of Georgian Bay, and at least one firm, Scatcherd & Son, has a man there looking for oak and elm. The margin is so small that it will be necessary to sell at once and ship direct to the buyer.

The idea of a middle-point wholesale lumber district is not favorable to the direct shipment plan. If there was a fair margin of profit all purchases would be made without a customer in sight, and the lumber would be handled here and put into a better shape for the eastern market than is usually possible at the mill. But so long as profits are so small it will be the practice to ship as much lumber, especially hardwood, through to destination without stopping it off here.

The new yard of George W. Stevens at Black Rock is filling up with shipments by rail of the Arthur Hill Company's pine from Midland. He has taken the Proctor yard since occupied by Donogh & Oliver, and with it all that was occupied by Tyler and Leslie & Willcox, and still finds the room very small for handling so much lumber. No one else is in a hurry for the opening of navigation, but if there was to be any early running of the mills at the Midland yard, there must be room made somehow for piling the lumber. It looks a trifle out of the ordinary to begin a large number of new piles of bright new lumber at this time of the year, but the necessity appears to be imperative.

The stock held by Donogh & Oliver is rapidly disappearing, and they will soon be out of the Buffalo trade entirely, so far as the holding of lumber here is concerned. The trade will be sorry to lose them, even if their place is taken by a dealer who promises to be the second largest handler in the city.

There are many reports of the low rates made on lumber by the Canadian Pacific, which appears to be doing what it can to steal a march on the water route and to circumvent the other roads. The new hold obtained by the Inter-state Commerce Commission on the American roads is having a salutary effect on rates, and it is believed that no secret cuts are in existence at present.

There is not much doing in hemlock at present, though the Goodyears are cutting 500,000 feet a day, and are getting a new mill ready at Gainesville on their Pennsylvania tract. Prices are very low and demand is light.

The difficult point in hardwood is the scarcity of oak, especially red, which seems to be almost out of market. Plain white oak is also scarce, and it may be said that hardly any sort of hardwood is really plenty. There would be some resignation over the situation if the price of such woods as are hard to find would advance, but the report is made by the trade generally that no buyer will offer a cent extra for anything that is not in stock.

Tonawanda is quite as indifferent to the opening of navigation as any other market, for though the winter's business has been fairly good, a large stock was laid in last fall, and there is still plenty of it left. There is a report that one of the Weston yards is to be closed this season. The report that the Eastern Company was to open a yard on the north side is not confirmed.

E. N. Mead is back from his four months' journey around the world, and will content himself at selling hardwood lumber for a while. He appears to be in the best of health and spirits, and has made the most of a traveller's privileges, enjoyed what he saw, and used the new experience to sharpen his good opinion of his own country.

The hardwood dealers will meet this week to adopt a set of inspection rules.

At the last meeting of the Lumber Exchange President Betts and the full board of last year were re-elected.

BUFFALO, March 20th, 1896.

FIRES.

Alex. Davidson's saw mill at Colpoy's Bay, Ont., has been burned. Insurance, $1,000.

Tucker & Hodges' saw mill at Westmeath, Ont., was burned on the 18th inst. Partially insured.

LUMBER FREIGHT RATES.

Lumber freight rates on the Canada Atlantic Railway are as follows: Ottawa to Toronto, 10 cents per 100 lbs.; Ottawa to Oswego, $1.90 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Montreal, $1.00 per M ft., (3,000 lbs. and under per M ft.); Arnprior to Montreal, $1.50 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Buffalo, 12 cents per 100 lbs.: Ottawa to Port Huron and Detroit, 14 cents per 100 lbs. Ottawa to New York, water delivery, lots of five cars and over, $3.00 per M ft.; under five cars, $3.25 per M ft. (subject to extra towage) 3,000 lbs. and under per M ft. Arnprior to New York, lots of five cars and over, $3.50 per M ft.; under five cars, $3.75 per M ft. (subject to extra towage) 3,000 lbs and under per M ft. Ottawa to Boston, Portland and common points, local 15 cents; exports 13c. per 100 lbs.; Arnprior to Boston, Portland and common points, local 17 cents; export 15 cents per 100 lbs.; Ottawa to Burlington, 6 cents per 100 lbs.; Ottawa to Albany, 10 cents per 100 lbs. Arnprior to Albany, 12 cents per 100 lbs.; Ottawa to St. John, N. B. and common points, 20 cents per 100 lbs.; Ottawa to Halifax, N. S. and common points, 22½ cents per 100 lbs Minimum carload weight for shipment of lumber, lath, shingles, etc., is 30,000 lbs., and rates quoted above are in cents per 100 lbs., except when quoted per M ft. the minimum carload charged is 10 M ft., lumber not exceeding 3,000 lbs. to the M feet. Ottawa rates apply on shipments from Rockland and Hawkesbury.

Lumber freight rates for pine on the Grand Trunk Railway have been made a fixture, as below. Of any intended change due notice will be given lumbermen.

General instructions in shipping by Grand Trunk are embodied in these words in the tariff schedule: On lumber in carloads, minimum weight, 30,000 lbs. per car, unless the marked capacity of the car be less, in which case the marked capacity (but not less than 24,000 lbs.) will be charged, and must not be exceeded. Should it be impracticable to load certain descriptions of light lumber up to 30,000 lbs. to the car, then the actual weight only will be charged for, but not less than 24,000 lbs. The rates on lumber in the tariff will not be higher from an intermediate point on the straight run than from the first named point beyond, to the same destination. For instance, the rates from Tara or Hepworth to Guelph, Brampton, Weston or Toronto, would not be higher than the specific rates named from Wiarton to the same points. The rates from Cargill and Southampton to points east of Listowel and south and west of Stratford will be the same as from Kincardine, but in no case are higher rates to be charged than as per mileage table published on page 9 of tariff.

Rates from leading lumber points on pine and other softwood lumber, shingles, etc., are as follows: From Glencairn, Creemore, Aurora, Barrie and other points in group B to Toronto, 6½c.; Collingwood, Penetang, Coldwater, Waubaushene, Sturgeon Bay, Victoria Harbor, Midland, Fenelon Falls, Longford, Gravenhurst and other points in group C, to Toronto, 6½c.; Brace, bridge to Toronto 7c.; Utterson, Huntsville, Navor-Emsdale, Katrine to Toronto, 7½c.; Burk's Falls, Berriedale and Sundridge, to Toronto, 8c.; South River, Powassen and Callender to Toronto, 9c.; Nipissing Junction and North Bay, 10c. Rate from Goderich, Kincardine and Wiarton to Toronto, 6½c. These rates are per 100 lbs. Rates from Toronto east to Belleville are 7½c. per 100 lbs.; to Deseronto, 9c.; to Brockville and Prescott, 10c.; to Montreal and Ottawa, 11c. The rates on hardwoods average about from 1c. to 2c. per 100 lbs. higher than on softwoods. For rates on railway ties, mahogany, rosewood, walnut, cherry, and other valuable woods, application must be made to the district freight agent.

On the Canadian Pacific the rates on pine and soft woods may be illustrated as follows: Cache Bay, North Bay, Sturgeon Falls and Warren, to Toronto, 10c.; Algoma, Cook's Mills, Massey, Spanish River and Whitefish to Toronto, 13c.; Ottawa to Toronto, 10c From Ottawa, Hull, Aylmer and Duchesne Mills to station on the Lake Erie and Detroit River, Erie and Huron, Toronto, Hamilton and Buffalo, and Michigan Central Railways, the rate is 14½c. per 100 lbs. Regulations apply as to minimum size of carload of 30,000 lbs., and an advanced rate is charged for hardwoods.

MODIFICATION OF HARDWOOD RATES.

THE Grand Trunk Railway and Canadian Pacific have made the rates on hardwoods from certain points to Toronto and Hamilton as follows. The regulations are over the signature of Mr. John Earls, W.D.F.A., of the G. T. R., and given in reply to a letter from Toronto hardwood men:

"After careful consideration we have come to the conclusion that, on and after Jan. 1st, 1895, a modification will be made in the present arrangements for hardwood lumber, to the effect that the rate will be 7½c. per 100 lbs from our Northern and Northwestern branches to Toronto and Hamilton. This rate, however, will not apply from main line points and the straight run between Toronto, Sarnia and Windsor; also that so far as rates on common lumber to points like Guelph, Galt, London, Woodstock, Ingersoll, etc., from all lumber shipping stations the rate will be the same on hardwood as on pine." On the old principle, we suppose, that half the loaf is better than none, hardwood men have something, possibly, to be thankful for, though there is no good reason why the rates generally on hardwood should not be as low as on pine. It is understood that the C. P. R. rate will be made uniform at 7½c from same points.

MILLS

Having Brown Ash 12, 14 and 16 ft. firsts and seconds, inch Bass firsts and seconds 12 feet, or any other Hardwood Lumber, can sell same for cash by addressing

H. D. WIGGIN
No 89 State St., BOSTON, MASS

Inspection at mill.

ONE DOLLAR
will pay your subscription to the weekly and monthly CANADA LUMBERMAN for
ONE YEAR

CANADIAN EXPORTERS AND WHOLESALERS

Thos. Meaney & Co. .

London Canadian Chambers

103 Bay St. - Toronto, Ont.

LUMBER

MILLMEN—Send us list of dry hardwoods.

DONOGH & OLIVER o o o o

Wholesale Dealers in **Lumber, Lath and Shingles**

TORONTO : 204-205 Board of Trade Building. -:- BUFFALO : Dock foot of Hertel Avenue.

Huntsville Lumber Co., Ltd.

—: HUNTSVILLE, ONT. :—

MANUFACTURERS OF LUMBER LATH AND SHINGLES

WE are open to cut White Pine and Hemlock Bill Stuff. Have for Sale a Quantity of Dry Mill Stocks and Sidings, also 16 in. Pine Shingles and 4 ft. Lath 1½ in. wide.

CORRESPONDENCE SOLICITED

THE PEMBROKE LUMBER CO. LTD.

MANUFACTURERS AND WHOLESALE DEALERS IN

DIMENSION TIMBER OF ALL SIZES AND KINDS, JOISTS, CAR DECKING, CAR SILLS, SHIP DECKING, AND ALL KINDS OF ROUGH AND DRESSED LUMBER.

Write us for Quotations on all Bills PEMBROKE, ONT

FOR SALE

Red Pine Dimension Logs, can be any length up to 50 feet to suit purchaser, and would contract for two to three million for next summer delivery at Spanish River. Special long lengths could be loaded on cars at Rayside, C. P. R. Will have five to six million feet of WHITE PINE, first cut on limit at Spanish River. And have about five million feet at mouth French River which could be delivered at opening of navigation . . . . . .

ADDRESS

BOOTH & GORDON - Sudbury, Ont.

WM. MASON & SONS . . . Manufacturers of..... and Dealers in

LUMBER and **DIMENSION TIMBER** LATH and SHINGLES

We have the largest and best equipped Dimension Saw Mill in Eastern Canada. All our machinery is of the latest and most improved pattern, and we are prepared to quote prices on and supply at the shortest notice any orders that may be submitted to us.

Address, P. O. Box 1020, OTTAWA, ONT.

WHOLESALE LUMBER

OFFICE: 20 Aberdeen Chambers

Jas. G. GANE & Co.

HARDWOOD a Specialty

TORONTO

JAS. PLAYFAIR & CO.

Manufacturers and Wholesale Dealers

LUMBER • LATH • SHINGLES

Contractors for Railway Supplies
BILL TIMBER a Specialty . . .

MIDLAND, ONT.

THE REID CO., of TORONTO, Ltd.

Handle all kinds of Pine and Hardwood Lumber
LONG OAK BILLS A SPECIALTY

LUMBER WHOLESALE AND RETAIL **COAL**

Office, Corner King and Berkeley Sts. DOCK, FOOT OF BERKELEY ST.

PACIFIC COAST LUMBER CO.

MANUFACTURERS OF . . . . . .

British Columbia Red Cedar Lumber and Shingles
Kiln-Dried Bevel Siding, V Siding, Ceiling, Wainscotting
Door Stock, Base, Casings, Mouldings, etc.

We do accurate work and make reasonably prompt shipments. NEW WESTMINSTER, B.C.

J. M. HOWRY & SONS · LUMBER · FENELON FALLS, ONT.

Stock on Hand . . .

LUMBER —25 Million
SHINGLES—10 "
LATH — 5 "

As we employ no travelling men in Ontario, send us your specifications. If we cannot save you money we do not want your trade.

WRITE US STATING YOUR WANTS

KILN-DRIED BIRCH FLOORING SHEETING .. and .. CEILING **$20.00** SAMPLES BY MAIL **KNIGHT BROS.** Bulk's Falls, Ont.

FOREIGN EXPORTERS AND IMPORTERS

WE want to buy FOR CASH the following kinds of Lumber : : : : :

Red Oak, Soft Elm
Basswood (all thicknesses)

Write us promptly, stating what you have to offer in each kind and quantity of each thickness, also dryness, etc., with lowest prices.

Empire Lumber Co. - Buffalo, N. Y.

WILLIAM B. YOUNG Successor to Young & Keeler Co.

WHOLESALE DEALER AND MANUFACTURER

ELM, BASSWOOD, BIRCH AND MAPLE

Canadian mill men invited to offer stocks. -:- 54 South Street, NEW YORK.

Public Lumber Storage Yard, Brooklyn.

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o o **POOLE & HOTCHKISS** o o

Wholesale Dealers in

PINE AND HARDWOOD LUMBER

Shingles and Lath

Correspondence invited. 270 West Genesee St., BUFFALO, N. Y.

SCATCHERD & SON 1053 Seneca Street, BUFFALO, N.Y. . .

—: WANT :—

ROCK ELM

COMMUNICATE AT ONCE.——7, 8, 14 and 16 feet, firsts and seconds

---

To Saw Mill Owners

WANTED FOR CASH: PINE SQUARES, SIDINGS, &C.

Address— JOHN ASHWORTH & CO. Timber Importers

Established 1856 WATERFOOT, MANCHESTER, ENGLAND

Is it your wish . .

To Purchase or Sell as quickly as possible

A PARTICULAR LOT OF LUMBER
A MILL PROPERTY
SECOND-HAND MACHINERY

An Advertisement in the "Wanted" and "For Sale" Department of the . . .

CANADA LUMBERMAN WEEKLY EDITION

Will secure for you a Buyer or Seller, as the case may be. Address,

The Canada Lumberman
Toronto, Canada.

CANADA ATLANTIC RAILWAY

Ottawa, Arnprior & Parry Sound Ry.

- - operating - -

OTTAWA & NEW YORK LUMBER LINE
OTTAWA & BOSTON LUMBER LINE
CANADA ATLANTIC FAST FREIGHT LINE

R. A. CARTER, Contracting Agent, 115 Board Trade, Montreal.
JOHN SMITH, Ontario Agent Union Station, Toronto.

Shortest and Quickest Route from

OTTAWA, ROCKLAND, HAWKESBURY, ARNPRIOR and all points on Grand Trunk Ry. TO . . .
BOSTON, PORTLAND, NEW YORK, DETROIT, TONAWANDA, ALBANY, &c., MONTREAL, TORONTO, QUEBEC, HALIFAX, ST. JOHN, &c.

CAPT. J. H. WILLIAMS, 16 Lumber Dist., Albany, N.Y.
C. J. SMITH General Freight Agent, Ottawa, Ont.

Ottawa & New York Lumber Line

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CANADIAN POINTS, NEW YORK CITY AND ALL POINTS REACHED BY WATER FROM ALBANY

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In the Monthly Edition of "The Canada Lumberman"

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WHOLESALE PRICES CURRENT.

TORONTO, ONT.

TORONTO, March 25, 1896.

CAR OR CARGO LOTS.

1¼, 1½ and 2 inch cut up and better	33 00	36 00
2 inch picks and uppers	35 00	37 50
1x12 dressing and better, 60% 16 ft	24 00	26 00
1x10 fine dressing and better	23 00	25 00
1x10 and 12 Canadian dressing and better	20 00	22 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	18 00
1x10 and 12 common	13 00	15 00
1x10 and 12 mill culls	9 00	10 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	11 00	12 00
1 inch siding ship culls	10 50	11 50
1 inch siding mill culls	8 50	9 00
Cull scantling	8 00	9 00
1 inch strips 4 in. to 8 in. mill run	13 00	14 00
1 inch strips, common	11 00	12 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		2 30
XX shingles 16 inch		1 35
Lath, No. 1		1 60
Lath No. 2		1 30

HARDWOODS—PER M. FEET CAR LOTS.

Quality, 1s and 2s unless otherwise specified.

Ash, white, 1 to 2 in.	$26 00	$28 00	Cherry 1 to 1½	$50 00	$60 00
" " 2½ to 4 in.	30 00	32 00	" 2 " 4 in.	60 00	65 00
Ash, black, 1sts and 2nds, 1 to 1½ in.	17 00	19 00	Elm, soft 1 " 1½	14 00	15 00
Ash, black, 1sts and 2nds, 2 to 4 in.	19 00	21 00	" " 2 " 3 in.	15 00	16 00
Ash, M. R., 1 " 2 in.	15 00	18 00	" rock 1 " 1¼	16 00	18 00
Birch, 1 " 2 in.	20 00	22 00	" " 1½ " 3 in.	20 00	22 00
" 1½ " 2 in.	22 00	24 00	Hickory 1½ " 2 in.	28 00	30 00
" sqrs. 4x4 " 8 x8	24 00	26 00	Maple 1 " 1½	16 00	17 00
Basswood 1 " 1¼	16 00	18 00	" 2 " 4 in.	17 00	18 00
" 1½ " 2 in.	19 00	20 00	Oak, red, p'n 1 " 1½	28 00	30 00
" m. r. 1 " 1¼	14 00	16 00	" " 2 " 4 in.	30 00	32 00
Butternut 1 " 1½	23 00	25 00	" white " 1 " 1½	28 00	30 00
" 2 " 3 in.	25 00	28 00	" " " 2 " 4 in.	30 00	35 00
Chestnut 1 " 2 in.	24 00	26 00	" quart'd 1 " 2 in.	46 00	50 00
			Walnut 1 " 3 in.	85 00	100 00
			Whitewood 1 " 2 in.	32 00	36 00

OTTAWA, ONT.

OTTAWA, March 25, 1896.

Pine, good sidings, per M feet, b.m.	$30 00	35 00
Pine, good strips, " " "	26 00	30 00
Pine, good shorts, " " "	18 00	25 00
Pine, No. 1 dressing sidings, per M feet, b.m.	17 00	20 00
Pine, " " strips, " " "	15 00	18 00
Pine, " " shorts, " " "	13 00	14 00
Pine, 10 s.c. and better stock, " " "	13 00	16 00
Pine, 8 s.c. " " "	11 00	12 00
Pine, " sidings " " "	13 00	15 00
Pine, " strips " " "	9 00	12 00
Pine, " shorts " " "	7 00	9 00
Pine, box culls " " "	9 00	11 00
Pine mill culls " " "	00	10 00
Lath per M No. 1	1 00	1 25
Lath per M No. 2	80	1 00
1x10 No. 1 barn	18	20
1x10 No. 2 "	16	18
1x8 & 9 No. 1 "	16	18
1x8 & 9 No. 2 "	15	

QUEBEC, QUE.

QUEBEC, March 25, 1896.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For interior and ordinary according to average, quality etc., measured off	16 @	22
For fair average quality, according to average, etc., measured off.	20	26
For good and good fair average " " " " "	25	30
For superior " " " " "	32	40
In shipping order " " " " "	36	42
Waney board, 18 to 19 inch " " " " "	36	42
Waney board, 19 to 21 inch " " " " "	38	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	40	49

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	22	30

BIRCH.

16 inch average, according to average and quality	21	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $40 to $43 for 3rd quality.
Bright spruce, according to mill specification, $40 $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality. F.O.B. batteau.

SAGINAW, MICH.

SAGINAW, Mich., March 25, 1896.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$45 00	Selects, 11in., 8in. and up wide	$39 00
1¼, 1½ and 2 in.	45 00	1¼, 1½ and 2 in.	41 00
2½ and 3 in.	53 00	2½ and 3 in.	47 00
4 in.	56 00	4 in.	50 00

FINE COMMON.

1 in., 8 in. and up wide	33 50	2½ and 3in., 8in. and up wide	40 00
1¼, 1½ and 2 in.	35 00	4 in.	45 00

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	23 50	2½ and 3in., 7in. and up wide	35 00
1¼, 1½ and 2 in.	35 00	4 in.	38 00

STRIPS. A AND B (CLEAR AND SELECTS).

1¼ in., 4, 5 and 7 in. wide	34 00	1 in., 4, 5 and 7 in. wide	32 00
6 in. wide	30 00	6 in. wide	36 00

FINE COMMON OR C.

1¼ in., 4, 5, 6 in. wide	30 00	1 in., 6 in. wide	30 00
1 in., 4, 5 in. wide	25 00		

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24 00	1 in., 4, 5, 6 in. wide	22 00

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in	16 00	1 in., 4, 5 and 7 in.	15 00
1 in., 6 in.	17 00	1 in., 6 in.	17 00

NO. 2 FENCING OR NO. 4 FLOORING.

1 in., 4, 5 and 7 in.	13 50	1¼ in., 4 to 7 in.	14 00
1 in., 6 in.	14 00	No. 3 fencing, 1 in., 6 in.	12 00

SHELVING.

No. 1, 1 in., 10 in. stocks	25 00	No. 2, 1 in., 7 and 8in. stocks	19 00
1 in., 10 in. and up wide	26 00	1 in., 10 in. stocks	21 00
1 in., 12 in. stocks	29 00	1 in., 12 in. stocks	24 00
1 in., 12 in. and up wide	30 00	1 in., 10 in. and up wide	23 00
1¼ in. 1½ and 2in., 8in. and up wide	29 00	1 in., 13 in. and up wide	25 00

BARN BOARDS OR STOCKS.

No. 1, 12 in.	20 00	No. 2, 9 in.	14 00
10 in.	16 50	8 and 7 in.	14 00
9 in.	16 50	No. 3, 12 in.	12 50
8 and 7 in.	16 50	10 in.	11 00
No. 2, 12 in.	16 00	9 in.	11 00
10 in.	14 00	8 in.	11 00

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$ 9 00	1 in., 13 in. and up wide	$11 50
1 in., 6 in. wide	10 00	1¼, 1½ and 2 in., 7 in. and up wide	11 50
1 in., 7 in. wide and up	10 50		

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9in. wide	17 00	1 in., 10 in. and up wide	18 00
1 in., 6 in. wide	18 00	1¼, 1½ and 2 in., 8in. and up wide	20 00

COFFIN BOARDS.

No. 1, 1 in., 13in. and up	20 00	No. 1, mill culls	8 00
No. 2	17 00	No. 2, or red horse	6 50

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23 00	No. 2	19 00
No. 1 (nearly clear)	21 50	No. 3	15 00

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16ft.	$ 8 50	Hemlock, 2x4 to 10, 12 to 16 feet	8 00
18 ft.	10 50	2x12	8 50
20 ft.	11 50	Add $1 to each additional 2ft. in length.	
22 and 24 ft.	12 50		

SHINGLES, 18-IN.

Fancy brands, XXXX	3 00	Standard brands, river made, XXXX	2 75
Clear Butts	1 90	Clear Butts	1 75

WHITE PINE LATH.

No. 1	1 75	No. 2	1 35
		Hemlock	1 25

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA N. Y., March 25, 1896.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in.	$45 00	No. 3, 1¼ to 2 in.	15 00
2½ and 3 in.	50 00	Shelving, No. 1, 13 in and up, 1 in.	30 00@31 00
4 in.	54 00	Dressing 1¼ in.	24 00
Selects, 1 in.	39 00	1½x10 and 1	26 00
1¼ to 2 in.	39 00	1½ in.	24 00
2½ and 3 in.	47 00	2 in.	25 00
4 in.	52 00	Mold st'ps, 1 to 2 in.	31 00
Fine common, 1 in.	35 00	Barn, No. 1, 10 and 12 in.	19 00
1¼ and 1½ in.	34 00	6 and 8 in.	18 50
2 in.	34 00	No. 2, 10 and 12 in.	15 00
3 in.	45 00	No. 3, 10 and 12 in.	13 00
4 in.	45 00	6 and 8 in.	12 50
Cut'g up, No. 1, 1 in.	28 00	Common, 1 in.	15 00
1¼ to 2 in.	33 00	1¼ and 1½ in.	17 00
No. 2, 1 in.	15 00	2 in.	18 00
No. 2, 1¼ to 2 in.	22 00		

WHITE ASH.

1st & 2nd, 1 inch,	32 00	33 00	2½ to 4 in. 28 00 30 00
1¼ to 2 in.	33 00	34 00	Strips 17 00 18 00
			Culls 9 00 10 00

BLACK AND BROWN ASH.

1st & 2nd, 8 inch up,	20 00	22 00	Com. & good culls 10 00 12 00

BIRCH.

1st & 2nd, 6 inch & up, red	28 00	30 00	1st & 2nd, white, 6 in. & up, 18 00 Com & good culls 10 00 12 00

ELM.

1st & 2d, rock, 8in. & up, 18 00 22 00 1st & 2d, soft, 8 in. & up, 16 00 18 00

MAPLE.

1st & 2d, hard, 6in. & up 18 00 20 00 1st & 2d, soft, 6in. & up, 17 00 19 00

WHITE OAK.

1st & 2nd, plain, 8 in. & up	26 00	28 00	Clear squares, 5x5 to 8x8 35 00
Good common	15 00	17 00	1st & 2nd quartered, 6 in. up 45 00 50 00
Good culls	10 00	12 00	Common quartered 25 00 30 00

RED OAK.

1st & 2nd	25 00	27 00	Quartered 1st & 2nd 42 00 44 00
Common	14 00	16 00	Common 22 00 26 00
Cull	9 00	10 00	

NEW YORK CITY.

NEW YORK, N. Y., March 25, 1896.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$40 00 @	50 00	Building orders $28 00 @ 40 00
Decking	45 00	55 00	

SPRUCE.

6 to 9 in.	14 00	15 00	10 to 12 in. 16 00 16 75
6 to 12 in.	14 50	15 50	Lath 1 85 1 90
9 to 12 in.	15 50	16 00	

HARDWOOD.

4/4 and thicker, No. 1 and 2	Black Ash,	10 to 16		23 00
" " "	Soft Elm,	"		17 00
" " "	Hard Maple,	"		21 00
" " "	Basswood,	"		20 00
" " "	Birch,	"		23 00
" "	Black Ash, Com. and Shipping Cull, M.C.O.			14 00
" "	Soft Elm,	"	"	12 00
" "	Hard Maple,	"	"	14 00
" "	Basswood,	"	"	12 00
" "	Birch,	"	"	14 00

ALBANY, N.Y.

ALBANY, N. Y., March 25, 1896.

PINE.

Uppers, 3 in. up	$50	$52	Dressing boards, narrow $19 $21
2½ in.	50	52	West India shipping boards 16 17
1 to 2 in.	45	48	Box boards 12 14
4 inch uppers	50	52	10-in. dressing and better 26 30
Selects, 2½ in. up	40	42	10-in. common 14 15
1 to 2 in.	36	40	12-in. dressing and better 26 32
Fine common, 2½ in. and up	38	40	Common, 1x12 14 16
1 to 2 in.	34	38	No. 1 barn, 1x12 20
No. 1 cut, 1 to 2 inch	25	35	1x10 18 21
No. 2	18	25	1x8 16 18
No. 3	17	20	No. 2 barn, 1x12 17 19
No. 1 molding, 1 to 2 in.	33	36	1x10 17 19
No. 2 molding, 1 to 2 in.	25	28	1x8 17 19
Stained saps		20	Shaky or star clear, 1 to 2 in. 19 21
Bracket plank	30	35	Dressing 16 18
Shelving boards, 12-in. up	28	30	Common 11 15

LATH.

Pine	$2 25		Spruce $2 00

SHINGLES.

Sawed Pine, ex. XXXX	$4 25	$4 30	Bound butts, 6 x 18	$6 00 $6 15
Clear butts	3 25	3 35	Hemlock	2 15 2 30
Smooth, 6 x 18	5 40	5 50	Spruce	2 20 2 30

OSWEGO, N.Y.

OSWEGO, N. Y., March 25, 1896.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$45 00@46 00		
Pickings, " "	36 00	38 00	
No. 1, cutting up, " "	31 00	33 00	
No. 2, cutting up, " "	24 00	25 00	
In strips, 4 to 8 wide, selected for moulding trips, 14 to 16 ft.	30 00	32 00	

SIDING.

1 in siding, cutting up		1¼ in selected	38 00@43 00
1 icks and uppers	32 00@39 00	1¼ in dressing	20 00 22 00
1 in dressing	19 00 21 00	1¼ in No. 1 culls	15 00 17 00
1 in No. 1 culls	14 00 15 00	1¼ in No. 2 culls	14 00 15 00
1 in No. 2 culls	13 00 14 00	1 in. No 3 culls	11 00 12 00

1X12 INCH.

12 and 16 feet, mill run	21 00	24 00	
12 and 16 feet, No. 1 and 2, barn boards	19 00	20 00	
12 and 16 feet, dressing and better	27 00	31 00	
12 and 16 feet, No. 2 culls	15 00	16 00	

1¼X10 INCHES.

Mill run, mill culls out	$22 00@25 00	No. 1 culls	17 00 18 00
Dressing and better	27 00 35 00	No. 2 culls	14 00 15 00

1X4 INCHES.

Mill run, mill culls out	17 00 21 00	No. 1 culls	14 00 15 00
Dressing and better	24 00 30 00	No. 2 culls	12 00 13 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20 00 25 00	6, 7 or 8, No. 1 culls	16 00 17 00
6, 7 or 8, drsg and better	25 00 30 00	6, 7 or 8, No. 2 culls	14 00 15 00

BOSTON, MASS.

BOSTON, March 25, 1896.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$11 50	12 00	¾ inch	$ 9 25	9 50
Coarse No. 5	15 00	15 50	11-16 inch	8 50	8 75
Refuse	13 00	13 25	⅝ inch	8 00	8 25
Outs	9 00		Clapboards, sap ext.	45 00	46 00
Boxboards, 1 inch	10 75	11 00	Sap clear	41 00	42 00
⅞ inch	9 75	10 00	Sap, 2nd clear	34 00	36 00
			No. 1	23 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in.	$50 00@52 00		Fine com., 3 and 4 in	46 00	52 00
1¼, 1½ and 2 in.	52 00	53 00	No. 2, 1 in. Fine com.	29 00	31 00
3 and 4 in.	58 00	64 00	1¼, 1½ and 2 in.	30 00	32 00
Selects, 1 in.	44 00	46 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in.	45 00	47 00	No. 2	36 00	37 00
3 and 4 in.	52 00	56 00	No. 3	26 00	30 00
Moulding boards, 7 to 11 in. clear	37 00	39 00	Cut ups, 1 to 2 in.	24 00	32 00
60 per cent. clear	32 00	34 00	Coffin boards	20 00	22 00
Fine common, 1 in.	38 00	40 00	Common all widths	22 00	26 00
1¼, 1½ and 2 in.	39 00	41 00	Shipping culls, 1 in.	15 00	15 50
			do 1¼ in.	15 50	16 50

SHINGLES.

Spruce	1 30	1 50	Second Clear	1 75	2 00
Cedar, extra	2 65	2 90	Extra No. 1	1 25	1 50
Clear	2 25	2 50			

HEMLOCK.

Boards, rough	11 00@11 50		No. 2	8 00@	10 50
Planed	11 75	12 00			

LATH.

Spruce		By cargo.	1 80@ 1 90
By car	1 80@ 2 00		

PROPOSED EXPORT DUTY ON PULP-WOOD.

We referred briefly in our last issue to the request made to the Dominion government by a number of pulp manufacturers to impose an export duty on pulp-wood. The deputation was headed by Mr. John Forman, of the Laurentide Pulp Company. They pointed out that while spruce logs were admitted free to the United States, a duty of ten per cent. was imposed on wood-pulp, which, it was claimed, had the effect of giving the United States manufacturers the lion's share of the profit of the pulp industry. The imposition of a duty would result in the government of the United States abolishing the duty on pulp, and as Canada was said to have eighty per cent. of the pulp-wood of North America, the Canadians would practically have a monopoly of the industry. Between five and six hundred thousand cords of pulp-wood were exported annually.

Below will be found the opinions, pro and con, of several prominent lumbermen, pulp manufacturers, and others, on the advisability of imposing the duty :

FOR THE DUTY.

Mr. Bennett, M. P. for East Simcoe, in introducing the question in the House, denounced the policy of permitting saw logs to be exported without a duty. He read the declaration of a manufacturer in Bay City that if Canada were to impose an export duty on saw logs it would throw 20,000 American mill hands out of employment, as the American mills would have to be removed to the Canadian side. He believed it was the influence of the Ottawa mill men that had previously prevented the imposition of such a duty, they being afraid of the re-imposition of the United States duty of $1 per thousand on Canadian lumber.

Mr. W. H. Rowley, secretary-treasurer of the E. B. Eddy Co., Hull, Que., says : "Canada has an enormous forest wealth. Why should we in Canada furnish the paper and pulp mills of the United States with our raw material at the cost of the destruction of our forests, without receiving in return anything except the bare cost of cutting down the standing timber and exporting it? The Americans have placed a heavy duty on all pulp and paper going into the States, while, without our source of supply for their mills, they could not operate them, as they are almost entirely dependent upon Canadian or Northern European sources for their pulp wood. Some of our lumber people are the strongest opponents to the imposition of the export duty on pulp wood, timidly fearing that if Canadians impose a duty on pulp wood the United States would impose an import duty on lumber. Well, suppose they did. Mr. Whitney, of the St. Anthony Lumber Co., who, knowing the value of Canadian green tree tops, came over here and established a large lumbering mill in our midst, has given his opinion that an import duty on our lumber will never be imposed by the U. S., because the present party in power is not in sympathy with it, and because Michigan lumbermen are already making a big noise over it. He adds that if an import duty was imposed by the United States, it would be so small as not to be felt by Canadian lumbermen during brisk business seasons. The answer of the pulp manufacturers of Canada to the point taken by the lumbermen is that as lumber, the product of saw logs, goes into the United States free, pulp and paper, the product of pulp wood, should also go into the United States free, instead of as present being subject to an import duty of 10 per cent. It seems certain that the Canadian Government will impose a duty on pulp wood for the following reasons, among others : A tariff of $2 per cord seems likely to be the duty first imposed, though it would appear to be better to fix it at $3, which tax would yield a handsome revenue to the Dominion Government, but which would speedily result in the United States paper makers obtaining a change in their pulp duties or in compelling them to come to this side and manufacture the pulp on the ground. The Canadians have no desire to embarrass or hamper the operations of their American cousins, asking only that our Government take such steps as will preserve to us the legitimate trade advantages."

Wm. Mason & Sons, Ottawa : "As regards the advisability of the Dominion Government imposing an export duty on spruce logs, we may say that in our opinion there should be a good substantial export duty placed upon all unmanufactured products of the forests, such as pulp-wood, saw logs, timber, etc., where they are taken from this country for the purpose of manufacturing them in direct opposition to industries established or capable of being established in Canada."

AGAINST THE DUTY.

J. W. Howry & Sons, Fenelon Falls, Ont. : It is our opinion that the request for export duty on spruce logs is premature, owing to the agitated state of affairs in the United States, and anything of this nature coming up at the present time would but intensify the desire to place an import duty on lumber, making it very much harder for those interested to do business with the people beyond the border. We also think that it will have the effect of reducing the price on spruce stumpage and a general depressing effect on lumber, lath and shingles.

Mr. Geo. T. Marks, of Port Arthur, Ont., a large owner of spruce timber limits, says : "The Canadian government will make a serious error if they adopt the $2 export duty. The owners of standing spruce find difficulty now in competing with the Maine and Virginia owners. They can almost supply the U. S. market. Because our firm could not sell so cheaply as the Maine owners last autumn, we had 3,000 cords of pulp wood left on our hands. It is rotting now at Port Arthur. If the government of Canada grants the request of the Canadian pulp manufacturers, the timber owners will have to sell for next to nothing."

Mr. Edwards, M.P., in reply to Mr. Bennett, made a strong argument against the imposition of a duty. Mr. Bennett had claimed that if the 300,000,000 feet of logs which were exported last year had been sawn in Canada it would have given employment to 20,000 men, with a wages bill amounting to $5,500,000. The truth was that the sawing of that number of logs would have given employment to 2,000 men, with wages of $600,000, and then it had to be remembered that although the logs were not sawn in Canada they were rafted here, and 50 cents a thousand had to be allowed for that. He declared that while the United States could get along for 1,000 years without buying one stick of Canadian timber, that country took two million dollars' worth more of Canada's sawn lumber than Great Britain, and that was of the lower grades which were harder to sell. Therefore he would regard as a great calamity a proposition to impose an export duty on logs.

Hon. J. K. Ward, proprietor Mono Saw Mills, Montreal: "I think it would be impolitic on our part to put an export duty on spruce logs going out of the country, whether used for pulp or otherwise. Until recently the spruce lumber that found a market in the United States was subjected to an import duty of $2 per thousand feet and pine to $1 per thousand feet, we allowing all logs to be exported free of duty—which arrangement, no doubt, is a great benefit to Canadian spruce producers especially. Therefore, the only reason that I can see for putting an export duty on spruce pulp wood would be, that it might induce the United States to take the duty off ground pulp. It might, nevertheless, have the contrary effect by restoring the $2 duty on our spruce lumber, which would be a serious matter to us. The Provincial governments, who are the proprietors of the timber on crown lands, could make the conditions for cutting pulp wood so onerous as to size and price as to make it almost prohibitory. This policy, if pursued, would undoubtedly bring about retaliation, which I do not think would be to our interest. As a holder of spruce limits, I am not in favour of imposing an export duty on spruce logs or pulp wood. Many of the settlers on new land in Eastern Canada and other parts of the country find much small spruce suitable for pulp on their lands, which would be burned in clearing if they could not find a market for it, the price received often helping them to eke out an existence, and the lumberman concluding it is better to realize on his timber than to run the risk of having it burnt up or stolen by bogus settlers. Until our provincial authorities come to the conclusion to adopt a policy, such as setting apart all lands as forest reserves which are not suitable for agriculture, of which there is a vast quantity in this province, and giving the owners of limits some security in that which has in most cases cost them a good deal of money, it will be to their interest to sell their standing timber to the first comer, regardless of the future."

PERSONAL.

Mr. A. H. Campbell, of the Muskoka Mill and Lumber Co., Toronto, is at present on a pleasure trip to England.

Mr. Samuel Erb, of Seattle, has been engaged by the Victoria Lumber Co. as foreman of their mill at Chemainus, B. C.

The death is announced of Mrs. Eaton, wife of Mr. D. R. Eaton, of the well-known lumber firm of that name at Parrsboro, N. S.

Mr. John Pringle, late mill manager for the Conger Lumber Co., has received a similar appointment with the Ontario Lumber Co.

Mr. William Armstrong, lumber merchant, of Portage la Prairie, Man., is receiving the congratulations of his friends upon his recent marriage.

Mr. Wm. A. McGillis, of Charlottenburg, Ont., at one time one of the most prominent lumber dealers in Eastern Ontario, is dead, aged 74 years.

The death occurred on the 12th ultimo, of Mr. D. W. Alexander, of Marysville, N. B. He was formerly a prominent mill man of St. Stephen.

Mr. D. O'Connor, lumber merchant, of Sudbury, Ont., is a probable Liberal candidate for the Nipissing district at the approaching Dominion elections.

Mr. B. F. Young, of Young Bros. & Co., lumber merchants, Parrsboro, N. S., has recently returned from an extended trip through the United States.

Mr. P. Cantin, advocate, of Quebec, was recently united in marriage with Miss Veilleux, eldest daughter of Mr. Charles Veilleux, lumber merchant, of St. David.

Mr. L. H. Shepard has severed his connection with the Shepard & Morse Lumber Co., of Boston, Mass., to embark in the wholesale lumber business for himself.

Mr. R. W. Graham, of Gagetown, N. B., an extensive lumber operator, will, it is said, retire from the business as soon as he has disposed of the present winter's cut.

The sudden death of Mr. Alexander Shives took place at St. John, N. B., a fortnight ago. Deceased was 78 years of age, and for a number of years operated a saw mill at Dunsinaine.

Mr. A. L. Fox, who operates a saw mill at Arnor, Essex county, Ont., was a recent visitor at the LUMBERMAN office. Mr. Fox reports the prospects as bright for a good season's business.

Mr. Louis Dupuis, one of the best known timber limit explorers of the Ottawa valley, is dead. His death was the result of heart failure, brought on by exposure while travelling through the pine forests in the upper Ottawa.

Mr. Wm. Gidley, mill foreman for M. M. Boyd & Co., of Bobcaygeon, Ont., has been obliged to seek the aid of specialists at the Toronto hospital for knee trouble. Since his return from British Columbia he has suffered from swelling in the joint.

Information reaches us of the death at British Columbia of Mr. Sutton, of Kincardine, Ont., formerly ex-sheriff of the county of Bruce. Mr. Sutton erected the first saw mill in the township 42 years ago, and since that time has carried on business as miller in Ontario and British Columbia.

One of the oldest lumbermen in Canada was Mr. Peter Cockburn, of Gravenhurst, Ont., whose death occurred at the age of 87 years. He came to Canada in 1815, and soon after entered into the square timber business, carrying on trade generally between the lower Ottawa and Quebec. In 1876 he removed to Gravenhurst, where he remained until his death. He had not been in active business for the last fifteen years.

Messrs. J. & R. E. Butler have recently opened out in the wholesale and retail lumber business at Woodstock, Ont., and have leased the Peacock planing mill for five years. They have put in a splendid brick kiln and purpose adding four machines to the present equipment. Mr. R. E. Butler was a member of the firm of Leischman, Maundrell & Co. for some time, and has a wide experience in the lumber business, while Mr. John Butler is well known in Woodstock as an energetic business man.

The death occurred at London, Eng., on the 26th of February, of Mr. John Burstall, lumber merchant, of Quebec. Mr. Burstall had decided to reside in England, and had recently taken up his residence at Blackneath. He was born at Hessle, near Hull, sixty-four years ago, and left England for Canada at the age of 23 years. Entering the office of his uncle, Mr. Edward Burstall, at Quebec, after four years he was admitted as a partner in the firm. In 1862 Mr. Edward Burstall retired, and his nephew acquired the business shortly after, remaining senior partner since that time.

OTTAWA LETTER.

[Regular Correspondence CANADA LUMBERMAN.]

THE enthusiasm which prevailed early in the month in connection with the proposed Ottawa and Georgian Bay ship canal has to some extent died out. While no one can be found to dispute the advantages to be derived therefrom, the probability of the work being undertaken at the present time, or even in the near future, are meagre. The recent deputation to the government in its behalf pointed out that to deepen the waterways of the Ottawa and French rivers and Lake Nipissing would necessitate the construction of about sixteen miles of canal work, and with accessories would cost about $16,000,000.

The Chaudiere mill owners will request the City Council to assist in the construction of another dam, at a cost of $40,000, to facilitate the utilization of the water power. The dam will be a large structure, and will reach directly across the head of the Chaudiere Falls from the upper end of the Eddy dam to Russell Island, where the Booth dam starts.

A report is current that Mr. Eugene Swan, of New York, is the promoter of a company which proposes erecting two pulp mills and a paper mill during the coming summer, near the mouth of the Rouge river. The property on which it is proposed to erect the mills is a portion of the J. K. Ward limit, which was acquired by Mr. Swan last fall for between $150,000 and $200,000.

INDIFFERENT LENGTHS.

The Bryson & Fraser timber limits will be offered for sale by public auction owing to the death of one of the partners.

The exports of forest products from Canada to Great Britain for the months of January and February show an increase of £43,000 over the corresponding period in 1895.

Mr. J. R. Booth has been sawing red pine lumber for some time at his Chaudiere mill. The logs are brought down by the Ottawa, Arnprior and Parry Sound Railway from his limits near Whitney.

About 100 men are now engaged constructing the new mill for Mr. J. R. Booth on the site of the structure which was burned two years ago. It is expected that the mill will be completed by the first of May.

Excellent progress has been made in logging operations in nearly all portions of the Northern Ottawa district, and most of the men have returned from the woods. Last year the cutting of logs was continued until the early part of April.

OTTAWA, Ont., March 23, 1896.

BRITISH COLUMBIA LETTER.

[Regular Correspondence CANADA LUMBERMAN.]

THE announcement recently made, and which is now verified, that the Victoria Lumber Company had decided to again re-open their mill at Chemainus and fight the recently organized combine, has created considerable discussion among the trade. The mill has been shut down for nearly three years. It is on the Canadian side, but the principal members of the company are Americans, among whom are ex-Senator Spooner; W. H. Phipps, land agent of the Northern Pacific; J. A. Humbird, of St. Paul; Major William Gregory, of Chicago, and W. J. Macaulay, formerly of St. Paul, but now of Victoria. The company own 150,000 acres of timber land, most of which was purchased from the late Robert Dunsmuir, he having acquired it by grant from the British Columbia legislature when he built the island railway. The cut will be limited to 100,000 feet per day until a trade is created. Sawing will be commenced about the first of May.

The Takush Harbor Timber Company has recently been organized to manufacture lumber at Takush Harbor, about 250 miles up the coast on the main land, just above Queen Charlotte Island. The company was organized by English investors, with a capital of $400,000, and Mr. G. W. DeBeck, formerly of New Westminster, is the general manager. The construction of the mill building has already commenced, and sawing will begin in July. The capacity will be 50,000 feet daily. The new mill will cut entirely for the foreign trade, and cypress and spruce will be the only timbers cut. The company have 14,000 acres of excellent timber limits.

A deal, with considerable importance attached thereto, has recently been consummated, by which Messrs. Robert Ward & Co., Ltd., have taken over the entire management of the Moodyville saw mill. Heretofore this exclusive business was in charge of J. Wulffsohn, of Vancouver. The mill is running to its full capacity, and the new proprietors intend opening a branch of their business at Vancouver, corner of Hastings nnd Homer streets.

COAST CHIPS.

Two carloads of lock-gate timber were shipped to Montreal, recently, by the Royal City Mills, New Westminster.

The Brunette Sawmill Co., Sapperton, have started up their new mill. It is said the company intend entering into the foreign trade at any early date.

Mr. Sword moved in the Provincial Legislature that the government should insist on all logs on which royalty is leviable being scaled by official scalers. The motion has been agreed to.

The lowest price for labor paid at the Brunette Mills is now $1 a day and board, while both those and the Royal City Mills are giving employment to almost as many men as ever. This is largely the result of the combine.

The new machinery at the Brunette Saw Mills is running smoothly, and a full cut is being made daily. This mill, though not so large as some others in the province, is considered a model one in point of construction and equipment, and the Takush Timber Company intend building their new mill on almost the same plans.

NEW WESTMINSTER, B. C., March 20, 1896.

NEW BRUNSWICK LETTER.

[Regular Correspondence CANADA LUMBERMAN.]

LUMBERMEN'S ASSOCIATION OF THE MARITIME PROVINCES.

THE above Association was organized at Moncton in December, 1894. At the organization meeting it was agreed not to hold regular meetings, the question of calling special meetings at such times as were found necessary being left with the Executive Committee. Since that time none have been held. The officers of the Association are as follows: President, Hon. A. F. Randolph, Fredericton, N. B.; Vice-Presidents, William Chisholm, Halifax, D. I. McLaughlain jr., St. John; Executive Committee—For New Brunswick: James Robinson, M.P., Chatham; Geo. T. Vaughan, Albert Co.; William Murray, Charles Woodman, and D. I. McLaughlain jr., St. John. For Nova Scotia: William Chisholm, Halifax; A. Young, Cumberland Co.; T. G. McMullen, Truro; T. E. Eaton, Eatonville; F. Halliday, Passboro. The Secretary and Treasurer are appointed by the Executive Committee. Mr. J. G. Forbes, of St. John, has acted as Secretary, but having recently been appointed to the Bench of New Brunswick, his services will be no longer available.

ST. JOHN RIVER LOG DRIVING COMPANY.

The eleventh annual meeting of the St. John River Log Driving Company will be held at the Queen's Hotel, Fredericton, on the 1st of April. An interesting meeting is anticipated, as several matters affecting the river drive will be brought up for discussion. Every owner of logs intended to be driven by the company during the season must fyle a statement of the same before that date.

BITS OF LUMBER.

J. & T. Jardine, of Richibucto, have given an order for a large mill to be placed at Jardineville.

S. T. King & Son's mills at Kingsville is receiving an overhauling. The capacity is being considerably increased.

A bill has been passed in the Provincial Legislature to continue the act incorporating the Magaguadavic River Driving Company.

H. R. McLennan last year purchased some timber lands near Rathesay for $1,550. He is at present cutting the lumber on the property, and expects to make a good profit on the transaction.

Messrs. Wm. Currie & Co., of Eel River Crossing, N. B., are erecting a new and commodious mill. The Robb Engineering Co., of Amherst, are putting in the boiler and engine. Mr. W. McWair, of the same place, intends erecting a shingle mill. He has a large crew cutting cedar.

It is reported that in the spring, Stehelin Bros. intend making a tramway from New France, Digby county, through the level part of the country, coming out near Gates' mills. This road will be about twelve miles long, and is intended for hauling lumber from their mill to the Sissibou river, by means of cars moved by horses.

ST. JOHN, N.B., March 22, 1896.

THE NEWS.

CANADA.

—H. J. McCreary is erecting a saw mill at Chatham, Ont.

—E. D. Tillson has started his saw mill at Tilsonburg, Ont.

—M. Malcolm will start a shingle factory at Scotland, Ont.

—H. Hardy, of Little York, P. E. I., is building a new saw mill.

—The mills at Chatham, Ont., are running to their full capacity.

—The erection of a shingle mill at Price's Corners, Ont., is spoken of.

—There are said to be first-class openings in Manitoba for paper and pulp mills.

—A new planing mill will shortly be started in Hintonburg, Ont., by N. Bevin.

—Mr. Wakefield & Son have leased the McKenzie saw mill at Kirkfield, Ont.

—John Cook, of Arkell, Ont., has purchased the mill property of W. T. Haines.

—John Vance, of Woodland, Ont., has recently erected a saw mill near that place.

—A new pulp mill will be put in operation at Church Point, N. B., at an early date.

—Messrs. Lovering contemplate removing their mill from Coldwater, Ont., to Bush's Corners.

—Two new saw mills are being constructed near the line of the Lake St. John Railway at Quebec.

—J. J. Joliffe has recently completed his contract at Christie, Ont., with the Parry Sound Lumber Co.

—J. L. Allen & Co., of Grimsby, Ont., intend starting a factory there for the manufacture of bicycle rims.

—A change is said to be contemplated in the operation of the Burrard Inlet red cedar mills at Port Moody, B. C.

—The Sayward Mill & Timber Co., of Victoria, B. C., is reported about to be reconstructed with English capital.

—Harman & Co., Victoria, B. C., have taken over the Oak Bay Lumber Yard, and will control it during the season.

—It is stated that the Katrine Lumber Co.'s mill at Parry Sound, Ont., will be operated during the coming summer.

—R. W. Richardson, of Hartland, N. B., is erecting a woodworking factory and expects to have it running before the 1st of May.

—Turnball & Davidson, of Manitou, Man., have purchased the entire lumber stock of G. R. Gordon, together with the steam sash and door factory.

—Edward Harnett has removed his portable steam saw mill from St. Louis, N. B., to Sussex, where he has secured a contract for ten years sawing.

—Three cars of large pine timber were recently shipped from British Columbia to Halifax. The freight paid on them is said to have been in the vicinity of $800.

—The erection of a foundry at Westville, N. S., has been decided upon by a local company. It is proposed to make shingle mills and do a general foundry business.

—The County Crown Attorney of Hull, Que., has decided to take no further action against Mr. Turpin, for the alleged murder of Deschatles in the Edward's lumber camp.

—Letters patent have recently been issued limiting the existence of the Pickerel River Improvement Co. to a period of twenty-three years, to be computed from May 9th, 1883.

—Mickle, Dyment & Son's mill at Gravenhurst, Ont., is being refitted. The band saw will be placed with a new Allis machine, and a new saw placed in the planing mill for resawing.

—The erection of a woodenware and pulp factory at Midland, Ont., is said to have been decided upon. Mr. H. H. Cook, of the Ontario Lumber Co., Toronto, is one of the promoters.

—Donald Fraser & Sons, of Fredericton, N. B., are making extensive repairs to the Aberdeen mills. These mills will be started as soon as the river opens and expect to cut twelve million feet of lumber.

—Mr. F. W. Morris has been admitted as partner with

M. S. Madole, W. Embury and W. Greer, operating a sash and door factory at Napanee, Ont. The factory has recently been refitted throughout with new machinery.

—The total number of licensed cullers in Ontario is six hundred and twenty-four.

—A lumberman named Alexander Archer, on his way to his home in Glencoe from Marquette, Mich., was sandbagged and robbed of $85 at Windsor.

—Gilmour & Co., of Trenton, Ont., have commenced the erection of a large saw mill at their timber limits in Algonquin Park, and intend to employ from 500 to 800 men. The mill will have a capacity of 20,000 feet per day.

—John McCollock, agent for the Shepard & Morse Lumber Co. at Mattawa, has lately taken a gang of river drivers and lumbermen to Bois Franc and North River to drive logs for the company when the river is open in the spring.

—Mr. W. Harris, of Day Mills, Ont., offers a free site of land and a never-failing water power to any reliable person who will erect a pulp mill at that place. Large quantities of pulp wood can be secured in the immediate vicinity.

—Captain A. Clark and Geo. McCormack have purchased from the Emery Lumber Co., of Windsor, Ont., the steam tug Evelene, which was built for the French River Boom Co. about two years ago. The price paid was $10,000.

—While cutting up a huge old poplar tree at his mill in Dover Centre, Ont., Mr. Rankin found a large and rusty piece of scythe imbedded in the centre of the trunk. The metal had evidently entered while the tree was a mere sapling and grown into it.

—C. F. & F. R. Eaton, of Eatonville, N. S., have recently completed a long slide or chute leading to their mills which will effect a large saving in the cost of handling logs. The slide is 3½ miles in length, and is constructed by placing logs side by side in such a way as to form a continuous V-shaped trough.

—There is at present an Indian named Joseph Francois, jobbing for McLachlin Bros. at Barry's Bay, Ont., who is a remarkable type of human nature. He is about fifty-five years old, and in 1860 had an arm taken off. At present he can chop with his one hand as much as an ordinary man can with both hands. He has often been seen mowing and cradling, making bark canoes, axe handles, etc., that would defy competition. He is a peaceful, honest, and industrious citizen.

—Harnwell vs. Parry Sound Lumber Co. was an action brought to recover damages for wrongful dismissal. The plaintiff was employed by defendant as assistant bookkeeper for one year from 1st May, 1893, and after the end of the year he continued in their service without anything being said as to terms. On September 14th, 1894, he was dismissed. The judge held that the proper inference to be drawn was that contract was for a year and not defeasible, and judgment for plaintiff for $240 with full costs of action was awarded.

—Some time ago Messrs. Adams & Co. purchased the Burns saw mill property at Bathurst, N. B., for about $35,000, together with the claim against Novelli & Co., of London, amounting to $328,687. It was supposed at the time that the Burns estate would pay only a small dividend, but already a dividend of ten per cent. has been paid, and Messrs. Adams & Co. have received their check for $23,868, and expect yet to receive $11,434 additional, making a total for the estate of $35,302. This amount is nearly equal to the amount paid by them for the property.

FOREIGN.

—Washington architects will ask Congress to appropriate $40,000 to test the strength of American timbers, a third of the appropriation to be used in testing fir.

—During the past year there is said to have been more assignments in the Albany lumber district than in the past ten years. Among the recent failures were those of H. S. Van Stantford, Patton & Co., and John C. Patton.

—New York City is an immense consumer of lumber. During the year 1895 she received 994,909,000 feet of lumber, of which 534,000,000 was received from the interior by canal and rail, 309,718,000 from the Southern coast, and 151,191,000 feet, mostly spruce, from Maine and the provinces.

—A load of timber which contained 1,000 cubic feet of lumber, and equivalent to 12,000 feet board measure, was recently hauled from the Dead River Milling Company, near Marquette, Mich., to the lake shore. The weight of the load was 40,000 pounds, equal to two carloads, and was hauled by one team.

—During the year 1895 the supply of foreign timber to the United Kingdom, exclusive of staves and furniture woods, was as follows: Norway and Sweden, 652,467 loads hewn, 1,982,048 loads sawn; Russia, 393,458 loads hewn, 1,492,819 loads sawn; Germany, 225,647 loads hewn; British North America, 142,738 loads hewn, 1,167,947 loads sawn; other countries, 864,238 loads hewn, 422,984 loads sawn.

CASUALTIES.

—George McDonald, of Coverdale, N. B., was killed by a falling tree while chopping in the woods near that place.

—While working in the woods near Arden, Ont., Benjamin Smith, Kennebec Township, was killed by the falling of a tree.

—A large limb fell from a tree and killed a chopper named John Verge, of Sheet Harbor, N.B. He was only 19 years of age.

—Martin McNulty, an employee of Roy & Gordon, at Pogamising, Ont., was recently killed by falling while carrying a skid.

—While felling timber near Bancroft, Ont., Matthew Creighton had one of his legs so badly injured that amputation was found necessary.

—An employee at Thos. Vance's saw mill at Dunrobin, Ont., named James Newham, was killed recently by coming in contact with a circular saw.

—John Armand was loading logs at Mallock's mills, near Arnprior, Ont., when a large log fell on him. He was not released until next morning, when life was extinct.

—Benjamin McTavish, formerly of Southesk, N. B., while in the employ of the Randolth Lumber Co., of West Virginia, was crushed to death. He was driving a team when the load of logs gave way.

—A fatal accident occurred at Aylmer, Que., on the 6th of March, by which Joseph Leon, jr., of Aylmer, lost his life, and a Mr. Tracy, of Torbolton, was seriously injured. They were engaged in loading sawdust on a sleigh from the heaps when the frozen top of the heap fell in, and both were buried in the sawdust.

—A serious accident recently befell Mr. James McCredie, of the firm of R. McCredie & Son, sash and door factory, Shawville, Que. While adjusting a belt in his mill, his coat caught in the revolving shaft, whirling him around until the machinery was stopped. One leg was broken, his back injured, and his legs and arms paralyzed. Hopes are entertained of his recovery.

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REMARKABLE CANADIAN PINES.

AMONG the singular trees of Canada mention is made of a group of pines in the cemetery in St. Stephen, New Brunswick. The group contains several hundreds of white pines of unusual size and singular beauty, which show the curious spectacle of branching, some three feet from the ground, into numerous great limbs, some of them as much as seven feet in circumference. A hundred or so of these trees have attained large size, the most massive of them being 75 feet high and 11 feet and more in circumference. The aspect of the high horizontal or perpendicular branches laden with heavy foliage, and the rugged, knotty boles from which they spring, is striking in character, while they have a certain dignity and solemnity especially befitting a cemetery. As the ground on which they stand was burned over in 1801, when the adjacent country was laid waste by fire, the trees are all of second growth. Some of them that have been cut show from 89 to 91 concentric rings, so that their age is less than 100 years, and they are still full of health and vigor. Around them have sprung up hundreds of other stately trees, six or seven feet from the ground. Impressive as is the spectacle of the lofty unbranched trunks, which now and then indicate the site of a primeval forest in Maine or New Brunswick, there is something in the character of these distorted giants more imposing still. The checking of the upward growth in their youth has caused some of the trees to send up as many as 14 branches, each one of the size and proportions of a leader, and some of them five or six feet in girth. One of the trees shows a sort of Siamese-twin connecting link between two mighty trunks, which rise almost perpendicularly to a considerable height. The keeper estimates that there are a thousand good-sized pines in the enclosure, several hundred of which are between 5 and 10 feet in circumference. Of the curious branching trees of great size there are over a hundred, the largest of which is 11 feet 8 inches in girth, with 14 limbs, 40 to 60 feet long, some of them seven feet in circumference. Its height is 70 feet. Another, which is 75 feet high, has a girth of 10 feet. Adjacent pines, less remarkable in growth, measure from 7½ to 9½ feet round.

TRADE NOTES.

Thirty-one Allis band mills were sold in Canada during the past twenty-four months.

The Welland Vale Manufacturing Co., of St. Catharines, are fitting up the old White mill as a saw manufactory.

E. Leonard & Sons have recently supplied a large engine to R. C. Tait, of Shediac, N. B., to replace the engine now running in his saw mill.

Messrs. P. W. Ellis & Co., Toronto, who are the only Canadian manufacturers of extra thin silver solder for repairing band saws, have just set up a new pair of rolling mills bought especially for the manufacture of this material. They are now in a position to make this solder exactly as required.

The Ottawa Saw Works report that they have been obliged to run their establishment night and day in order to keep up with their work; they have also had to add to their band saw staff on account of increased trade.

The W. R. Gardner Tool Co., of Brockville, Ont., have let the contract for a large addition to their present factory. They have recently purchased the Beaver Saw Works, of Hamilton, which have been removed to Sherbrooke, Que. It is the intention of the company to manufacture a full line of circular, band and other saws.

The Waterous Engine Works Co., of Brantford, recently received a cable from London closing a contract for one of their largest portable saw mills for South Africa, including a 70 horse power engine with locomotive boiler. The firm also report the sale of seven complete saw mill outfits for Chili, South America. It is learned that about 20 per cent. of their entire output of saw mill machinery is shipped to South America.

The Dodge Wood Split Pulley Co., of Toronto, report a steady and growing trade in wood split pulleys, and are able to keep their large works at Toronto Junction running constantly supplying their numerous agencies throughout the Dominion and Europe with stock. Saw mill and planing mill men are adopting the Dodge pulley almost universally the world over, and for any one requiring a good serviceable pulley of any size, no matter how great the power, the Dodge Co. are prepared to fill the bill promptly and for the least possible money.

We have seen the advance sheets of a handsome booklet containing opinions of many of the users of the Allis band mill. It is being prepared by the Waterous Co., of Brantford.

The usual annual number of the Winnipeg Commercial for 1896 has been issued, and contains a large amount of general information with illustrations regarding the western country. Among its articles are brief reviews of the lumber business in British Columbia, Manitoba and the Northwest Territories.

AGENTS WANTED

To sell **Capt. Geo. S. Thompson's New Book, "Up-to-date or The Life of a Lumberman."** (Profusely illustrated). 2,000 copies sold already, and only out of the press two months. The first book ever written by a practical lumberman, describing the many interesting stages of Lumbering, and the hazardous life of those engaged in the woods and on the river. An edition in French will be out sho tly. The book will be mailed to anyone on receipt of $1.00. Address to

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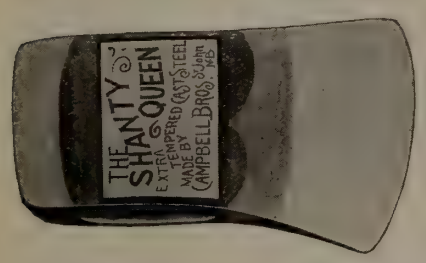

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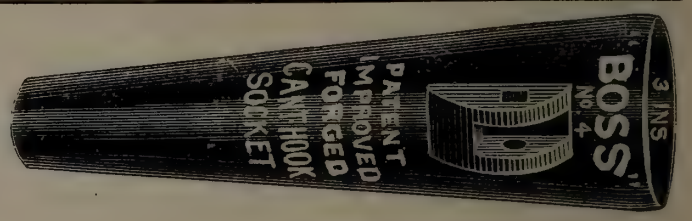

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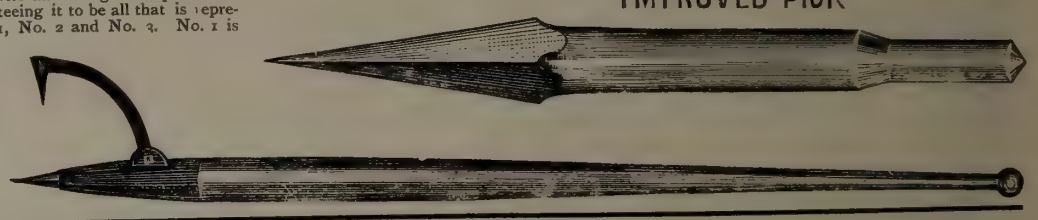

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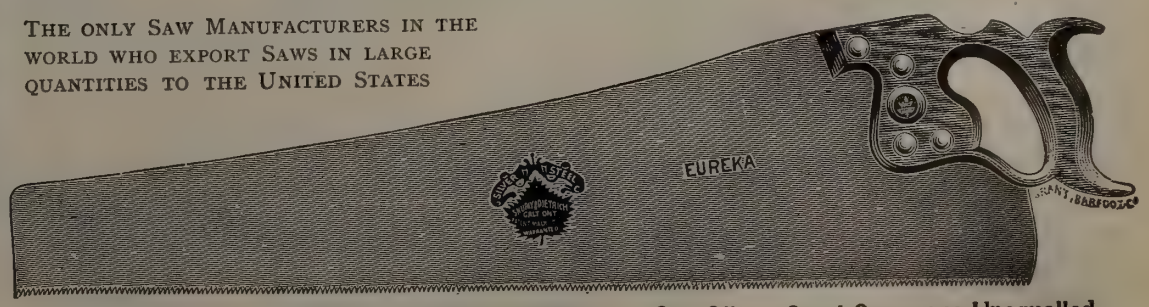

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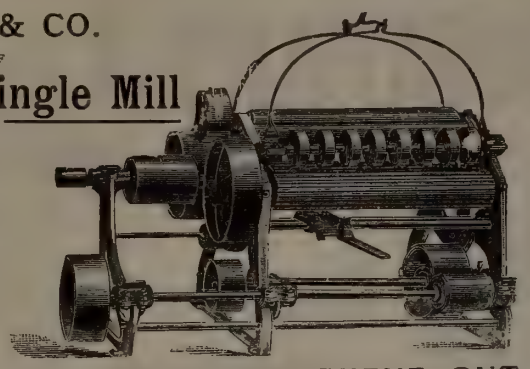

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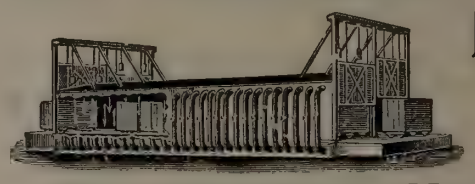

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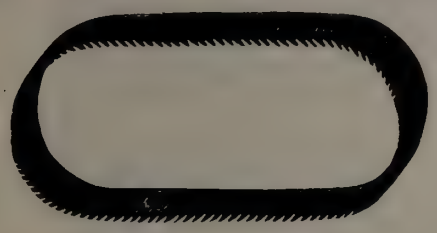

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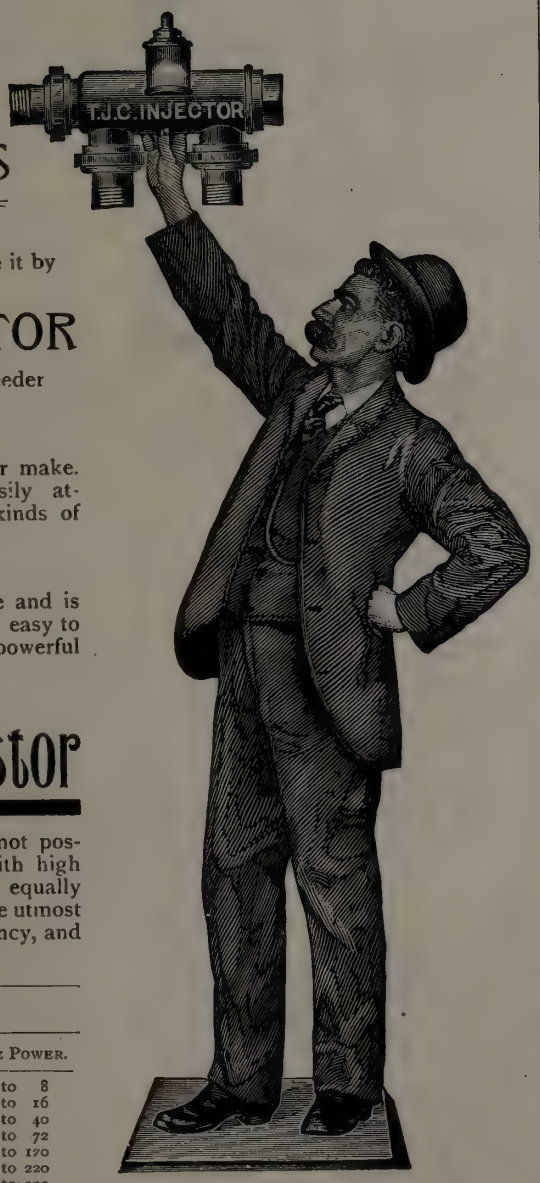

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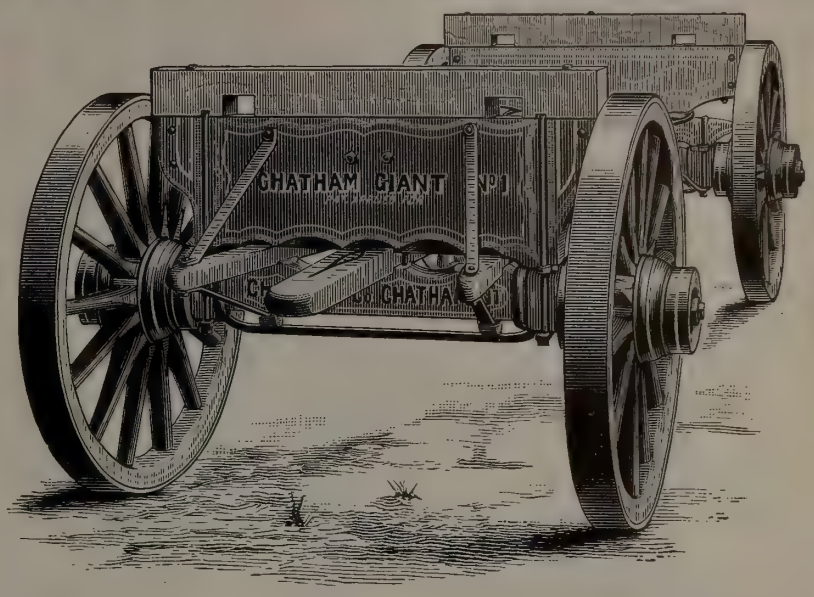

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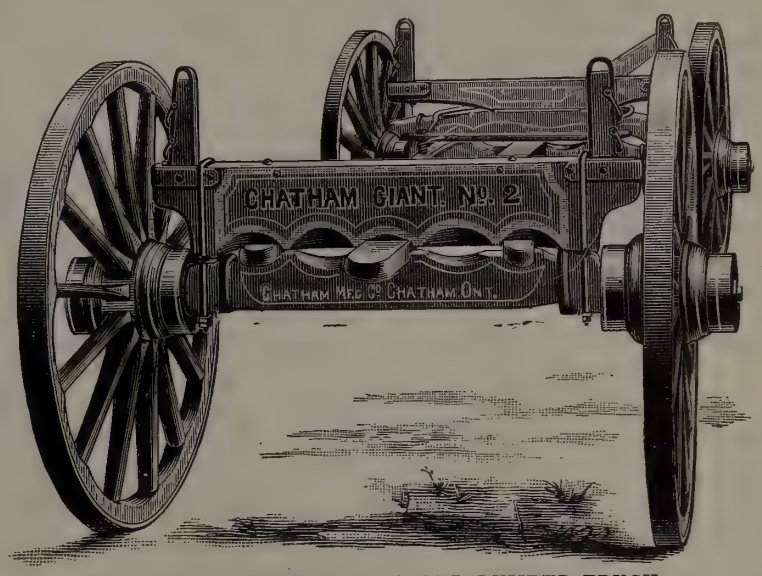

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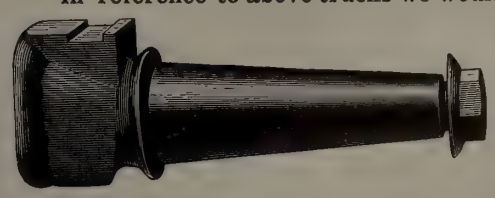

It will be seen that the hind bolster and sand-board are formed to rest upon the flat top of this arm, and being securely clipped to the axles forms a complete and solid truss and render the axles unbreakable and inflexible.

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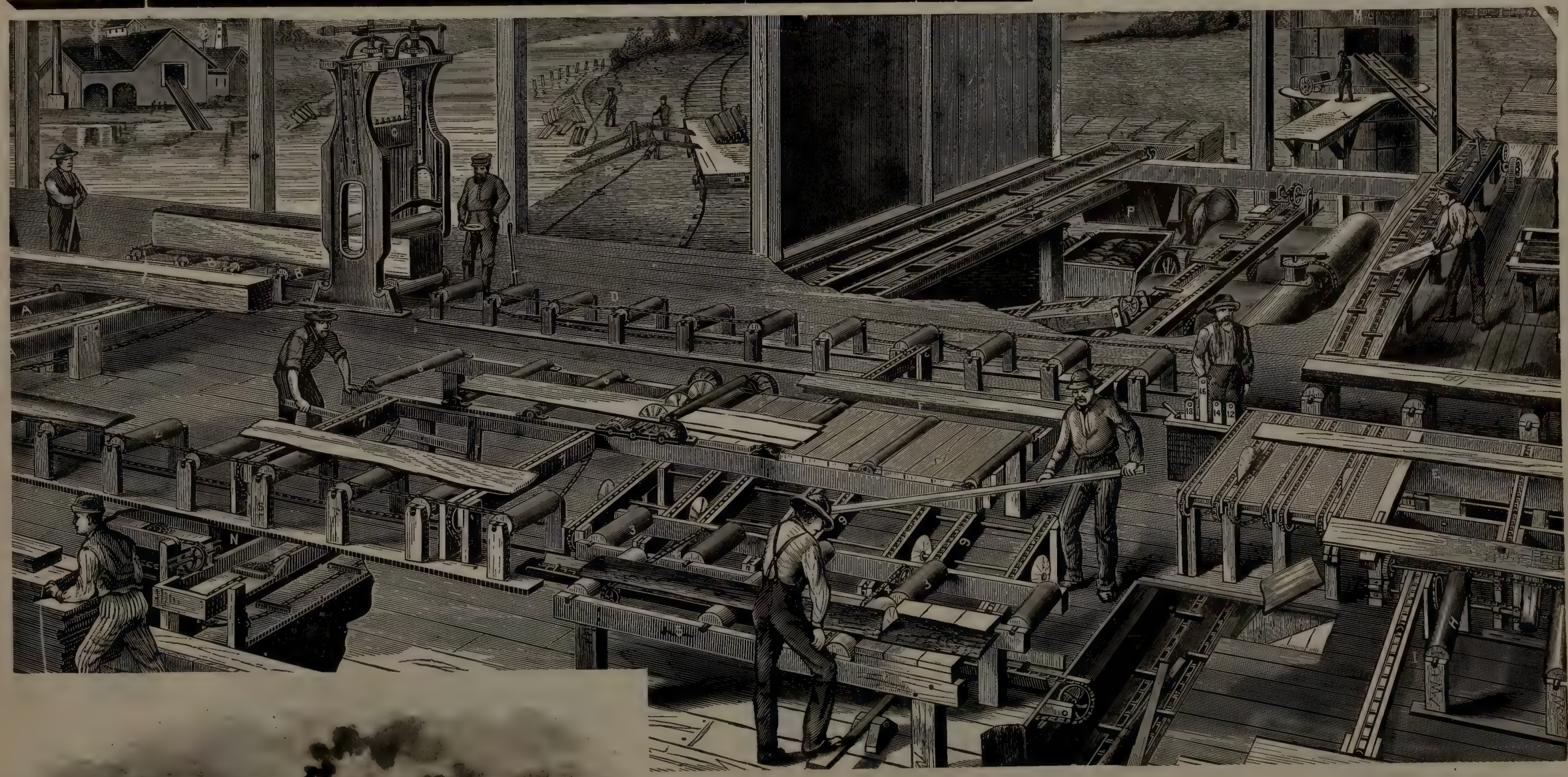

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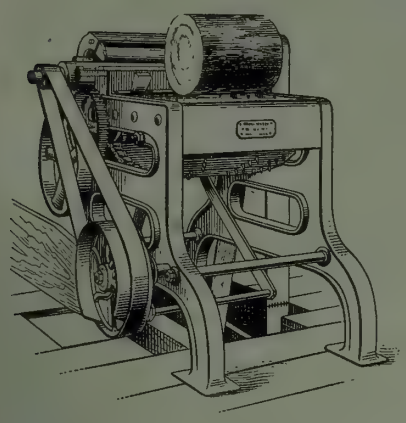

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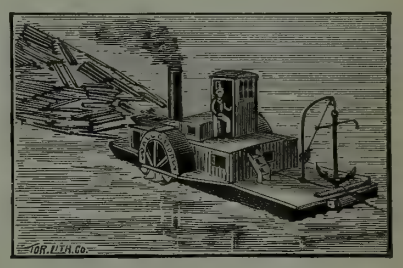

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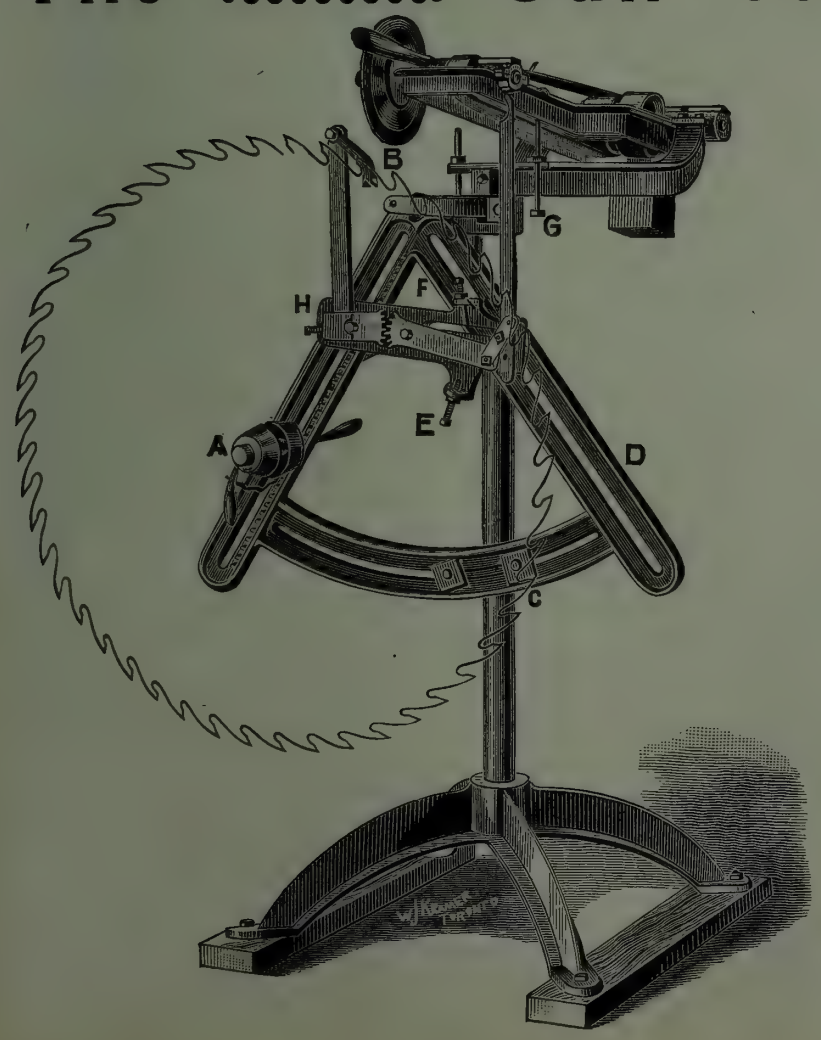

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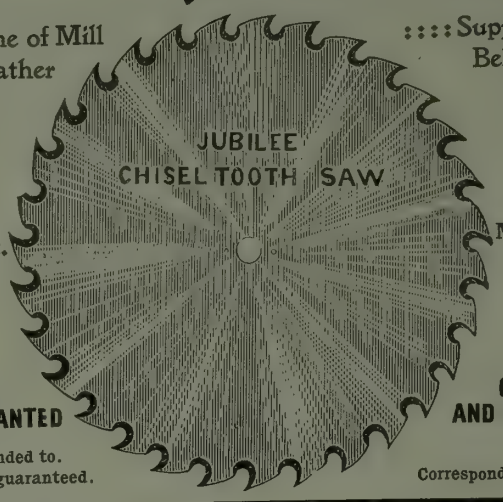

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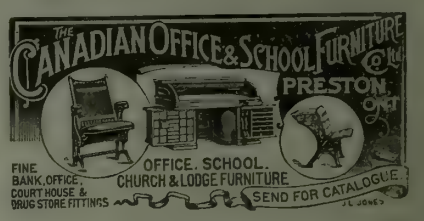

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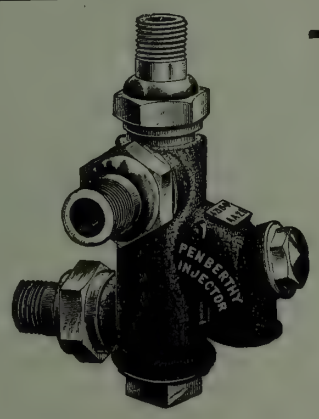

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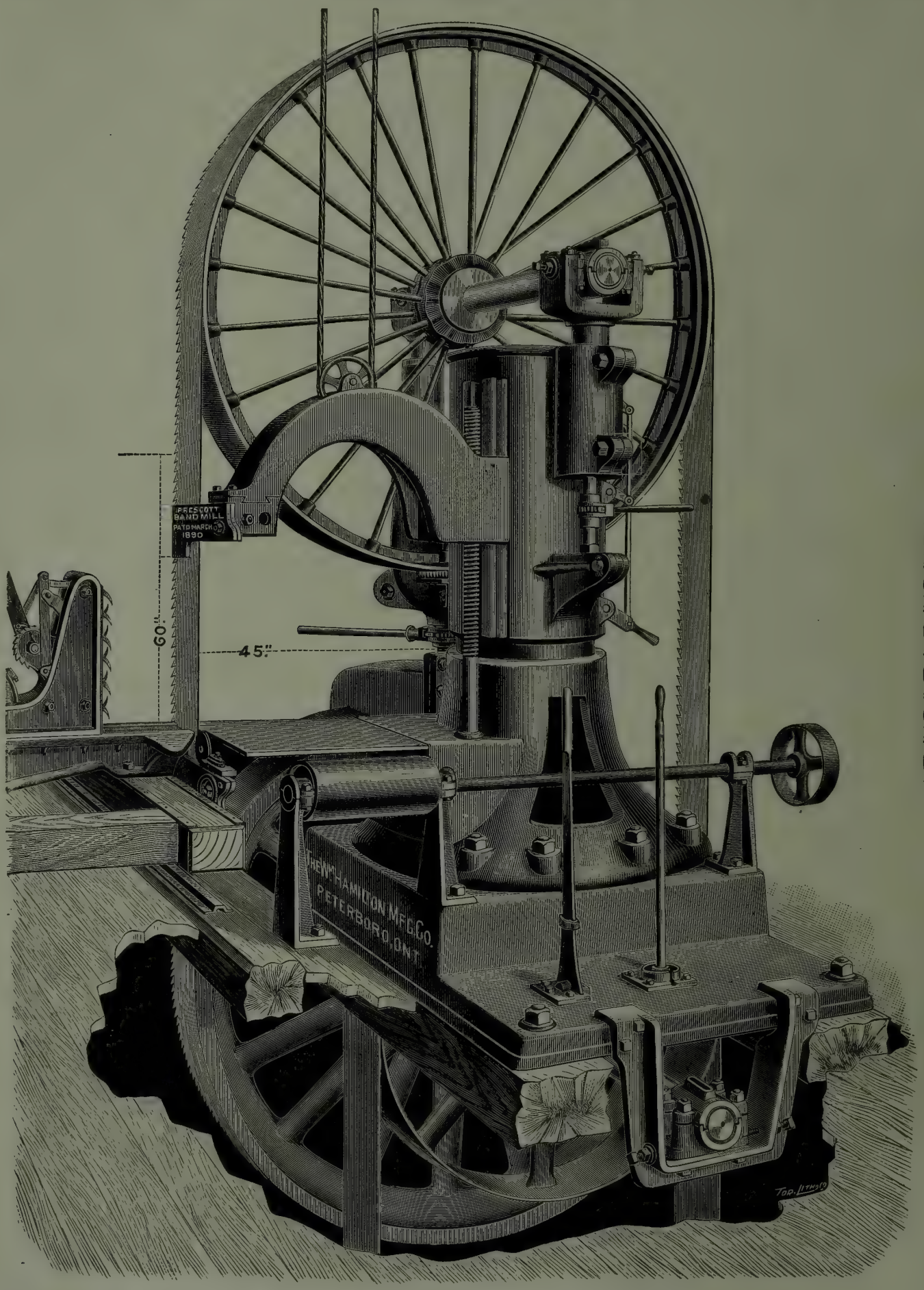

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VOLUME XVII. NUMBER 5. | TORONTO, ONT., MAY, 1896 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

ONTARIO LOG OUTPUT.

THE quantity of logs taken out during the winter largely determines the amount of lumber which will be placed upon the market during the following season, notwithstanding the fact that the total output is not always manufactured. Consequently the question is one in which lumbermen are deeply interested. It is not possible at this date to give information which will prove to be absolutely correct, as the drives are just being started, and low water may result in considerable quantities of logs being tied up. It is believed, however, that the total output for the past winter compares favorably in extent with that of the previous season, with the probability of a slight curtailment. Its extent, nevertheless, is greater than the present demand for lumber would warrant, when the fact is considered that large stocks of lumber have been carried over by manufacturers for the past two years. In some sections a larger cut than was desired was necessitated in order to remove timber which had been damaged by forest fires.

In the Ottawa valley the winter was very favorable for operations in the woods, and the log output exceeds that of a year ago.

In the Georgian Bay district the quantity of logs taken out by Canadian firms is said to be below that of last season, while on the other hand the operations of American companies are believed to be more extensive than last season. While some of the Canadian operators have increased their output, others have taken out very small stocks, and some of the mills will not be operated this summer owing to the large stock of lumber carried over.

The Georgian Bay Lumber Co., of Waubaushene, have slightly exceeded last year's output. Their supply is estimated at from 35,000,000 to 40,000,000 feet. The Ontario Lumber Co.'s operations will, in all probability, show a curtailment.

The Irwin Chapman Lumber Co. have taken out 100,000,000 feet on the Wahnapitae river, and Munro & Gordon 11,000,000 feet at Sudbury. The output of Graham, Horne & Co., Fort William, is in the vicinity of 11,000,000 feet.

The Whaley Lumber Co., of Huntsville, have taken out three-and-a-half million feet, while last season their output was two millions.

The Spanish River Lumber Co., of Spanish River, estimate their output at 22,000,000 feet, against 19,205,000 feet last season. There is to come down the Spanish river this spring in the neighborhood of 200,000,000 feet. Last year 180,000,000 feet came to the booms. The White Fish river will probably show an output slightly exceeding 22,000,000 feet.

The output of the Keewatin Lumber Co., of Keewatin, is placed at 8,500,000 feet. They have 6,000,000 feet of last season's logs in the water. In the season of 1895, they sawed 9,500,000 feet, and will probably saw more this year. The Ontario and Western Lumber Co., of Rat Portage, are said to have taken out about 8,000,000 feet. The total output of the Lake of the Woods district is placed at 30,000,000 feet.

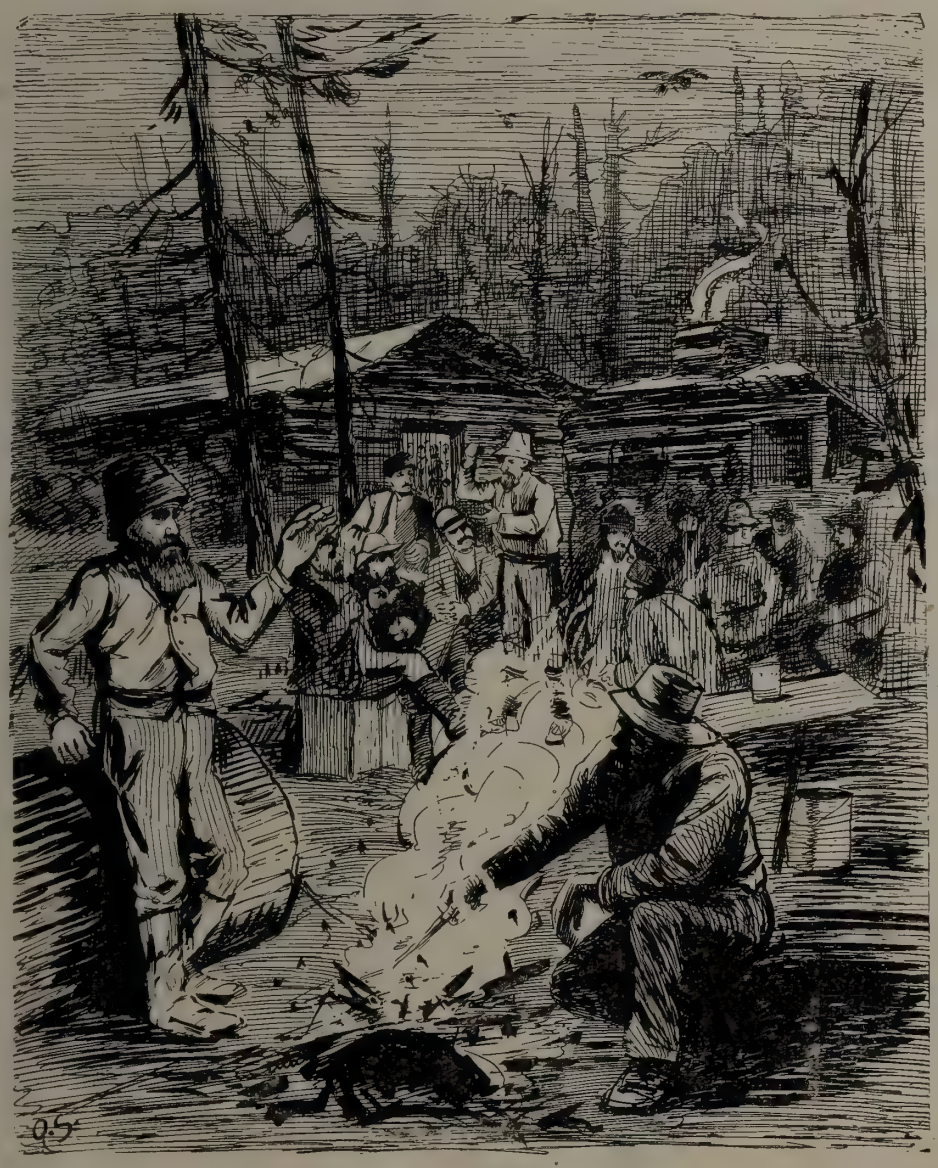
J. W. Howry & Sons, of Fenelon Falls, manufactured a little over 25,000,000 feet of lumber in the season of 1895, and expect to manufacture about 40,000,000 ft. this season. A quantity of logs were left over from last season, which, with the past winter's output, will make this amount. In that vicinity the output is below that of previous years, as several firms have curtailed considerably.

The following figures show the quantities taken out by J. E. Murphy, of Hepworth Station, in the past two seasons :

1895.	1896.
3,000,000 Hemlock.	1,750,000 Hemlock.
830,000 Hardwood.	1,050,000 Hardwood.
150,000 Cedar and Pine.	255,000 Cedar and Pine.
7,000 Pieces Ties.	6,300 Ties.
8,000 Posts.	4,500 Posts.

Mr. Murphy is carrying over a considerable quantity of hemlock and hardwood lumber. The mills in that vicinity have taken out larger stocks of hardwoods than in 1895, but the stock of hemlock is probably a little lighter.

Macpherson & Schell, of Alexandria, Ont., have taken out this winter the following stocks, being about the same as last year : 1,200,000 ft. of basswood ; 850,000 ft. of ash ; 500,000 ft. of soft elm ; 150,000 ft. of hard maple ; 50,000 ft. of birch ; and 500,000 of hemlock, spruce and other logs. They have at their factories 850,000 ft. of elm logs, 2,000 cords of heading bolts, and sufficient cedar bolts for 6 millions of shingles. The stocks of eleven other mills on the C. A. R. and C. P. R. east of Ottawa, and on the G. T. R. east of Brockville, show, perhaps, a slight decrease as compared with last year's stocks.



THE LAST NIGHT IN CAMP.

To-night they meet like comrades tried,
And tell of dangers dire,
At dawn they'll part to scatter wide ;
As the sparks of their shanty fire.—ANON.

SPOOL WOOD AT MATANE, QUE.

IT is not generally known that a large quantity of spool wood is manufactured yearly on the Lower St. Lawrence, in and around Matane. It is seventeen years since this industry started there, and several million feet are exported to Great Britain yearly. Last year more than 4,000,000 feet were shipped. It has been of much benefit to the people in a country where agricultural returns are small and fishing has gone down to almost a minimum.

But a small quantity of spool wood will be made this winter, as the spool centers are placing their orders in Maine, where there are greater facilities for shipping and disposal of waste, which is great. However, as white birch becomes scarcer in Maine, the thread makers must look for their supplies elswhere, as long as they use spools for thread, which is likely to be for some years yet. Spoolbars should be sawn in the winter, before the frost leaves the wood, which will then retain its white, fresh appearance, also, it must be protected from rain and weather as much as possible while drying.

NOVA SCOTIA NOTES.

[Special Correspondence of the CANADA LUMBERMAN.]

THE winter throughout the province of Nova Scotia has been very favorable for cutting and hauling lumber to the banking points, and now the outlook for stream driving is good. There is an abundance of snow in the woods, which the cool weather is preserving until the ice in the sluggish parts of the river and in the lakes melts, and the probability is that with the rains that may reasonably be looked for, stream driving will go off with a rush. Along the south shore of the province driving is now being pushed. The streams along that shore open earliest, so that the mills get to work early in April.

There is splendid water power on the La Have, Port Medway, Liverpool, Jordan, Shelburne and Clyde rivers, a part of which on each is utilized as power for saw mills. There are also pulp mills—mechanical or grinding process—at New Germany on the La Have, Mill Village, on the Port Medway, and at Milton, on the Liverpool rivers.

The pulp mills at New Germany and Milton are owned by the same company, represented by Hon. A. G. Jones, Halifax, the superintendents of both mills being brothers, the Messrs. Hughes. They are thoroughly practical men in their line, which is proven by the success they are meeting with in the business. The Milton mill turns out thirty-four tons of wet pulp, and the New Germany mill nearly as much. The product of the latter is taken by train to Lunenburg, about forty miles, thence by vessel to Halifax, where it is shipped to England. Shipments are also made to Boston direct from Lunenburg and Liverpool. The Milton mill is about four and a half miles from shipping point, to which the pulp is hauled by teams at present, but arrangements are being made to build an electric railway from the shipping point to the mill and some ten or twelve miles further up river to Greenfield, the power to be supplied by water at the pulp mills. All these pulp mills run day and night from one o'clock Monday morning till twelve o'clock Saturday night, and it takes no small amount of timber to supply them. They give steady employment to a large force of men in all the operations from the woods to the shipping point, besides the cargoes furnished vessels.

At Mill Village, on Port Medway river, J. P. Mitchell & Co. have a large double gang, water power saw mill, but it is not being operated this year.

Messrs. J. & J. Coop, Milton, have a steam and water power gang saw mill at Brooklyn, three miles east of Liverpool. The mill is furnished with lath, shingle and planing machinery. The Messrs. Coop have a large area of good timber land near the mill and make a specialty of cutting frame and ship timber, besides sawing for the West India and South American markets; they ship from Liverpool.

At Milton, two and a half miles above Liverpool, there are five mills on one dam, owned by Messrs. Tupper Bros., John Millard, Ira P. Freman, A. T. Freeman and John G. Morton. With the exception of Mr. Millard's mill they are all single live gang mills, that is, the log goes through the gang in its sound state, the boards all being edged afterwards. These mills cut principally boards for the West India, South American and Boston markets. Mr. Millard has completely remodelled his mill during the past winter; formerly it was a rotary. He has changed it over to use the rotary for slabbing the logs and put in a stock gang, patent parallel edger, and all the modern improvements. Mr. Millard also has a rotary mill, water power, near Brooklyn, and a sash, door and planing factory at Liverpool, and also carries on shipbuilding at the latter place. At the present time he has two large vessels nearly finished, one of them for a steamer. Mr. Millard is putting up a large hotel in Liverpool, to replace the "Trilby," burned in the great fire last year. He is also a large importer of West India goods, shipping along the coast and to Newfoundland.

Three quarters of a mile above the last named mills on same river there is another dam, on which there are three mills. The owners are Eldred Minard, William Ford and Harlow & Kempton. Those of the two former are single live gang mills and saw boards, while that of the latter is a gang and rotary mill, with lath and box machinery. They also have a factory apart from the mill, with planers, resaws and box machinery, where everything is utilized that can be turned to a profit. Messrs. Harlow & Kempton ship a large quantity of lumber besides their own cut. They also do a large general store business.

Messrs. Gardner & Storratt, Brooklyn, have a very nicely arranged water power, rotary mill, with shingle, lath and planing machinery.

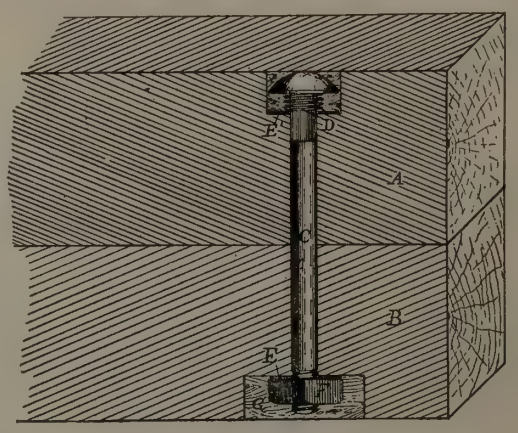
Mr. Nathan Gardner, Brooklyn, has a shingle factory, which turns out a large quantity of shingles in the run of a year, most of which are shipped to the West Indies and Newfoundland.

During the sawing season, Milton, Brooklyn and vicinity are busy places, very prettily situated, within sight of the Atlantic ocean, and if "Eli" wants a fine trip this summer send him here.

W. J. P.

CANADIAN PATENTS.

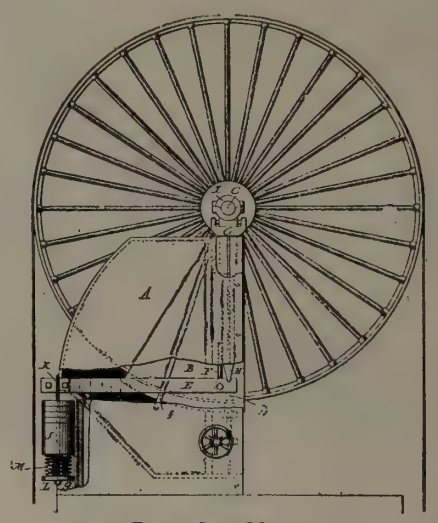
A patent has recently been granted to Alexander McEwan, of Calumet, Que., for a method of floating heavy timber, as shown by the accompanying illustration. The



METHOD OF FLOATING HEAVY TIMBER.

invention will prove interesting to lumbermen, and is described by the patentee as follows: An improved method of fastening hard or heavy timber to soft or light timber for the purpose of floating such hard or heavy timber, consisting in a bolt passing through the timbers at or near each end of same and under the head of which bolt a spiral spring is placed.

D. B. Hanson, of San Francisco, and the Edward P. Allis Co., of Milwaukee, U. S., have been granted a patent in Canada for a band saw-mill, as illustrated below. The inventors' claim is as follows: The combination of a main frame provided with guides, a supplemental frame or yoke



BAND SAW-MILL.

movable in said guides, an upper band wheel shaft, and pedestals or supports for said shaft carried by the yoke, the axes of the shaft and pedestals being in a common plane with the guides. In combination with the main frame of a band saw-mill, a sliding yoke r, frame B mounted within the main frame, and provided with lugs d, and with stops f, stirrups F carried by said lugs, a lever E carried by the stirrups, pedestal G mounted and movable in the yoke, a band-wheel shaft carried by said pedestals, and rods extending from the lever to the pedestals. In combination with frame A, having recess g, shaft C, pedestal G supporting said shaft, lever E supporting said pedestal, and weight J carried by lever E, and located within the recess.

At Fowler's saw mill at Canaan, N. B., on the 3rd ultimo, George Delehunt, of Parrsboro, was caught in the machinery and instantly killed.

"CUT-OFFS."

BAY CITY, MICH., 27th March, 1896.

To the Editor of the CANADA LUMBERMAN:

DEAR SIR,—In your March number you speak of "cut-offs," and would like to bring producer and consumer together. I have made a specialty of handling small hardwood piece stuff through Massachusetts and Connecticut, and have had as many as 344 customers, doing a business from $2,000 to $5,000 per month, the largest three months sales being $17,863. It is a very difficult business to handle. The chair, tool and toy men are all right and need but few personal calls. The novelty, specialty, dealers, turners and enamelers need frequent visits and are chronic kickers, often times with reason, as the mill man does not use due care to cut exactly to size, and the stock is not properly bunched, counted and marked. This stuff must be free from all defects, true to size, dry, bright, straight, and shipped promptly when required. If this is adhered to there is no doubt of success, as there is a large and growing demand for such stuff.

This trade cannot be done on commission for the reason that often times both the producer and consumer will try and save the commission by dealing direct, and so the middleman is out. At least this was my experience.

Yours respectfully,

R. A. JOHNSTON.

PERSONAL.

G. H. Miles, a well-known lumberman of St. John, N.B., is dead.

Mr. David McLaren, lumber merchant, of Ottawa, Ont., has recently returned from Great Britain.

Francis Smith, a prominent lumber surveyor of St. Stephen, N. B., died on the 11th of April, at the age of sixty-one years.

The death is announced of Mr. Charles Bertrand, of Isle Verte, Que., who for nearly half a century carried on a saw mill business and spool factory at that place.

Messrs. R. H. Smith, Wm. Power, Stuart Dunn, and Hon. John Sharples, representative Quebec lumbermen, have returned from the English markets, and report a satisfactory business.

Mr. Thomas Mackie, the well-known lumberman of Renfrew, Ont., has been unanimously chosen as the Liberal candidate to contest North Renfrew at the approaching Dominion election.

The LUMBERMAN had the pleasure of a call recently from Mr. William Irwin, lumber merchant, of Peterboro', Ont. Mr. Irwin expresses confidence in Canadian lumber, having recently become the possessor of additional timber limits.

Mr. W. B. Snowball, the popular manager of Hon. Senator Snowball's lumber business at Chatham, Ont., has recently taken unto himself a bride, in the person of Miss Bertha Harris. The LUMBERMAN extends its congratulations.

Mr. C. Beck, of Penetanguishene, Ont., will in all probability receive the Liberal nomination for Algoma at the forthcoming Dominion election. Being a large lumberman, and owning several timber limits, Mr. Beck's chances of success are considered good.

Mr. John Briggs, of the firm of Briggs & Sons, sash and door manufacturers, Brockville, Ont., succumbed to the grim hand of death a fortnight ago. The deceased was 72 years of age, and had been connected with the business interests of Brockville for more than half a century.

Mr. Henry Dufell, who had been a resident of St. John, N. B., for fifty-four years, died in that city a fortnight ago, at the age of 80 years. Mr. Dufell was formerly connected with Messrs. Jardine, lumber operators, and afterwards went into business for himself, retiring from active life six years ago.

Mr. Arthur Forchheimer, representing Hugo Forchheimer, lumber merchant, of Frankfort-on-the-Main, Germany, is at present on a visit to this continent, with a view of investigating the possibilities of exporting hardwood and other lumber. He states that in many parts of Europe the lumber consuming trade are entirely unacquainted with American woods, with the exception of pitch pine.

The flagstaff standing in Kew Gardens, London, measures in height 159 feet, the weight being 4 tons, 8 cwt., 2 qrs. The wood is the Douglas pine of Vancouver's Island.

BOILER EXPLOSION AT RIDGETOWN.

ON the 6th of April a boiler exploded in the saw, stave and heading mill of Watson Bros., at Ridgetown, Ont., which completely wrecked the mill and has thus far resulted in the death of four persons. The accident occurred just as the employees were preparing to enter upon their days' work. The fire had been under the boiler for some time, but the machinery had only been in operation about a minute and a half.

The boiler was a horizontal tubular one, 54 inches diameter and 11 feet 6 inches long, with 58 tubes 3 in. in diameter, and a dome 20 in. diam. and 27 in. high. The plates were iron and were a little over one-quarter inch thick. The joints were all single riveted, the lap of plates being 2 in., and the rivets were 5/8in. diam. and 2 in. pitch. Manhole was 15 in. by 11½ in. and had a strengthening ring around it 1¾ in. by 3/8in. The boiler was in general good order and fairly clean inside.

After explosion there was no evidence that the boiler had been neglected or had been carelessly used. The back head had been renewed at some time and was in very good condition, and evidently was stronger than the front head. The boiler had been used at a pressure of nearly 90 lbs. per sq. inch, and was supposed to be quite safe for a higher pressure. It apparently gave way first at the manhole, or near to it, and was split open from the top across the boiler. The manhole cover was picked up about 60 feet from the original position of the boiler, complete and uninjured, with bridge and bolt attached.

The dome was thrown about 600 feet, and the plate to which dome had been attached went about 700 feet in a different direction. The position of the front part of shell and of the back part confirm the theory that the boiler gave way first at the upper part, as these pieces were thrown in opposite directions and appear to have been turned end for end in their flight.

A second boiler which had no steam on at the time was thrown bodily over the engine and badly ruptured.

The violence of the explosion is clear proof that there was plenty of water in the boiler at the time, and the back head showed no sign of ever having been over-heated. The quality of the plates seemed to be common boiler iron, and the most probable cause of the explosion was that the pressure carried was too high for the strength of the shell at the manhole and at base of dome. The severe strain put upon these parts had gradually weakened the boiler, so that it gave way at the ordinary working pressure.

How best to prevent similar accidents is a question well worth considering. In Great Britain where so many boilers are in use, Government inspection has been carefully avoided, but the Boiler Explosions Act requires the user of a steam boiler to report to the Government every accident, no matter how trifling, and an investigation is held and the owner has to prove that he was using all proper precautions. Under this system the fault which led to the accident is traced out to the maker, or seller, or user of the boiler, and the blame fixed upon the right person.

The coroner's jury, in their verdict, stated that the cause of the explosion is unknown, but recommended that the government make it compulsory to users of steam boilers of all kinds to have them periodically inspected by competent boiler inspectors.

BOILER EXPLOSION AT RIDGETOWN, ONT.

GAS LIGHTING FROM SAWDUST.

THE town of Deseronto enjoys the distinction of being partially lighted by sawdust. The sawdust is charged in retorts, which are heated by a wood fire, the gas from the retorts passing into a series of coils and thence into the purifiers, which are similar to those used for coal gas. Lime is the principal purifying agent employed. When it passes out of the retorts the gas possesses an odor much less disagreeable than that of ordinary lighting gas, and resembles somewhat that of the smoke from a fire of green wood or leaves. The works in use are small, turning out daily 540 cubic metres of gas, for the production of which about two tons of sawdust are required. A man and a boy furnish all the labor needed at the works. The gas in an ordinary burner gives an illumination of about 18 c.p. The best quality comes from resinous woods. A quantity of 100 kilogs of sawdust leaves a residue of 20 kilogs of charcoal.

Timber testers say that seasoned timber is twice as strong as green. Long leaved pine is stronger than oak.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

PREFERENTIAL TRADE.

THE address recently delivered before the Canada Club in London by Mr. Chamberlain, Colonial Secretary, on the subject of preferential trade between Great Britain and her Colonies, has awakened much interest throughout the Empire. The recent difficulty with the United States and Germany appears to have directed the attention of the British government to the necessity of devising means of binding the Empire more closely together; indeed, Mr. Chamberlain, in the address referred to, expressed the opinion that a closer union of Great Britain and her Colonies is "essential for the existence of the Empire as such."

Attention is also called, in the address, to the following resolution adopted at the Intercolonial Conference held at Ottawa in 1894: "That this Conference records its belief in the advantage of a customs arrangement between Great Britain and her Colonies, by which trade within the Empire may be placed upon a more desirable footing than that which is carried on with foreign countries," and also to a resolution moved by Mr. McNeill, in the Dominion Parliament at its present session, which declares that "it is desirable, in the interests of Great Britain and of the Colonies, that a moderate ad valorem duty, independent of any existing duty, should be imposed, both by the Colonies and by the Mother Country, upon all imports from foreign countries."

Having referred to the fact that there exists a united opinion in Canada and Great Britain regarding the necessity for closer union between the various branches of the Empire, Mr. Chamberlain proceeds to argue that such a union could be more happily approached from its commercial side. He points out that the consolidation of the German Empire of to-day was brought about by a commercial zollverein, which had the ultimate effect of bringing the various independent states together in political as well as commercial union. As to the possibility of preferential trade between Great Britain and her Colonies, Mr. Chamberlain frankly states that he does not consider that the proposals which have thus far come from the Colonies are sufficiently favorable to induce the mother country to depart from the policy of absolute free trade which she has established and worked upon for so many years. On this point he says, "I think we may very fairly ask our fellow subjects in the Colonies to better their offer, if, as I believe, they desire to proceed upon these lines, and if those lines do really offer the best direction in which we can proceed," and adds, "I want especially to point out that the advantages of such a proposal are so enormous to the Colonies, as they would undoubtedly lead to the earliest possible development of their great natural resources, would bring to them population, would open to them the enormous market of the United Kingdom for their products—their food, their timber, their sugar. The advantages, I say, are so enormous that it appears to me that the Colonies themselves would be bound to give to any suggestion of this kind, at all events, a careful reconsideration."

It must be admitted by all who have given the subject any consideration that the preferential trade problem is a large and difficult one. Theoretically, it would be a most desirable thing to have an arrangement which would consolidate the British Empire, but when the many divergent interests involved are considered, the possibility of arriving at a satisfactory arrangement is open to question. Anything short of a heavy duty by Great Britain in favor of her Colonies would be of little advantage to them, and just here the question arises, would the British consumer consent to pay such a duty? On the other hand, Canada and Australia have adopted the protective system, the idea in the case of this country being to develop our manufacturing interests. If to get preference in the British markets for our natural products would involve the free admission of British manufactured goods, would our people be willing to sacrifice to a certain extent the interests of our home manufacturers?

Any arrangement which might be made would necessarily be based on the principle of conserving the welfare of the majority of the industries of the different countries concerned. It would not be possible to take into consideration the particular circumstances in connection with any one industry, and we can readily conceive that an arrangement under which advantage would accrue the majority of the industries of Canada might work very serious disadvantage to some one particular industry. What for example would be the probable effect upon the lumber industry of Canada? If Great Britain were to discriminate in favor of Canadian lumber and against the United States, might we not reasonably expect that the United States would retaliate upon Canada by again imposing a heavy import duty on our lumber? While we would no doubt find in Great Britain a market for much of our lumber of the better class, it is extremely doubtful if we could dispose of our low grade lumber, which now goes to the United States. As, owing to the disappearance of choice timber, we are every year manufacturing a larger quantity of low grade lumber, the question of finding a market for the same is becoming a more and more important one. Even supposing that the United States should not reimpose a duty upon our lumber, the partial closing of the British market to lumber from the United States would result in increased competition in the American home market and lessen the possibility of finding a market there for Canadian lumber.

These are points which present themselves on a first consideration of this question. It is of course yet too early to be able to consider the subject in its various phases. A conference of delegates representing the various parts of the Empire is to be held shortly to consider the question. After the deliberations of this Conference shall have been published, we should find ourselves in a better position to discuss the matter intelligently.

BUILDING TIMBER.

THE gradual disappearance of good building timber from Ontario, and the substitution of hemlock, soft elm and basswood for white pine and the better class of woods, is the cause of much wrong-doing in the building trades, and the creation of a class of buildings whose lives will be short by comparison. The high price of white or red pine joists is made an excuse by country builders to substitute hemlock instead, where the use of such uncertain lumber should be carefully eschewed. Fancy hemlock joists in the lower floor of a country farm house, where perhaps only a few inches of space exists between the damp earth and the lower edge of the joists. What is the result? A rotten floor in a few years, and a miasmatic one from the moment it is laid. Where it can be avoided, hemlock should never be employed in a situation subject to alternations of dryness and dampness. It does very well if kept constantly dry, though it has the quality of becoming very brittle if made very dry, and is not by any means a reliable wood, if subject to sudden strains. Hemlock may be used with profit in the upper floors of small or medium-sized buildings, that are not likely to be subject to heavy work, and when once in place and properly secured, does satisfactory service. For inside studding, scantlings and light roofing timbers, it will do fairly good service if skilfully arranged and properly secured. It must not be supposed that we decry hemlock as a building material. We do not. Like everything else it has its uses, and it is its improper use we object to. For rough boarding, sheeting and roof covering hemlock has no equal. It is superior to pine in nail-holding qualities, and when dry and properly machined makes a firm and solid base to "side" or shingle over, and each nail may be driven home with a certainty that it will stay where put. When covered, as under shingles, hemlock is not so likely to "swell" or "warp" in a damp atmosphere, as pine would under like circumstances. Hemlock timber, though frequently used in heavy constructions, is rarely satisfactory, owing to the unequal direction of the grain, and the difficulty of working it to correct and proper shape. While it may do passably well for temporary

structures, such as bridge centres, platforms, scaffolding, etc., it should never be employed for outside purposes where permanency is an important factor.

EDITORIAL NOTES.

Hauling logs by rail is becoming more popular in the northern and eastern districts of the United States, while in some parts of Canada the method has also been adopted with success. During the past winter unfavorable conditions existed for logging in many sections of Canada and the United States, and were such seasons to be frequent, we predict a more general adoption of railways for the purpose of facilitating the movement of logs.

In response to a question asked in the Dominion parliament regarding the recent proposal to impose an export duty on pulp wood, it was stated that it was not the intention of the Government to impose such a duty. The Governor-General-in-Council is authorized to impose a duty by order-in-council, provided the case came under the provisions of section 13 of the Customs' Tariff Act. If it did not, the advice of Parliament would be asked before anything was done.

The necessity of standard rules of inspection of hardwood lumber is becoming more generally recognized in the United States, and hopes are now entertained of the adoption, at least by the principal eastern markets, of a code of rules which will to some extent remove the difficulties which shippers of lumber have hitherto experienced in this connection. The opposition to uniform rules which existed a short time ago has in a measure disappeared, and the trade as a whole take more kindly to the idea. Canadian lumbermen will welcome the advent of this much needed reform.

The Canadian Gazette, published in London, Eng., in speaking of Canada's resources in pulp wood, points out that Canadian mills should carry the pulp wood business a step further, namely, to the manufacture of paper. The United Kingdom imported last year unprinted paper to the value of £2,046,106, and strawboards, millboards, and wood-pulp boards to the value of £548,254. The exports of paper from the United States last year were of the value of about £500,000 sterling. Canada, with her forest resources and unlimited water-power, should certainly secure a large portion of this business. At present Great Britain looks chiefly to Germany, Holland, Sweden and Belgium for her imported supply of paper.

It is to be regretted that the peculiarities of the lumber business enable so many tricksters to enter into competition with honorable men. The lumbermen who can justly be said to represent the trade are gentlemen of honor, whose business transactions are carried on in a straight-forward manner. But, unfortunately, from time to time we hear of transactions on the part of certain parties in connection with the lumber business which bear on their face the mark of dishonesty. Our attention was recently directed to the fact that an American buyer was purchasing lumber in Ontario at the same figure at which he was selling the same lumber at Oswego, N. Y. The same person is also said to have purchased lumber in Buffalo at a figure in the vicinity of $14 per thousand feet, and agreed to supply it to an Oswego firm at $10.75. We leave our readers to judge for themselves how he intended to "finance" the scheme.

The present would seem to be an opportune time for Canadian lumbermen to take steps towards the further development of trade with Cuba. The Governor-General of Canada has recently received a communication from the British consul at St. Jago de Cuba, enclosing a number of resolutions passed by business men at several commercial centres, condemning the stand taken by the United States in relation to Cuban affairs, and pledging themselves to purchase no more goods from that country. A considerable trade has already been secured in that country by some of our eastern lumbermen, and this opportunity should not be allowed to pass without a further effort being made in this direction.

An industry which promises considerable development is the manufacture of butter tubs. For this purpose spruce is largely used, owing to the fact that it does not communicate the taste of the wood to the contents of the vessel. An effort is being made by Washington Territory spruce manufacturers to secure a portion of this trade in the Eastern States. Canadian lumbermen should also make an effort to secure a share of this business. As has already been pointed out, the supply of spruce in the Eastern States is very meagre. Manufacturers on this side of the line would be obliged to pay a duty of twenty-five per cent. on butter tubs or shooks shipped into the United States, but this amount would seem to be below the cost of freight from the western spruce-producing territory. The demand in Canada for tubs and boxes for butter packing is also increasing. Efforts are being made to establish a dairy trade with China and Japan, while Great Britain takes considerable of our butter. In the latter country objections are being raised to the old-fashioned tub, the 56-lb. boxes being considered the preferable form for shipment.

From time to time we receive from subscribers to The Canada Lumberman expressions of appreciation of the journal, such as those which we print in this issue. These are very gratifying and encouraging to the publisher, as is also the fact that the number of subscriptions discontinued each year bears an exceedingly small relation to the total list of subscribers, and is far more than replaced by new subscribers. The large number of persons who have been continuous subscribers for five, ten, twelve and fifteen years is also satisfactory evidence of the appreciation with which the journal is regarded as the exponent of the lumbering and wood-working interests. There is one other method by which our subscribers may show appreciation of our efforts, and assist the prosperity of the journal, that is, by consulting regularly its advertisement pages, and mentioning The Lumberman in their correspondence with manufacturers of machinery and other appliances. When something in this line is required which subscribers do not find advertised, they will oblige by dropping us a post card, stating the fact, when we will put them in the way of getting what they need.

A LEGAL DECISION.

Salter v. St. Lawrence Lumber Co.—Defendants were a foreign company and had offices in London, Quebec and New Brunswick, but no office or agent within the province, and did no business within the province of a regular or permanent character. Subsequently to an order of the Supreme Court of N.B. winding up the company under provisions of c. 129, R.S.C., and appointing liquidators (none of whom resided within the province), plaintiff attached and levied on certain assets of the company. Thereupon the liquidator moved to set aside the attachment and levy, and obtained an order accordingly. On appeal from that order it was contended (a) that the liquidator not being a party to the suit had no standing in the Court, and was not entitled to attack the proceedings; (b) that the winding-up order was not proved, not having been certified and sealed with the seal of the Court as required by statute; (c) that the liquidator had not shown that he had authority from the Court to intervene in the action; (d) that since the liquidator's title was founded on liquidation he should have proved it distinctly.

Held, that as the functions of the directors ceased at the winding-up, the liquidator was the proper and only person who could intervene to conserve the assets of the company, and for such purpose it was not necessary that he should be a party to the suit;

That the motion to set aside attachment was not an attempt to enforce any order made by the N.B. Court (in which case the provision of sec. 85 regarding the mode of proving such order would have to be complied with), but to protect rights acquired under the winding-up proceedings;

That on such a motion it was not necessary for the liquidator to do more than satisfy the Judge by reasonable proof—such proof as is customarily employed on interlocutory applications and motions founded on affidavit—that a winding-up order had been granted when made, and that liquidators had been appointed.

Held further, that the summary provisions of O. 47, J. A., did not apply to a foreign company which merely had a few isolated transactions within the province, but conducted no regular or continuous business.

TRADE NOTES.

The gang saws for Peters' mill at Parry Sound, Ont., were supplied by the William Hamilton Manufacturing Co., of Peterboro.

The Small & Fisher Co., of Woodstock, N. B., have made three shipments of shingle machinery to British Columbia recently.

The Pembroke Lumber Co., of Pembroke, Ont., have commenced sawing. Having recently refitted their mill, they are prepared to fill orders on short notice.

The Ottawa Saw Works Co. report a good demand for their saws from different parts of Canada. It is the intention of the company to erect an addition to their factory at the Chaudiere.

P. Payette & Co., of Penetanguishene, Ont., have recently shipped one of their improved double edgers to the A. R. Williams Machinery Co., of Toronto, and also one to the Stevens Lumber Co., of New Brunswick.

T. McAvity & Sons, of St. John, N. B., have supplied Andre Cushing & Co.'s mill with large quantities of leather belting. The longest piece is 120 feet long and 48 inches wide, while two other pieces measure 120 ft. × 18 inches and 68 ft. × 20 inches.

The Puget Sound Lumberman, of Tacoma, Wash., has been purchased by Frank B. Cole, proprietor of the West Coast Lumberman, of the same city. The consolidation of the two journals should enable the publisher to produce a paper of high standard.

THE DAKE ENGINE.

THE extremely compact type of engine shown in the accompanying illustrations is unusually interesting on account of the ingenious mechanical principles involved in its design. As a steam engine, aside from questions of design, the manufacturers claim that experience has demonstrated that in reliability, and especially durability, it is not exceeded by any of the types of usual design. On account of its compact form,

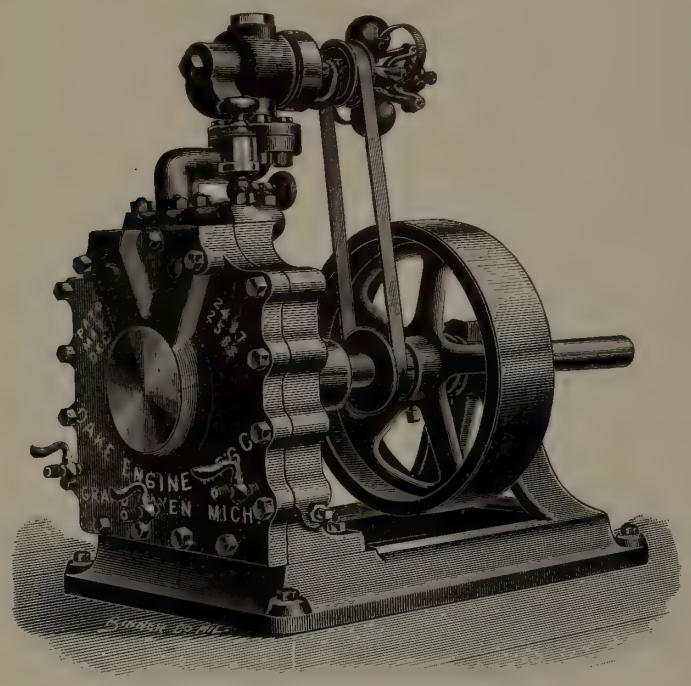


FIG. 1.—DAKE STATIONARY ENGINE.

this engine is claimed to be particularly suited for running ventilating fans, centrifugal pumps, incandescent lighting dynamos and saw mill carriages. Being strongly built, self-contained, and not affected by ordinary jars, it also gives reliable service when used to run smoke-consumers and head-light or other dynamos on railway trains, and when employed for various auxiliary purposes aboard vessels.

Fig. 1 illustrates the engine complete, and in Fig. 2 the pistons are removed, showing the interior of the case with the crank in position, this latter revolving in the chamber shown in the

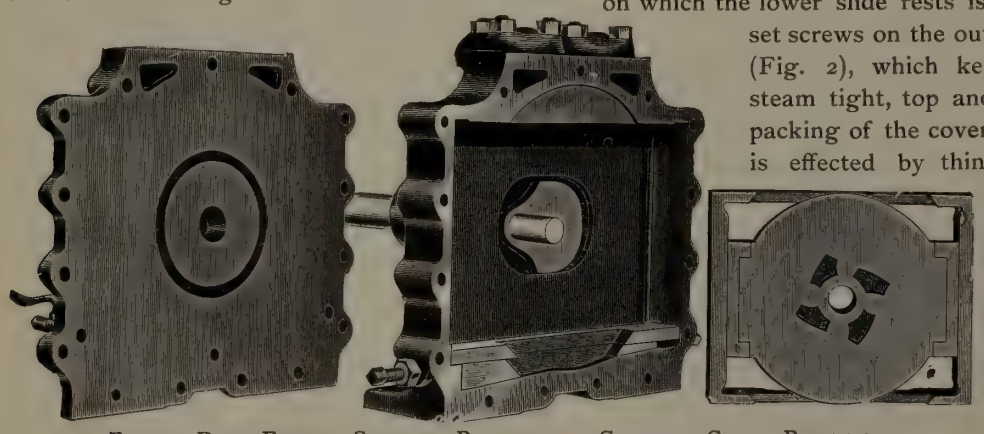


FIG. 2.—DAKE ENGINE, SHOWING PISTON WITH CYLINDER COVER REMOVED.

back of the case in the central cut. This chamber is supplied with oil and water from an opening in its back, thus securing lubrication to every part of the interior of the engine.

Both side pistons have a horizontal movement sliding from side to side, and at the same time an inner piston to which the crank pin is attached has a vertical or up and down motion, the two movements imparting rotary motion to the crank. Steam is admitted through channels in the cover, one opening into a central aperture and another into an annular opening on the inside of the cover. Four channels are cored through the inner piston, one leading to the top and another to the bottom, and one to each end of the inner piston, the latter also leading through the ends of the outer piston. Four parts corresponding with the channels in the interior of the inner piston are cut through the face (or side next to the cover) of the inner piston in the proper position to register over the central aperture in the cover. The steam entering the port in the inner piston, through the central aperture of cover and re-acting against the side of the case, imparts motion to the crank, the port passing over the annular ring and exhausting into it after having done its work. There are four distinct impulses of steam to each revolution of the crank, and the arrangement of the ports to the crank are such that each impulse of steam is given at a point where it has the greatest power. The expansion of steam is secured in the passage of the ports of the inner piston over the central aperture in the cover.

With the reversing engine, the channelling on the cover and in the piston is the same as in the engine built to run one way, but the ports in the inner piston are shaped so that they register over both the central and the annular openings, using each alternately as steam and exhaust. The ports on the top of the case being fitted with a suitable valve which connects the channels leading to the working parts of the engine, motion is given to the engine either to the right or left, as desired. The reversing engine is the same as a stationary engine, only with reversing throttle instead of governor.

Provision is made for taking up the wear of the working parts of the engine in a simple and effective manner. The inner piston is fitted with phosphor-bronze slides that admit of a thin piece of tin or sheet iron being inserted when the wear is sufficient to allow it. A wedge-shaped plate on which the lower slide rests is arranged with set screws on the outside of the case (Fig. 2), which keeps the piston steam tight, top and bottom. The packing of the cover to the pistons is effected by thin copper joints placed between the edge of the case and cover. The pistons are made so that they are slightly thicker than the case they occupy, and enough copper strips are put in to fill up the space; these joints are removed one at a time as the pistons wear down, and where it is seen that repacking is needed and a copper joint is too much to take off at one time, a piece of thin paper to take its place will repack the cover perfectly. The repacking of the cover as above described, and replacing the nuts or cap screws (as found on the different sizes of engines) evenly, is the only point about the engine that requires careful attention and judgment on the part of the person in charge, and repacking is not required except at long intervals.

There is very little friction, and consequently slight wear on the pistons, from the fact that the steam pressure is inside of the inner piston, instead of against it, making the pistons similar to balanced valves. The bearings for the main shaft and crank pin are in the form of bushings and made from phosphor-bronze. From the manner in which steam is applied to the pistons the wear is slight compared with the ordinary engine. When they need renewing the worn ones are driven out and the new bushings driven to place, which can be done by any good machinist at a small cost to the purchaser. The crank

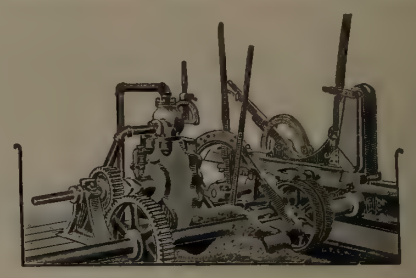


FIG. 3.—CARRIAGE ENGINE.

and pin are made from the best quality of cast steel, and the shaft, which is machinery steel, is shrunk into the crank in a solid manner. The outer piston is also made from best quality of cast steel. Every part of the interior of the engine is fitted with the greatest care. The inner face of the cover and all of the working parts of the engine are ground surfaces, made with tools especially designed for the manufacture of this type of engine, thus ensuring that the engine is practically steam tight from the start. Everything about the inside of the engine is made interchangeable, and can be duplicated in case of accident on short notice.

Fig. 3 shows the carriage engine for setting up and receding head blocks.

In Fig. 4 is shown the steam feed, which is recommended to the consideration of saw mill

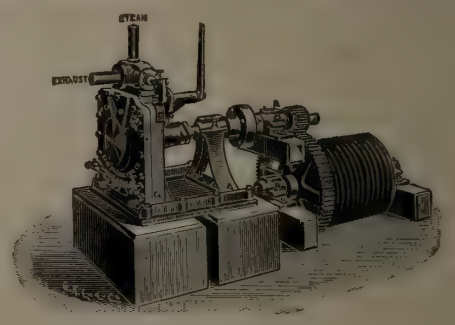
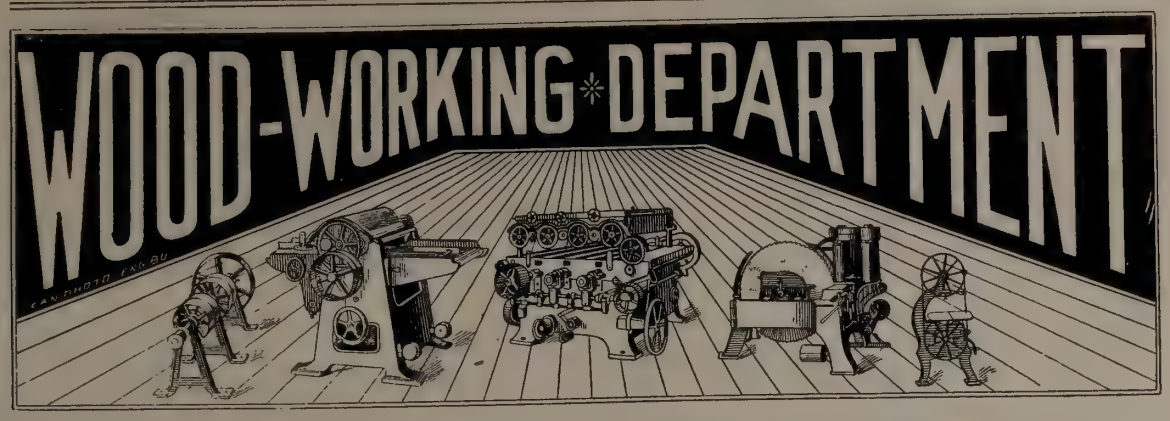


FIG. 4.—STEAM FEED.

owners and operators. The claims made for it are simplicity of construction, positive operation and easy management, economical use of steam, small space occupied, cheapness, and easy adaptation to either new mills or those now in use. In placing the engine in position, it is not necessary to move the husk frame, as it can be lowered from above through the frame onto foundation. The movements of the engine in either direction is under absolute control of the sawyer by lever connecting with reverse valves on top of engine, thus accommodating the speed of the feed to the size and conditions of logs.

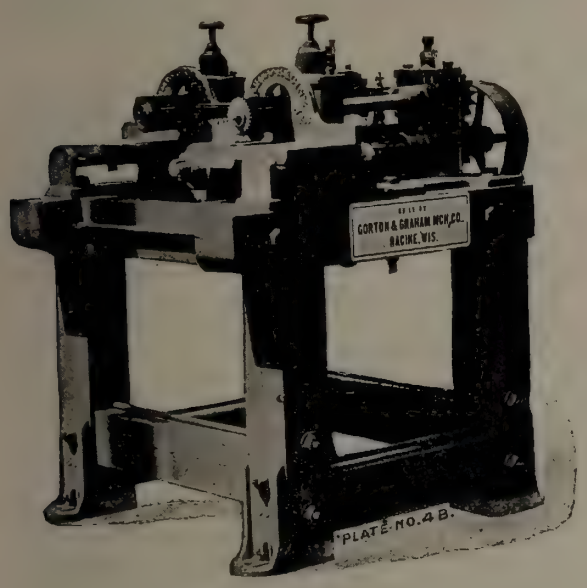
The Dake engine has been placed upon the Canadian market by the Phelps Machine Co., of Eastman, Que., who will gladly furnish any further information.



GANG HOOP SAWING MACHINE.

THE accompanying machine is adapted for sawing hoops from 3-32 to ½ inch or thicker, ¾ to 1½ inches wide, any length. Collars are furnished for any dimension hoop required. The machine is also adapted to cutting rule stock and similar work in large quantities. It cuts hard or soft timber, the output being almost as smooth as if planed, which for basket hoops and similar work is preferable to planed stock.

The feed rolls are adjustable for different thicknesses of stock. The arbor is fitted to run four



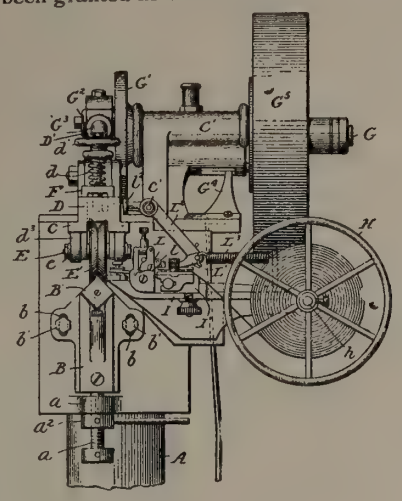
HOOP SAWING MACHINE.

to eight saws nine inches diameter. The bearings are fitted with sight-feed lubricators to exclude dust and dirt. The saws can be changed in less than a minute to vary the thickness of hoops. The engraving herewith shows a wood frame, but this machine is also built with a one-piece-casting frame. It will saw boards 15½ inches long. It is also made to carry a greater or less number of saws, as desired.

SOME of the most beautiful articles ever made of American woods are piano-cases, side-boards and furniture, in which oak, maple, cherry and other woods are used in their natural state. It is supposed that the only way to show up the markings in wood is to apply stains and fillers, and the enormity of error in this supposition will be appreciated by any person who will make a close scrutiny of articles made of unstained and unfillered woods. In the case of oak the fillers simply disfigure the wood, making obtrusive lines and shades that really mar the native beauty of that noble wood. In all cases both stains and fillers are inartistic, because wholly unnatural. It is incorrect taste that prefers the vulgarly emphasized filler markings in wood. The poetical rule should prevail in wood finish, that is, the finisher should remember that "beauty least adorned is beauty most adorned."

RECENT WOOD-WORKING PATENTS.

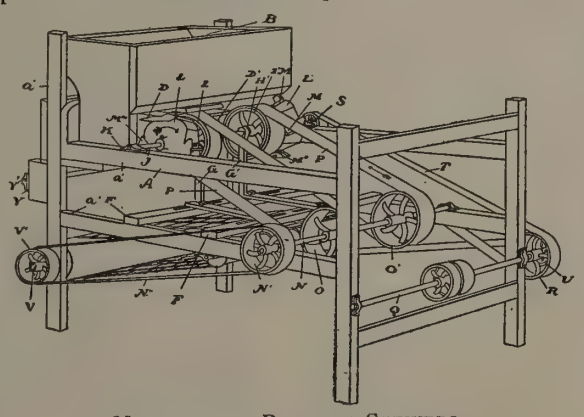
CANADIAN patents for wood-working machinery have recently been granted as follows:—



MACHINE FOR APPLYING ADHESIVE STRIPS TO BOXES AND OTHER ARTICLES.

Patentee: H. Inman and H. A. Inman, both of Amsterdam, N. Y., patented 4th February, 1896; 6 years.

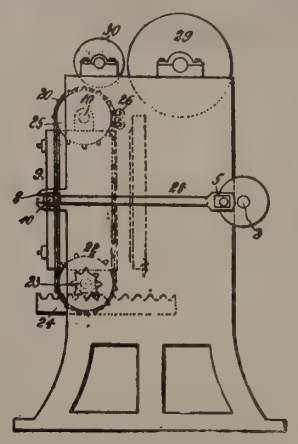
Claim.—In a machine for applying adhesive strips to boxes and other articles, the combination of a support for the box or other article, a head to reciprocate in a direction substantially parallel with the surface of the box or other article, and a roller carried by said head and having its working face conformed to the surface of the box or other article to be operated upon, and arranged to lay the adhesive strip upon said box, and to roll over the same. In a machine as above described, with feeding and cutting mechanism for above said strip, with spring clamp disposed above said strip, and a finger carried by said head and arranged to co-operate with each spring clamp to press the same and hold said strip.



MACHINE FOR POINTING SKEWERS.

Patentee: Thos. W. Hamlin, Sarawak, Ont., patented 21st February, 1896; 6 years.

Claim.—In a skewer pointing machine, the combination of the hopper, the skewer supporting tables, a shaft opposed to the said tables journalled in the frame, a pillow block opposed to the interval between the tables, sleeves supported by the pillow blocks encircling the shaft, idlers mounted on the sleeves opposed to the tables, cutter heads mounted on the said shaft on the outer sides of the idlers, a second shaft, pulleys mounted on the second shaft, belts passing around the pulleys and idlers to carry the skewer blanks down the faces of the tables, and means for imparting motion to the machine. In a skewer pointing machine, the combination with the hopper of a feeding apparatus consisting of two slides, one located above the other, a shaft journalled in the frame, cams mounted on the shaft, rock shafts operated by the cams, arranged to work the slides alternately, to allow of the delivery only of one skewer blank at a time from the hopper, skewer supporting tables, a concaved face for each of the tables, a horizontal shaft opposed to the tables journalled in the frame, pillow blocks opposite the interval between the tables, sleeves supported by the pillow blocks encircling the shaft, substantially as specified.



MATCH MACHINE.

Patentee: Davenant Rodger, New York, U. S., patented 25th February, 1896; 6 years.

Claim.—In a splint cutting machine, the combination with a gang of cutting knives, of means for imprinting or stamping characters upon the splints, in which is comprised a bed over which veneer is intermittently fed, a gang of cutting knives, a holding and clearing plate bearing characters to be imprinted, and means for inking the characters. A splint cutting machine in which is comprised a gang of cutting knives, and a cutting bed, in combination with rollers adapted to feed the material to be cut, a spring actuated clearer, and means for imprinting characters upon the splints.

STAINING WOOD BLACK.

A PROCESS that is much employed for the above purpose consists in painting the wood consecutively with copper sulphate solution (one per cent.) and alcoholic aniline acetate (equal parts of alcohol and acetate). A very durable black—and the nearest approach to red ebony—is readily obtained by moistening the surface of the wood with dilute sulphuric acid (1:20), and subsequently applying heat. A temperature of 60°-90° C. suffices in a very few minutes to produce the desired result. An excellent black was obtained in this way on beech, bass and boxwood; while a second treatment with acid was necessary in the case of cherry, walnut and birch. With oak and ash the results were not so good; and apple, and different varieties of pine, were still less amenable to the process, pine especially being unevenly stained. In order to afterward remove the acid from the wood, it might be well to thoroughly wash the latter with dilute soda solution, followed by clean water. It is unlikely that this method can be applied to any but small articles, because of the risk of possible fractures during the necessary heating of the wood.

A SOLUTION of fifty parts of commercial alizarin in one thousand parts of water, to which a solution of ammonia has been added drop by drop until a perceptible ammonia odor is developed, will give to fir and oak a yellow brown color, and to maple a red brown. If the wood is then treated with a one per cent. aques barium chloride solution, the first-named become brown and the latter a dark brown. If calcium chloride be used instead of barium chloride, the fir becomes brown, the oak red brown, and the maple a dark brown. If a two per cent. aqueous solution of magnesium sulphate be used, the fir and oak become dark brown and the maple a dark violet brown.

A GENTLEMAN who is quite familiar with the European market, in speaking of the present agitation for a further development of the Ontario hardwood trade in Europe, remarked to me that every precaution should be taken lest the expenses of shipping, insurance, storage, etc., should leave nothing for the shipper. The surest way was to endeavor to effect a sale before sending the cargo forward, as should it be necessary to store the lumber after its arrival until such a time as it could be disposed of, the charges would probably eat up all the profit. "Canadian mill men," he said, "must also take more pains in cutting their stock in order to supply the European market, for in this respect I believe they are somewhat lacking. The Americans are more particular than the Canadians, while in England the mill man is still more particular. There the lumber is put to many varied uses, and it therefore becomes necessary to use great care in cutting it for that market."

* * *

HON. T. NOSSE, Japanese Consul at Vancouver, B. C., recently made a trip through the eastern provinces of the Dominion with the object of introducing Japan to Canada, and vice versa. It was my privilege to meet Mr. Nosse while in Toronto. He informed me that Canada had been largely misrepresented in Japan, and was looked upon by many as being part of the United States. "I frequently get letters," he remarked, "addressed 'Vancouver, B. C., U. S.' This misapprehension has been brought about by the fact that the present Canadian trade with Japan has been done largely through United States houses. I once had occasion to order from the United States a superior quality of wheaten flour for the use of the army, and when it arrived the bag was labelled 'Ogilvie's.' Upon asking the supplier where this flour was produced, I was told in Chicago. Canada, with her railways, steamships, banks, and other facilities, should not be dependent upon other countries to handle her trade." With respect to the lumber industry, Mr. Nosse remarked that Japan had immense forests, the only lumber which was exported from Canada to Japan being sleepers and deck planking, which, of course, was supplied by British Columbia. A greater trade might, he thought, be built up with China, in which country there were no forests. At present Japan is exporting cedar and pine to China.

* * *

IT'S sad to see a man who in the prime of life enjoyed a liberal share of this world's goods, stricken with misfortune and compelled to spend in poverty his declining years. And did you ever notice how many men are brought to this condition through endeavoring to assist their sons? I had a conversation recently with such a man, who had been for many years connected with the lumber business. He had owned a mill in one of the northern countries, and had acquired a competency. The supply of timber in his locality became scarce, and he began to look round for a new location in order that there might be a business for his boys to step into when he should feel disposed to discard the activities of business life. In Muskoka he found what appeared to be a desirable location, and there he invested between twenty and thirty thousand dollars in a new mill, equipped with the most modern appliances. Before any returns had been obtained from the investment, the property was completely destroyed by fire. The insurance did not cover over half the loss. Father and sons set bravely to work and rebuilt the mill, but their capital was exhausted in the effort, and they lacked the means to successfully carry on the business. They also discovered that the cost of delivering the logs at the mill was much greater in Muskoka than at their former location, and that their profits were proportionately less. Difficulties of one kind and another pressed in upon them, until at last they were obliged to yield up the property to their creditors, and sacrifice every dollar of their means. There is a lesson here for fathers as well as for sons. The former should not risk the fruits of their life work for their children, nor should the latter be willing to accept the sacrifice if offered. Let the young men be equipped with a good business education and be given a few hundred dollars if the money can be spared to them. Beyond this they will be none the worse for being thrown upon their own resources.

* * *

GREATER transformations take place as the years pass by than the unobservant would imagine. Existing conditions to-day are quite different from those of a very few years ago. Of course, you say we are progressing rapidly, and these changed conditions are evidences of advancement. That this is only one view of the question was forcibly impressed on my mind while in conversation recently with Mr. Tennant, of Toronto, on the subject of white pine lumber. "We have encountered within the last five years a number of entirely new conditions," said Mr. Tennant. "We Americans are great on machinery, and lumber can now be worked to almost any shape or form. Maple, birch, oak and other hardwoods are now being largely used for finishing purposes, and white pine is suffering in consequence. Then again, for rafters, joists and scantling, hemlock is taking the place of pine, being much cheaper. A saving of $5 per thousand feet can be effected; thus a builder using thirty thousand feet in a building saves $150. For barn buildings hemlock is being exclusively used in some sections of Ontario. Of course it gives the carpenter a little more trouble in dressing, but that doesn't count for much. I recently paid a visit to a number of smart little towns in Western Ontario, and what did I find? Why, asphalt pavements, to the exclusion of wood. These facts show some of the difficulties under which the white pine trade is laboring, and for my part I am inclined to the belief that we will experience a further decline in prices. In the winter of 1894 large stocks were manufactured which are still unsold. These must be disposed of this season or in all probability the lumber will be spoiled. I know of a large quantity which was re-piled last summer in order to save it. In my opinion the government made a mistake in placing too many limits on the market. It was perhaps all right for the government at the time, but the ultimate result will be detrimental." I quite agree with Mr. Tennant that the developments of the past few years have been rather unfavorable to white pine, but we must accept the changed conditions with good grace, and hope for other changes in the future which will restore to white pine its old-time prestige.

* * *

MR. JOHN DONOGH, of the lumber firm of Donogh & Oliver, Toronto, who has recently returned from a trip to New York, Buffalo and other important cities of the neighboring republic, feels quite confident of a change in the United States government. "The Democrats concede," he says, "that the Republicans will win the day, and that the best they can do is to make a strong fight. It seems to me improbable that any change will be made in the lumber tariff. The strongest advocates for the re-imposition of the duty are the Southern lumbermen, while the Eastern people will use every effort against any change from the present." Mr. Donogh informs me that trade in the Eastern States is improving a little, and he managed to secure a few orders.

* * *

A RECENT visitor to Toronto was Mr. D. C. Smalley, of the firm of Smalleys & Woodworth, Bay City, Mich. His firm operate a large saw mill at that place, and are also the possessors of a Canadian timber limit. In conversation with Mr. Smalley on lumber matters, I learned that they cut largely on special bill stuff, in which they find the most profitable returns. "We have been running night and day for six years," he remarked. "Of course, that is only during the season. In the day time we cut the best logs with a band saw, and at night manipulate the rough logs with a circular. In a run of twenty-four hours we obtain 200 barrels of salt from exhaust steam. Our camp is about fifty miles from the mills, and when we require any logs to fill special bills, we telegraph to the camp and have them cut to the exact length and sent down. We sold our board timber last year to Quebec parties for the English market." I was interested in hearing the opinion of a representative Michigan lumberman on the tariff question and prospects for the season's trade, and questioned Mr. Smalley along this line. "We are expecting a little better year," he said. "I do not think the presidential election will influence business as much as has been the case in many former elections. The Democrats generally concede that a Repulican will occupy the chair for the next few years at least. In any case, I do not think the tariff as affecting lumber will be disturbed, unless the Canadian government should impose an export duty on logs. In Michigan good lumber is in demand, but the rougher grades are sluggish. We are sanguine, nevertheless, of an improvement. Men on the road are sending in some orders, and this fine weather is having a wonderful effect on general business. In the north they are curtailing the output of white pine, which it is believed will enable manufacturers to dispose of much of their surplus stock." I asked Mr. Smalley if any quantity of lumber was coming into Michigan from the Pacific coast, and was informed there was very little. Western shingles had been coming in pretty freely, but a prejudice was being aroused against them from the fact that, in order to reduce the cost of shipment, they were dried too much and were liable to check. They were laid down in Michigan at $3.50.

CANADA LUMBERMAN

WEEKLY EDITION

The Lumberman Monthly Edition, 20 pages } $1.00 PER YEAR { The Lumberman Weekly Edition, every Wednesday

THIS PAPER REACHES REGULARLY THE PRINCIPAL LUMBER MANUFACTURERS AND DEALERS THROUGHOUT CANADA, AND WHOLESALE BUYERS IN THE AMERICAN AND FOREIGN MARKETS.

VOL. II. TORONTO, ONT., APRIL 29, 1896 No. 17.

CANADA LUMBERMAN

PUBLISHED BY

C. H. MORTIMER

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NEW YORK LIFE INSURANCE BUILDING,

MONTREAL.

Weekly Lumberman, published every Wednesday. Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

Lumberman, Monthly. A 20-page journal, discussing fully and impartially subjects pertinent to the lumber and wood-working industries. Contains interviews with prominent members of the trade, and character sketches and portraits of leading lumbermen. Its special articles on technical and mechanical subjects are especially valuable to saw mill and planing mill men and manufacturers of lumber products.

☞ Subscription price for the two editions for one year, $1.00.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue.

FOR SALE.—CEDAR POSTS, ETC. APPLY to S. R. BEETON, Minesing, Ont.

WANTED.—BY A MAN HAVING 25 YEARS' practical knowledge of milling and lumbering business, a situation as foreman. Address, Box 126, Richmond, Que.

FIRE BOX BOILER FOR SALE—EIGHTY h. p.; in perfect condition; good as new; thoroughly tested; cheap. F. J. DRAKE, Kingston, Ont.

FOR SALE.

TWO ALLIGATOR STEAM WARPING TUGS, in good working order. For prices and particulars apply to GILMOUR & Co., Trenton, Ont.

WANTED.

A POSITION AS SALESMAN IN A PINE mill. One of the best connections in Ontario among planing mi l, yard men and manufacturers. Apply Post Office Box 537, Toronto.

WANTED.

DRY SIX FOUR SOFT ELM. QUOTE PRICE f. o. b. Union City, Pa.
KEYSTONE CHAIR WORKS, Union City, Pa.

FOR SALE.

A McDOUGALL ENGINE, PRACTICALLY new, 16"x20"; pulley, 8'x20"; bed, 12' long; right hand Judson governor, slide valve. Apply to P. H. KNOWLTON, Eastman, P. Q.

To Canadian Lumber Manufacturers

A GENTLEMAN CONNECTED WITH THE lumber trade is leaving for England during the summer for the purpose of forming a connection with English and Scotch lumber merchants for the sale of Canadian hardwoods and pine. He is willing to undertake sales on commission. Correspondence solicited. Address, "CANT HOOK," care CANADA LUMBERMAN.

JUDICIAL SALE OF LICENSES

FOR

CANADIAN TIMBER BERTHS

Pursuant to the judgment in an action in the Common Pleas Division of the High Court of Justice for Ontario of Beck v. Spohn, et al, there will be offered for sale at public auction (with the approbation of the Local Master of said court at Barrie), by Messrs. Dickson & Townsend, Auctioneers, at their rooms, No. 22 King Street West, in the City of Toronto, Ontario, at the hour of 12 o'clock noon, on

Thursday, the Twenty-Third Day of July, 1896:

(A) The following Ontario Government Provincia . timber berth licenses:—

Parcel No. 1—License for berth No. 2 in the Township of Finlayson, in the District of Nipissing; area, including road allowances, about 10¾ square miles.

Parcel No. 2—License for berth No. 3 in the Township of McCraney, in the District of Nipissing; area, including road allowances, about 11½ square miles.

Parcel No. 3—License for berth No. 19 in the District of Rainy River; area, about 11 44-100 square miles.

Parcel No. 4—License for berth No. 20 in the District of Rainy River; area, about 5 square miles.

Parcel No. 5—License for berth No. 21 in the District of Rainy River; area, about 4 square miles.

Parcel No. 6—License for berth No. 25 in the District of Rainy River; area, about 11 square miles.

Parcel No. 7—License for berth No 27 in the District of Rainy River; area, about 7 square miles.

Parcel No. 8—License for berth No. 65 in the District of Rainy River; area, about 7 square miles.

Parcel No. 9—License for berth No. 67 in the District of Rainy River; area, about 1½ square miles.

Parcel No. 10—License for berth No. 68 in the District of Rainy River; area, about 4 square miles.

ALSO—(B) The following Dominion of Canada Government timber berth license:—

Parcel No. 11—License for berth No. 292, situated on the north fork of High River, in the District of Alberta; area, about 47 8-100 square miles.

TERMS OF SALE.

Each parcel will be offered separately and subject to a reserved bid fixed by the said Local Master.

The biddings will be of a price per square mile.

The license of each berth will be sold subject to the various conditions contained or to be contained therein, and to the various statutes, orders in Council, regulations, dues and conditions now affecting or which may hereafter be passed or imposed affecting the same.

The price will be computed according to the areas stated above, and no allowance will be made for shortage or for water or for road allowances. No error in any of the above descriptions or in any map exhibited by the Vendor's Solicitors shall annul the sale, nor shall any compensation be allowed in respect thereof.

Ground rent and Government dues will be apportioned to the date of sale and assumed by the purchaser from the date of sale.

No timber on any berth shall be cut until the purchase money of the license thereof has been paid in full.

The purchaser shall at the time of sale pay down a deposit in proportion of $25 for every $100 of the purchase money, and shall pay the balance into court without interest to the credit of this cause, within thirty days after the sale.

The parties to the action, including the Vendor, shall be at liberty to bid.

The other conditions of sale will be the standing conditions of the court.

Maps of the berths may be seen at the offices of the Vendor's Solicitors.

Further particulars may be had from Messrs. BLAKE, LASH & CASSELS, Canadian Bank of Commerce Building, Toronto, Vendor's Solicitors, and Messrs. M'CARTHY, PEPLER & M'CARTHY, Solicitors, of Barrie.

Dated at Barrie this third day of December, A.D. 1895.

J. R. COTTER, Master.

PROVINCE OF QUEBEC.

DEPARTMENT OF CROWN LANDS

WOODS AND FORESTS

QUEBEC, 25th April, 1896.

Notice is hereby given that, conformably to sections 1334, 1335, and 1336 of the Consolidated Statutes of the province of Quebec, the timber limits hereinafter mentioned, at their estimated area, more or less, and in their present state, will be offered for sale at public auction, in the sales-room of the Department of Crown Lands, in this city, on THURSDAY, THE TWENTY-EIGHTH DAY OF MAY NEXT, AT HALF-PAST TEN A.M., at the upset price hereinafter mentioned opposite each limit:

	Area square miles.	Upset price per mile.
UPPER OTTAWA AGENCY.		
Islands in Lake Kaniwanaka, Ottawa River	2½	$500
Block A, 5th range, north, ½ No. 1	25	350
" " " south, ½ No. 1	25	350
" " " south, ½ No. 2	25	350
Block A, 1st range, No. 8A	1½	400
LOWER OTTAWA AGENCY.		
Red River, South A	22	100
" " " F	49¾	50
No. 34A Black River	8 1/10	100
SAGUENAY AGENCY.		
Laval No. 2	1 1/10	14
RIMOUSKI WEST AGENCY.		
River Neigette	10 9/10	30
BONAVENTURE WEST AGENCY.		
Grand Cascapedia, No. 2 north	24	25
" " " 2 south	24	25
" " " 3 south	16	25
Salmon River	36	25
Carleton, No. 3	4	20
GASPE CENTRE AGENCY.		
York River No. 2 north	3	20

CONDITIONS OF SALE.

Those limits will be adjudged to the highest bidder on payment of the purchase price in cash, or by cheques accepted by duly incorporated banks.

Those timber limits, when adjudged, will be subject to the provisions of all timber regulations now in force or which may be enacted hereafter.

Plans of limits offered for sale are opened for inspection in the Department of Crown Lands, in this city, and at the office of the Crown Lands and timber agents in the different agencies in which said limits are situated, up to the day of sale.

N. B.—No account for publication of this notice will be recognized, if such publication has not been expressly authorized by the Department.

E. J. FLYNN,
Commissioner of Crown Lands.

SHIPPING MATTERS.

Ship John McLeod, now at New York, has been chartered to load there for Sydney, N. S. W., at £2,150.

The Spanish steamer Gallego has been chartered to load deals at St. John, N. B., for Liverpool at 35s.

Sch. Arthur M. Gibson is chartered to load sleepers at Bay Chaleur for New York, three trips, at 14 cents.

The schooner Clara Youell has been chartered for the season to carry lumber from Thessalon to Goderich, Ont.

The Anchor line steamer Alsatia has been fixed to load deals at St. John, N. B., for Liverpool or Glasgow, at 36s. 3d.

The following lumber charters are reported: Barks R. Morrow, Mobile to Buenos Ayres, lumber, $13 net; Alice Reed, Yarmouth or Bridgewater, N. S., to Buenos Ayres, lumber, $7.75; Athena, Yarmouth, N. S., to Buenos Ayres, lumber, $8, Rosario, $9; a steamer, 1,570 tons, Miramichi to Liverpool, deals, 42s. 6d.; a steamer, 1,793 tons, St. John, N. B., to Liverpool or Glasgow, deals, 36s. 3d.; bark, 575 tons, Miramichi to the Mersey, deals, 46s.; bark, 639 tons, St. John, N. B., to e. c. Ireland, deals, 40s.

CURRENT TRADE CONDITIONS.

ONTARIO.

The month of April has drawn to a close with a record of lumber sales of very small proportion. It has shown little improvement over the three preceding months, and from present indications, it must be confessed, the near future will develop no unusual activity. "The local white pine trade is dead," remarked a wholesale dealer the other day, and his words expressed the sentiments of other dealers with whom the writer talked on the subject. Large orders such as are handled by wholesale dealers are few and far between, and it is not probable that there will be much activity in this respect until the general election is over. The mill men are receiving small local orders, and their complaints are of a lighter character. Some manufacturers report trade as being ahead of last year, but these are the exception. For the American market there has been more inquiry during the past week for better grades, but orders are not coming in as they should at this season of the year. Hardwoods are characterized by a firmer tone and a greater number of sales. Elm has moved with more freedom of late, and as considerable quantities are in stock, manufacturers are pushing sales. Birch and oak have been in good request, but stocks of the latter are small and difficulty is experienced in filling orders. Hemlock is going largely into building construction, and is consequently meeting with demand.

QUEBEC AND NEW BRUNSWICK.

Early in the season shipments of lumber from New Brunswick to the United States were quite restricted, and it was feared that the demand from that quarter might not prove as good as should reasonably be expected. The quantity of lumber which has gone forward within the past few weeks, however, has largely dispelled any anxiety in this respect, and the dealers now have confidence in the season's trade. The British market, which has been in a satisfactory condition since the early spring, shows no signs of decline, and new steamship charters are regularly reported. In one week recently ten million feet of deals, etc., cleared from St. John for British ports. In Quebec the disastrous floods of late have prevented the development of local trade. European shippers are encouraged by the orders which have been received, and shipping prospects both at Montreal and Quebec are very healthy. The prominent houses report unusually large sales, while many of the smaller houses have done correspondingly

well. It is believed the present season will be the best which has been experienced for many years.

BRITISH COLUMBIA AND MANITOBA.

Shipments of lumber from British Columbia to foreign countries are being made constantly, and the mills are running full time. The Moodyville Saw Mill Company have given a contract to cut timber on a berth of 925 acres, situated on St. Vincent Bay, in anticipation of an increased demand. The mills are also shipping largely to the eastern markets, and in addition to this a good local trade is being done. In Manitoba also is experienced no little activity, and a fair season's trade is anticipated.

UNITED STATES.

During the past week the lumber business has exhibited more life than for some time past, yet the volume of trade done is far from what might be expected at this season of the year. Dealers have been enabled to dispose of special lots, but for many lines which should be moving freely the demand cannot be said to be encouraging. It is a known fact that the retail yards are lightly stocked, which will result sooner or later in a replenishment. But for the present dealers are assuming a hand-to-mouth policy with respect to purchases, and no orders are being placed beyond those for actual requirements. One reason for this state of affairs is no doubt the uncertainty which exists regarding the condition of the national finances. Prices, nevertheless, have been well maintained, dealers refusing to drop in order to effect sales. This is strengthening the market, and if carried out a remunerative business may be expected when conditions improve. At Michigan points some sales of white pine have been effected to Chicago dealers at good figures. At Boston the situation is also improving; inquiries are increasing, and prices are firm. Oak holds the first position in the hardwood field, followed by basswood. Quarter-sawed white oak is scarce, and is not equal in all cases to the demand. Building operations in Philadelphia are especially brisk, creating a demand for considerable material. Maple flooring is meeting with some call in Michigan, and an advance in price is said to be under consideration.

FOREIGN.

The British market, which has been quiet of late as regards actual purchases of lumber, is looking up again, and contracts have been closed at good prices. Consumers of lumber who have been holding off from placing orders in the hope of a decline in values, now realize that the firm tone of the market is likely to be maintained for the balance of the season, and consequently are stocking freely. Favorable weather for building operations is also stimulating business in deals and boards, and the market is bare of many sizes. Shipments, however, are daily expected. J. M. Bennett & Sons, of Manchester, have sold the whole of their existing stock of spruce deals at a substantial advance. The situation is much superior to the same time last year, when shipments were sold much lower. The mahogany market retains its firm position, and available stocks are small. Birch, ash and maple are receiving some call, Quebec birch finding a ready sale at 95s. for good medium average, about 10s. in advance of last season's prices. Some recent sales of 20 in. have been made as high as 115s. A noticeable feature of the British market is the request this year for the small-sized goods, such as 2x3 and 2x4, which meets with ready consumption. Formerly it was difficult to get any quantity of boards and battens narrower than 6 inch. Reports from the French market tell of an increased consumption and a probable advance in values.

THE SITUATION.

REFLECTED THROUGH CORRESPONDENCE OF THE "WEEKLY LUMBERMAN."

Macpherson & Schell, Alexandria, Ont.: The past winter was not very favorable for getting out logs. The prospects for sales look favorable, and we have placed considerable of our season's cut on contract.

Keewatin Lumbering and Manufacturing Co., Keewatin, Ont.: Trade so far this spring has been ahead of last year, and we look for larger sales during this season. Stocks, on the whole, are not so heavy as what have been carried, but we expect there will be plenty to meet the requirements of the west. The total sales from this quarter in 1895 were about forty millions.

Bronson & Weston Lumber Company, Ottawa, Ont.: There is as yet no active movement of lumber from this section. We anticipate, however, that the better grades will be in most demand when movement commences, but we hear of no recent sales of importance. Our stock here is probably slightly under the average in the aggregate, with perhaps a little larger percentage of the common grades than a year ago.

J. E. Murphy, Hepworth Station, Ont.: Dry hemlock is going off briskly, and I am receiving a fair supply of orders in hardwood at good prices, especially for rock and soft elm of choice grades. I find it extremely difficult to find a place for common and cull hardwoods. I have recently loaded seven cars of fairly good common and cull birch and maple at the mere cost of handling, in order to get it out of the way of new stock.

W. W. Carter, Fesserton, Ont.: Am shipping four cars a week. Oak and elm are in most demand. Oak is scarce, and mill men are glad to see elm moving more actively. Have recently sold to the American market two million shingles at a fair price, and a large quantity of elm and pine lumber. Stocks of 1¼ and 2″ cuts and better are scarce, but 1½″ plentiful. Pine and basswood are also in large stock. Higher grades are firm in price, and other grades nominal, with good average of inquiries.

T. L. Pardo, of Blenheim, Ont., lost 200,000 staves by a recent fire in the store room of his cooperage works.

STOCKS AND PRICES.

Upwards of 3,000,000 feet of lumber will be shipped from Joggins Mines, N. S., this season.

About 3,000,000 feet of lumber will be manufactured at Bolton Centre, Que., this season.

Large quantities of birch logs are being shipped to England from the vicinity of Belleville, Ont.

W. Gillespie has disposed of 300,000 feet of basswood at Three Mile Lake, Ont., to the Rathbun Co.

Large quantities of lumber are being shipped from Havelock, N. B. S. H. White & Co. have already shipped 75 carloads.

The steamship Oregon, which sailed from St. John for London, had on board 20,592 bdls. box shooks, 15,236 pcs. deals, etc., and 266 pcs. birch timber.

The steamship Frey took from Halifax for Cardiff last week 1,409,331 feet spruce deals, 21,347 feet ends, 556,303 feet birch deals, and 34,262 feet ends.

Harry J. Crowe has purchased from R. Harlow, of Hantsport, N. S., 1,000,000 feet of timber lying at Bishopsville, in the eastern portion of King's county.

A syndicate of American capitalists have purchased the lumber lands and logs in connection with Rourke's mill at St. Martins, N. B. The price is stated as $56,000.

The Beaver line steamer Lake Superior sailed from St. John, N. B., for Liverpool on the 24th inst., with 350 standards of deals, 200 tons of timber, and 23 cars maple blocks.

The steamship Halifax City, from St. John for London, carried 11,920 box shooks and 307 pieces birch timber. From Halifax she took 114,840 ft. deals, 99,712 ft. spruce deals, and 3,509 ft. deal ends.

D. E. Spragge, of Winnipeg, will saw 7,000,000 feet of logs this season at his mill on the Red river in Point Douglas. Brown & Rutherford will also saw a considerable quantity at their mill near the Louise bridge.

The St. Stephen, N. B., Courier states that the lumber cut on that river this season will be the smallest yet made, and is estimated as follows: James Murchy & Sons, 6,000,000 ft.; H. F. Eaton & Sons, 7,500,000 ft.; F. H. Todd & Sons, 2,000,000 ft.

The following vessels are reported from Vancouver: British barque Glenbank, for Buenos Ayres, with 1,119,462 sp. ft. lumber, value $7,612; British barque Inch Keith, for Iquiqui, Chili, with 666,275 ft. of rough and 24,717 ft. of dressed lumber, value $10,945.66.

The following exports of lumber are reported from St. John, N. B., to the United States: For Boston, by W. H. Murray, 619,600 laths; by L. M. Jewett, 76,457 ft. pine boards, 72,909 ft. spruce boards, 12,250 pieces clapboards, 23,750 cedar shingles, 8,500 laths; by L. M. Jewett, 157,853 sp. ft. plank; by J. R. McDonough, 430 pcs. piling; by H. W. Rourke, 109,000 ft. boards, 3,000 laths; by J. & L. B. Knight, 9,020 ft. pine boards, 58,631 ft. spruce boards, 44,389 ft. scantling. For City Island, by Stetson, Cutler & Co., 318,000 laths; by Stetson, Cutler & Co., 239,167 deals. For Salem, by Stetson, Cutler & Co., 152,474 sp. ft. plank; by Dunn Bros., 137,465 sp. ft. plank, 61,452 sp. ft. deals; by Stetson, Cutler & Co., 93,683 sp. ft. plank, 86,352 sp. ft. scantling. For New York, by Miller & Woodman, 258,914 ft. deals; by J. H. Scammell & Co., 1,412,000 laths. For Vineyard Haven, by J. R. Warner & Co., 488,500 laths, 29,886 scantling. For Fall river, by Stetson, Cutler & Co., 22,000 deals, 91,400 scantling, 59,000 plank.

BUSINESS DIFFICULTIES AND CHANGES.

The sash, door and planing mill factory owned by the late Angus Campbell at Callender, Ont., is offered for sale.

G. R. Archibald, lumber merchant, Lower Stewaicke, N. S., is offering to compromise at 50 cents on the dollar. Liabilities $10,000.

Messrs. Donogh & Oliver, wholesale lumber merchants, Toronto and Buffalo, have disposed of their business in the latter city to Arthur Hill & Co., of Midland, Ont.

The sheriff is said to have taken possession of the business assets of A. Ames & Co., lumber merchants, East Syracuse, N. Y. It is stated that a number of Ontario dealers are interested in the estate.

A planing mill in Toronto, Ont., owned by the Toronto Rubber Co., and leased by Cockshead & Co., was burned last week. Loss $8,000.

Telephone 5332 Established 1851

JOHN B. SMITH & SONS,

MANUFACTURERS OF

LUMBER Lath, Shingles, Doors, Sash, Blinds, Mouldings, Boxes, &c.

BILL LUMBER a Specialty

Cor. Strachan and Wellington Avenues, TORONTO.

MILLS

Having Brown Ash 12, 14 and 16 ft. firsts and seconds, inch Bass firsts and seconds 12 feet, or any other Hardwood Lumber, can sell same for cash by addressing

H. D. WIGGIN

No 89 State St., BOSTON, MASS.

Inspection at mill.

CONSIGNEES AND SALESMEN OF ALL KINDS OF AMERICAN AND CANADIAN TIMBER.
Correspondence invited from shippers of Logs and Timber of every description and manufacture.

DENNY, MOTT & DICKSON TIMBER IMPORTERS, SALESMEN --AND MERCHANTS--

All letters to be addressed to: Chief Office, 165 Fenchurch St.

Telegrams: DENNY, LONDON. (A.B.C. Code, 4th Edition.) LONDON, E. C.

(With branches or Agencies at Liverpool, Glasgow, Newcastle on Tyne, Cardiff, &c. (Eng.) and at every important timber consuming or distributing centre in Europe.)

Represented by MR. J. E. JANSSON (Manager of Canadian and United States Consignments Department.)

American References: Messrs. Baring, McGoun & Co., New York; Bank of British North America, Agency—52 Wall St., N. Y.; Bank of British North America, Chief Office in Canada—Montreal.

Bankers in U. K.: Bank of England, Head Office, Threadneedle St., London; Royal Bank of Scotland, 123 Bishopgate St. Within, London; Royal Bank of Scotland, Royal Exchange Branch, Glasgow.

LAWRENCE & WIGGIN

MANUFACTURERS AND DEALERS IN Hardwood Lumber

IMPORTERS AND DEALERS IN Tabasco Mahogany

BOSTON OFFICE - - - 55 KILBY ST.

Boston Lumber Co. Wholesale Dealers in

Red Oak, Basswood, Black Ash, Soft Elm, Cedar Shingles, Spruce . . . .

Correspondence Solicited. No. 27 Kilby St., BOSTON, MASS.

RONAN LINE

HUDSON RIVER LUMBER TRANSPORTATION. Water Connection from Albany with lumber points in Canada via Canadian Pacific Railway to New York Harbor, Long Island Sound and inland waters of New Jersey. . . .

CONNECTION—Canadian Pacific Railway; Rome, Watertown & Ogdensburgh; New York Central & H. R. Rd.; Ronan Line.

OFFICES—Lumber District, Albany, N. Y.; 20 South St., New York. Telephone 711 Broad.

PARKER C. RONAN, Manager.

CANADA ATLANTIC RAILWAY

Ottawa, Arnprior & Parry Sound Ry.
- - operating - -
OTTAWA & NEW YORK LUMBER LINE
OTTAWA & BOSTON LUMBER LINE
CANADA ATLANTIC FAST FREIGHT LINE
R. A. CARTER, Contracting Agent, 115 Board Trade, Montreal.
JOHN SMITH Ontario Agent Union Station, Toronto.

Shortest and Quickest Route from
OTTAWA, ROCKLAND, HAWKESBURY, ARNPRIOR and all points on Grand Trunk Ry. TO . . .
BOSTON, PORTLAND, NEW YORK, DETROIT, TONAWANDA, ALBANY, &c., MONTREAL, TORONTO, QUEBEC, HALIFAX, ST. JOHN, &c.
CAPT. J. H. WILLIAMS, 16 Lumber Dist., Albany, N.Y.
C. J. SMITH General Freight Agent, Ottawa, Ont.

Ottawa & New York Lumber Line
- - - BONDED LINE BETWEEN - - -
CANADIAN POINTS, NEW YORK CITY AND ALL POINTS REACHED BY WATER FROM ALBANY
CANADA ATLANTIC RAILWAY. DELAWARE & HUDSON CANAL CO. WILLIAMS' LINE. } J. H. Williams Agent. { 15 Lumber District, ALBANY, N.Y. NEW YORK OFFICE, 93 Wall Street Telephone 531 Broad.

CANADIAN EXPORTERS AND WHOLESALERS

Thos. Meaney & Co. LUMBER

London Canadian Chambers
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MILLMEN—Send us list of dry hardwoods.

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Wholesale Dealers in Lumber, Lath and Shingles
TORONTO: 204-205 Board of Trade Building. -:- BUFFALO: Dock foot of Hertel Avenue.

Huntsville Lumber Co., Ltd.

MANUFACTURERS OF LUMBER LATH AND SHINGLES
—: HUNTSVILLE, ONT. :—
WE are open to cut White Pine and Hemlock Bill Stuff. Have for Sale a Quantity of Dry Mill Stocks and Sidings, also 16 in. Pine Shingles and 4 ft. Lath 1½ in. wide.
CORRESPONDENCE SOLICITED

THE PEMBROKE LUMBER CO. LTD.

MANUFACTURERS AND WHOLESALE DEALERS IN
DIMENSION TIMBER OF ALL SIZES AND KINDS, JOISTS, CAR DECKING, CAR SILLS, SHIP DECKING, AND ALL KINDS OF ROUGH AND DRESSED LUMBER.
Write us for Quotations on all Bills PEMBROKE, ONT

FOR SALE

Red Pine Dimension Logs, can be any length up to 50 feet to suit purchaser, and would contract for two to three million for next summer delivery at Spanish River. Special long lengths could be loaded on cars at Rayside, C. P. R. Will have five to six million feet of WHITE PINE, first cut on limit at Spanish River. And have about five million feet at mouth French River which could be delivered at opening of navigation . . . . . .

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We have the largest and best equipped Dimension Saw Mill in Eastern Canada. All our machinery is of the latest and most improved pattern, and we are prepared to quote prices on and supply at the shortest notice any orders that may be submitted to us.
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WHOLESALE HARDWOOD • LUMBER •
35 Adelaide East, Toronto, Ont.
Send us full description and lowest price for any lumber you have for sale.

JAS. PLAYFAIR & CO.

Manufacturers and Wholesale Dealers
LUMBER • LATH • SHINGLES
Contractors for Railway Supplies
BILL TIMBER a Specialty . . . MIDLAND, ONT.

THE REID CO., of TORONTO, Ltd.

Handle all kinds of Pine and Hardwood Lumber
LONG OAK BILLS A SPECIALTY
•• LUMBER WHOLESALE AND RETAIL COAL
Office, Corner King and Berkeley Sts. DOCK, FOOT OF BERKELEY ST.

PACIFIC COAST LUMBER CO.

MANUFACTURERS OF . . . . . .
British Columbia Red Cedar Lumber and Shingles
Kiln-Dried Bevel Siding, V Siding, Ceiling, Wainscotting
Door Stock, Base, Casings, Mouldings, etc.
We do accurate work and make reasonably prompt shipments. NEW WESTMINSTER, B.C.

J.W. HOWRY & SONS • LUMBER • FENELON FALLS ONT.

We Start our Mill This Month

LET US QUOTE YOU ON SPECIAL BILLS

Also three million feet good 4/4 mill culls,
Three million good 6 in., 8 in., 10 in. and 12 in. box, and
Three million good 8 in., 10 in. and 12 in. common.
All to be sold at hard times prices

We can also dress and match your stock in any manner that you may wish, with very little extra charge. WE WANT TO DO YOU GOOD.

KILN-DRIED BIRCH FLOORING SHEETING ..and.. CEILING **$20.00** SAMPLES BY MAIL **KNIGHT BROS.** Burk's Falls, Ont.

FOREIGN EXPORTERS AND IMPORTERS

WE want to buy FOR CASH the following kinds of Lumber : : : : :
Red Oak, Soft Elm
Basswood (all thicknesses)
Write us promptly, stating what you have to offer in each kind and quantity of each thickness, also dryness, etc., with lowest prices.
Empire Lumber Co. - Buffalo, N. Y.

WILLIAM B. YOUNG Successor to Young & Keeler Co.

WHOLESALE DEALER AND MANUFACTURER
ELM, BASSWOOD, BIRCH AND MAPLE
Canadian mill men invited to offer stocks. -:- 88 Kent Ave., BROOKLYN, N.Y.
Public Lumber Storage Yard, Brooklyn.

POOLE & HOTCHKISS

Wholesale Dealers in
PINE AND HARDWOOD LUMBER
Shingles and Lath
Correspondence invited. 270 West Genesee St., BUFFALO, N. Y.

Write us if you have any . . . .
DRY SOFT ELM for immediate shipment.
SCATCHERD & SON - 1053 Senena Street, BUFFALO, N. Y.

To Saw Mill Owners

WANTED FOR CASH: PINE SQUARES, SIDINGS, &C.
Address— JOHN ASHWORTH & CO. Timber Importers
Established 1856 WATERFOOT, MANCHESTER, ENGLAND

T. SULLIVAN. W. H. SULLIVAN. F. T. SULLIVAN. **T. SULLIVAN & CO.** Wholesale and Retail Dealers in . . . . . .
HARDWOOD LUMBER
Elm and Ash a Specialty
Main Office and Yards, Niagara Street, corner Arthur, BUFFALO, N. Y.
Branch Yards, Louisana Street. • SHIPMENTS MADE DIRECT FROM MILLS IN CANADA.

BUFFALO HARDWOOD LUMBER COMPANY

940 Elk St., BUFFALO, N. Y.

50,000 ft. 2 in. Nos. 1 and 2 and Common Soft Elm.
100,000 ft. 1¼ in. Nos. 1 and 2 and Common Soft Elm.
} WANTED {
30,000 ft. 2½ in. Nos. 1 and 2 and Common Rock Elm.
100,000 ft. 1 in. Nos. 1 and 2 and Common Rock Elm.

Are also in the market as CASH BUYERS for other kinds of Hardwoods. CORRESPONDENCE SOLICITED.

DIRECTORY OF ADVERTISERS

In the Monthly Edition of "The Canada Lumberman"

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Cant Dogs, Walter McFarlane, St. Marys, N. B.
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Lumbering Tools, Thos. Pink, Pembroke, Ont.
Magnolia Metal Co., New York.
Machine Knives, Peter Hay, Galt, Ont.
Metal Roofing, Pedlar Metal Roofing Co., Oshawa, Ont.
Patent Medicines, Ripan's Chemical Co., New York, N.Y.
Rails, John Gartshore, Toronto.
Silver Solder, P. W. Ellis & Co., Toronto.

WHOLESALE PRICES CURRENT.

TORONTO, ONT.

TORONTO, April 29, 1896.

CAR OR CARGO LOTS.

1¼, 1½ and 2 inch cut up and better	33 00	36 00
2 inch picks and uppers	35 00	37 50
1x12 dressing and better, 60% 16 ft	24 00	26 00
1x10 fine dressing and better	23 00	25 00
1x10 and 12 Canadian dressing and better	20 00	22 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 dressing and better	20 00	22 00
1x10 and 12 mill run	16 00	18 00
1x10 and 12 common	13 00	15 00
1x10 and 12 mill culls	9 00	10 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	11 00	12 00
1 inch siding ship culls	10 50	11 50
1 inch siding mill culls	8 50	9 00
Cull scantling	8 00	9 00
1 inch strips 4 in. to 8 in. mill run	13 00	14 00
1 inch strips, common	11 00	12 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		2 30
XX shingles 16 inch		1 35
Lath, No. 1		1 60
Lath No. 2		1 30

HARDWOODS—PER M. FEET CAR LOTS.
Quality, 1s and 2s unless otherwise specified.

Ash, white, 1 to 2 in	$26 00	$28 00	Cherry 1	to 1½	$50 00 $60 00
" " 2½ to 4	30 00	32 00	" 2	" 4	60 00 65 00
Ash, black, 1sts and 2nds, 1 to 1½ in	17 00	19 00	Elm, soft 1	" 1½	14 00 15 00
Ash, black, 1sts and 2nds, 2 to 4 in	19 00	21 00	" " 2	" 3	15 00 16 00
Ash, M. R., 1	" 2	15 00	18 00	" rock 1	" 1¼ 16 00 18 00
Birch, 1	"	20 00	22 00	" " 1½	" 3 20 00 22 00
" 1½	" 2	22 00	24 00	Hickory 1½	" 2 28 00 30 00
" sqrs. 4x4	" 8 x8	24 00	26 00	Maple 1	" 1½ 16 00 17 00
Basswood 1	" 1¼	16 00	18 00	" 2	" 4 17 00 18 00
" 1½	" 2	19 00	20 00	Oak, red, p'n 1	" 1½ 28 00 30 00
" m. r. 1	" 1¼	14 00	16 00	" " 2	" 4 30 00 32 00
Butternut 1	" 1½	23 00	25 00	" white " 1	" 1½ 28 00 30 00
" 2	" 3	25 00	28 00	" " " 2	" 4 30 00 35 00
Chestnut 1	" 2	24 00	26 00	" quart'd 1	" 2 46 00 50 00
				Walnut 1	" 3 85 00 100 00
				Whitewood 1	" 2 32 00 36 00

OTTAWA, ONT.

OTTAWA, April 29, 1896.

Pine, good sidings, per M feet, b.m	$30 00	35 00
ine, good strips, " " "	26 00	30 00
Pine, good shorts, " " "	18 00	25 00
Pine, No. 1 dressing sidings, per M feet, b.m	17 00	20 00
Pine, " " strips, " " "	15 00	18 00
Pine, " " shorts, " " "	13 00	14 00
Pine, 10 s.c. and better stock, " " "	13 00	16 00
Pine, 8 s.c. " " " "	11 00	12 00
Pine, " sidings " " "	13 00	15 00
Pine, " strips " " "	9 00	12 00
Pine, " shorts " " "	7 00	9 00
Pine, box culls " " "	9 00	11 00
Pine mill culls " " "	7 00	10 00
Lath per M No. 1	1 00	1 25
Lath per M No.	80	1 00

1x10 No. 1 barn	18	20
1x10 No. 2 "	16	18
1x8 & 9 No. 1 "	16	18
1x8 & 9 No. 2 "	15	17

QUEBEC, QUE.

QUEBEC, April 29, 1896.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For interior and ordinary according to average, quality etc., measured off	16 @	22
For fair average quality, according to average, etc., measured off	20	26
For good and good fair average " " " " "	25	30
For superior " " " " "	32	40
In shipping order " " " " "	36	42
Waney board, 18 to 19 inch " " " " "	36	42
Waney board, 19 to 21 inch " " " " "	38	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	40	49

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	22	30

BIRCH.

16 inch average, according to average and quality	21	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

DEALS.

Bright, according to mill specification, $115 to $123 for 1st, $78 to $82 for 2nd, and $40 to $43 for 3rd quality.
Bright spruce, according to mill specification, $40 $43 for 1st, $27 to $28 for 2nd, $23 to $25 for 3rd, and $19 to $21 for 4th quality. F.O.B. batteau.

SAGINAW, MICH.

SAGINAW, Mich., April 29, 1896.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$45 00	Selects, 1 in., 8 in. and up wide	$40 00
1¼, 1½ and 2 in.	45 00	1¼, 1½ and 2 in.	41 00
2½ and 3 in.	53 00	2½ and 3 in.	47 00
4 in.	56 00	4 in.	50 00

FINE COMMON.

1 in., 8 in. and up wide	33 50	2½ and 3 in., 8 in. and up wide	42 00
1¼, 1½ and 2 in.	36 00	4 in.	45 00

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	23 50	2½ and 3 in., 7 in. and up wide	37 00
1¼, 1½ and 2 in.	30 00	4 in.	40 00

STRIPS. A AND B (CLEAR AND SELECTS).

1¼ in., 4, 5 and 7 in. wide	34 00	1 in., 4, 5 and 7 in. wide	32 00
6 in. wide	36 00	6 in. wide	36 00

FINE COMMON OR C.

1¼ in., 4, 5, 6 in. wide	30 00	1 in., 6 in. wide	30 00
1 in., 4, 5 in. wide	25 00		

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24 00	1 in., 4, 5, 6 in. wide	22 00

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in	16 00	1 in., 4, 5 and 7 in.	15 00
1 in., 6 in.	17 00	1 in., 6 in.	17 00

SHELVING.

No. 1, 1 in., 10 in. stocks	25 00	No. 2, 1 in., 7 and 8 in. stocks	19 00
1 in., 10 in. and up wide	26 00	1 in., 10 in. stocks	21 00
1 in., 12 in. stocks	29 00	1 in., 12 in. stocks	24 00
1 in., 12 in. and up wide	30 00	1 in., 10 in. and up wide	23 00
1¼ in. 1½ and 2 in., 8 in. and up wide	29 00	1 in., 13 in. and up wide	25 00

BARN BOARDS OR STOCKS.

No. 1, 12 in.	20 00	No. 2, 9 in.	13 50
10 in.	16 50	8 and 7 in.	13 50
9 in.	16 00	No. 3, 12 in.	12 50
8 and 7 in.	16 00	10 in.	11 00
No. 2, 12 in.	16 00	9 in.	11 00
10 in.	14 00	8 in.	11 00

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$ 9 00	1 in., 13 in. and up wide	$11 50
1 in., 6 in. wide	10 00	1¼, 1½ and 2 in., 7 in. and up wide	11 50
1 in., 7 in. wide and up	10 50		

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9 in. wide	17 00	1 in., 10 in. and up wide	18 00
1 in., 6 in. wide	18 00	1¼, 1½ and 2 in., 8 in. and up wide	20 00

COFFIN BOARDS.

No. 1, 1 in., 13 in. and up	20 00	No. 1, mill culls	8 00
No. 2	17 00	No. 2, or red horse	6 50

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23 00	No. 2	18 00
No. 1 (nearly clear)	21 50	No. 3	14 00

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16 ft.	$ 8 50	Hemlock, 2x4 to 10, 12 to 16 feet	8 00
18 ft.	10 50	2x12	8 50
20 ft.	11 50	Add $1 to each additional 2ft. in length.	
22 and 24 ft.	12 50		

SHINGLES, 18-IN.

Fancy brands, XXXX	3 00	Standard brands, river made, XXXX	2 75
Clear Butts	1 90	Clear Butts	1 75

WHITE PINE LATH.

No. 1	1 60	No. 2	1 20
		Hemlock	1 25

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA N. Y., April 29, 1896.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in	$45 00	47 00	No. 3, 1¼ to 2 in	15 00	17 00
2½ and 3 in	50 00	55 00	Shelving, No. 1, 13 in and up, 1 in	30 00@31 00
4 in	54 00	57 00	Dressing 1¼ in	24 00	25 00
Selects, 1 in.	39 00	40 00	1¼x10 and 1	26 00
1¼ to 2 in.	39 00	42 00	1½ in.	24 00	25 00
2½ and 3 in.	47 00	50 00	2 in	25 00	28 00
4 in.		52 00	Mold st'ps, 1 to 2 in	31 00	33 00
Fine common, 1 in	35 00	37 00	Barn, No. 1, 10 and 12 in.	19 00	21 00
1¼ and 1½ in.	34 00	36 00	6 and 8 in.	18 50	20 00
2 in	34 00	36 00	No. 2, 10 and 12 in.	15 00	16 00
3 in.		45 00	No. 3, 10 and 12 in.	13 00	14 00
4 in		45 00	6 and 8 in.	12 50	13 50
Cut'g up, No. 1, 1 in.	28 00	30 00	Common, 1 in.	15 00	16 00
1¼ to 2 in.	33 00	34 00	1¼ and 1½ in.	17 00	18 00
No. 2, 1 in.	15 00	17 00	2 in	18 00	20 00
No. 2, 1¼ to 2 in	22 00	24 00			

WHITE ASH.

1st & 2nd, 1 inch,	32 00	33 00	2½ to 4 in.	28 00	30 00
1¼ to 2 in.	33 00	34 00	Strips	17 00	18 00
			Culls	9 00	10 00

BLACK AND BROWN ASH.

1st & 2nd, 8 inch up,	20 00	22 00	Com. & good culls	10 00	12 00

BIRCH.

1st & 2nd, 6 inch & up, red	28 00	30 00	1st & 2nd, white, 6 in. & up,	18 00
			Com & good culls	10 00	12 00

ELM.

1st & 2d, rock, 8in. & up,	18 00	22 00	1st & 2d, soft, 8 in. & up,	16 00	18 00

MAPLE.

1st & 2d, hard, 6in. & up	18 00	20 00	1st & 2d, soft, 6in. & up,	17 00	19 00

WHITE OAK.

1st & 2nd, plain, 8 in. & up	26 00	28 00	Clear squares, 5x5 to 8x8	35 00
Good common	15 00	17 00	1st & 2nd quartered, 6 in. up	45 00	50 00
Good culls	10 00	12 00	Common quartered	25 00	30 00

RED OAK.

1st & 2nd	25 00	27 00	Quartered 1st & 2nd	42 00	44 00
Common	14 00	16 00	Common	22 00	26 00
Cull	9 00	10 00			

NEW YORK CITY.

NEW YORK, N. Y., April 29, 1896.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply, rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$28 00	@ 40 00	Building orders	$27 00 @ 37 00
Decking	44 00	50 00		

SPRUCE.

6 to 9 in.	14 00	14 50	10 to 12 in.	16 25	17 00
6 to 12 in.	14 50	15 75	Lath	1 85	1 95
9 to 12 in.	15 75	16 25			

HARDWOOD.

4/4 and thicker, No. 1 and 2	Black Ash,	10 to 16			23 00
" " "	Soft Elm,	"			17 00
" " "	Hard Maple,	"			21 00
" " "	Basswood,	"			20 00
" " "	Birch,	"			23 00
" "	Black Ash, Com. and Shipping Cull, M.C.O.				14 00
" "	Soft Elm,	"	"	"	12 00
" "	Hard Maple,	"	"	"	14 00
" "	Basswood,	"	"	"	12 00
" "	Birch,	"	"	"	14 00

ALBANY, N.Y.

ALBANY, N. Y., April 29, 1896.

PINE.

Uppers, 3 in. up	$50	$52	Dressing boards, narrow	$19	$21
2½ in.	50	52	West India shipping boards	16	17
1 to 2 in.	45	48	Box boards	12	14
4 inch uppers	50	52	10-in. dressing and better	26	30
Selects, 2½ in. up	42	44	10-in. common	14	15
1 to 2 in.	38	42	12-in. dressing and better	26	32
Fine common, 2½ in. and up	40	42	Common, 1x12	14	16
1 to 2 in.	36	40	No. 1 barn, 1x12		20
No. 1 cut, 1 to 2 inch	25	35	1x10	18	21
No. 2	18	25	1x8	16	18
No. 3	17	20	No. 2 barn, 1x12	17	19
No. 1 molding, 1 to 2 in	33	36	1x10	17	19
No. 2 molding, 1 to 2 in	25	28	1x8	17	19
Stained saps		20	Shaky or star clear, 1 to 2 in.	19	21
Bracket plank	30	35	Dressing	16	18
Shelving boards, 12-in. up	30	32	Common	11	15

LATH.

Pine	$2 25	Spruce	$2 00

SHINGLES.

Sawed Pine, ex. XXXX	$4 25	$4 30	Bound butts, 6 x 18	$6 00	$6 15
Clear butts	3 25	3 35	Hemlock	2 15	2 30
Smooth, 6 x 18	5 40	5 50	Spruce	2 20	2 30

OSWEGO, N.Y.

OSWEGO, N. Y., April 29, 1896.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$45 00@46 00
Pickings, " "	36 00	38 00
No. 1, cutting up, " "	31 00	35 00
No. 2, cutting up, " "	24 00	23 00
In strips, 4 to 8 wide, selected for moulding trips, 14 to 16 ft.	30 00	32 00

SIDING.

1in siding, cutting up			1¼ in selected	38 00@43 00
1icks and uppers	32 00@39 00		1¼ in dressing	20 00	22 00
1in dressing	19 00	21 00	1¼ in No. 1 culls	15 00	17 00
1in No. 1 culls	14 00	15 00	1¼ in No. 2 culls	14 00	15 00
1in No. 2 culls	13 00	14 00	1 in. No 3 culls	11 00	12 00

1X12 INCH.

12 and 16 feet, mill run	21 00 24 00
12 and 16 feet, No. 1 and 2, barn boards	19 00 20 00
12 and 16 feet, dressing and better	27 00 31 00
12 and 16 feet, No. 2 culls	15 00 16 00

1¼X10 INCHES.

Mill run, mill culls out	$22 00@25 00	No. 1 culls	17 00	18 00
Dressing and better	27 00	35 00	No. 2 culls	14 00	15 00

1X4 INCHES.

Mill run, mill culls out	17 00	21 00	No. 1 culls	14 00	15 00
Dressing and better	24 00	30 00	No. 2 culls	12 00	13 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	20 00	25 00	6, 7 or 8, No. 1 culls	16 00	17 00
6, 7 or 8, drsg and better	25 00	30 00	6, 7 or 8, No. 2 culls	14 00	15 00

BOSTON, MASS.

BOSTON, April 29, 1896.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$11 50	12 00	¾ inch	$ 9 25	9 50
Coarse No. 5	15 00	15 50	11-16 inch	8 50	8 75
Refuse	13 00	13 25	⅝ inch	8 00	8 25
Outs	9 00		Clapboards, sap ext.	45 00	46 00
Boxboards, 1 inch	10 75	11 00	Sap clear	41 00	42 00
⅞ inch	9 75	10 00	Sap, 2nd clear	34 00	36 00
			No. 1	23 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in.	$50 00@52 00		Fine com., 3 and 4 in	46 00	52 00
1¼, 1½ and 2 in.	52 00	53 00	No. 2, 1 in. Fine com.	29 00	31 00
3 and 4 in.	58 00	62 00	1¼, 1½ and 2 in.	30 00	32 00
Selects, 1 in.	44 00	45 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in.	45 00	47 00	No. 2	36 00	39 00
3 and 4 in.	52 00	55 00	No. 3	26 00	30 00
Moulding boards, 8 to 11 in. clear	37 00	39 00	Cut ups, 1 in	20 00	32 00
60 per cent. clear	32 00	34 00	Cut ups, 1¼ to 2 in.	24 00	38 00
Fine common, 1 in.	40 00	41 00	Coffin boards	20 00	22 00
1¼, 1½ and 2 in.	40 00	41 00	Common all widths	22 00	26 00
			Shipping culls, 1 in.	14 50	15 50
			do 1¼ in.	15 50	16 50

SHINGLES.

Spruce	1 30	1 50	Second Clear	1 75	1 90
Cedar, extra	2 65	2 90	Extra No. 1	1 25	1 50
Clear	2 25	2 50			

HEMLOCK.

Boards, rough	11 00@11 50		No. 2	8 00@ 10 50
Planed	11 75	12 00			

LATH.

Spruce	By cargo	1 80@ 1 90
By car	1 80@ 2 00		

THE LATE MR. JOHN GOLDIE.

AFTER an illness of lengthy duration the grim hand of death has removed one of the most prominent manufacturers of the Dominion, in the person of Mr. John Goldie, of the Goldie & McCulloch Company, of Galt. His death occurred at his home in that city on the 26th of March. For some weeks his life had been dispaired of, but his splendid vitality, notwithstanding his advanced age, enabled him to offer strong resistance to the ravages of disease.

The late Mr. Goldie was a well-known, honorable and highly respected citizen, and to him is due a large portion of the prosperity enjoyed by the town in which he lived. Always having taken an active interest in all matters tending to promote the welfare of the community, his valuable counsel and assistance will be greatly missed. He was a man of sterling qualities, firm, but not obstinate in his convictions, energetic and reliable in all his business dealings. He was a Liberal in politics, but has never sought any public favors. In religion he was a Presbyterian.

Mr. Goldie was a native of Scotland, having been born near the town of Ayr, on the banks of Doon, Ayrshire, in 1822. The subject of our sketch received only a meagre educational training at the school in Kilroy, a small village near his home. When quite young he was apprenticed to learn the millwright's trade. He came to America in 1844 and settled at Greenfield, near Ayr, obtaining employment for over a year with Mr. Geo. Baird, a well known contractor of Blanford township. He afterwards spent eighteen months in Montreal, and was then engaged as millwright by the late Jas. Crombie, of Galt. Subsequently he went into partnership in a saw mill in Esquesing township, remaining in the business several years. In 1859 he returned to Galt, when he and Mr. Hugh McCulloch formed a partnership and bought out the foundry business of Jas. Crombie. At that time twenty-two hands were employed. The business steadily grew, and nearly every year the manufacture of new lines of machinery was commenced. From their factory many skillful mechanics were sent out, who have since given proof of their excellent training. In 1891, the business had grown to such an extent that it was deemed advisable to turn it into a joint stock company, which was done under a Dominion charter, with a capital stock of $700,000. The original shareholders were John Goldie, Hugh McCulloch, David Goldie, Hugh McCulloch, jr., and R. O. McCulloch. Since then Mr. A. R. Goldie and other members of the two families have been taken in. At the present time the name of the company is known throughout the Dominion as progressive and reliable manufacturers of safes, engines, boilers, mill machinery, etc.

PRESERVING THE FORESTS IN QUEBEC.

TIMBER limit owners in the territory covering twenty thousand square miles, under the supervision of Mr. McGrady, Crown timber agent, in Hull, have reported to the Quebec Government upon the extent and nature of their operations, and their views with regard to what steps should be taken to provide for the preservation of the forest. They have reported individually, but an idea of the general information given has been obtained. In their reports they stated the average size of the timber cut to be 100 feet to the log, or a log twelve feet long and fifteen inches in diameter. It was reported that the average size was decreasing, in consequence of the large trees being gradually cut away. As to the preservation of forests, the limit owners are almost unanimous in the opinion that the means adopted, that is, the employment of forest rangers and fire inspectors, was the only practical one. This was evident from the fact that the district was becoming freer from fires each year. During the past season not one fire was reported.

ONTARIO CROWN TIMBER ACT.

THE following amendments to the Act respecting timber on public lands were passed by the Ontario Legislature at the recent session :

1. The following sub-section is hereby substituted for sub-section 1 of section 11 of the Act respecting Timber on Public Lands :—

(1) All timber cut under licenses shall be liable for the payment of the Crown dues thereon, with interest thereon and expenses, so long as and wheresoever the timber or any part of it, may be found in Ontario, whether in the original logs or manufactured into deals, boards or other stuff; and when any license holder is in default for, or has evaded the payment of dues to the Crown on any part of his timber or saw logs, such dues, interest and expenses may be levied on any other timber or saw logs, or their manufactured product, belonging to such defaulter, cut under license, together with the dues thereon, and interest and expenses incurred ; and all officers or agents entrusted with the collection of such dues, may follow all timber, and seize and detain the same wherever it is found untll the dues, interest and expenses are paid or secured.

2. The following sub-section is hereby substituted for sub-section 2 of section 14 of the said Act.

(2) When the timber or saw logs made has or have been removed by any person out of the reach of the officers of the Crown Lands Department, or it is otherwise found impossible to seize the same, such person shall, in addition to the loss of his labour and disbursements, forfeit a sum of $3 for each tree other than pine and $10 for each pine tree which he is proved to have cut or caused to be cut and carried away, and in addition the full value of the timber or logs so cut or caused to be cut and carried away.

3. Section 20 of the said Act is repealed and the following substituted therefor :

20.—(1) The alleged owner or claimant of the timber seized may, upon at least four days' notice to the Commissioner of Crown Lands, apply to the judge of the county or district court, or in the Rainy River District to the stipendiary magistrate, for an order for the delivery of the timber to the alleged owner or claimant, and the judge or stipendiary may, on receiving security by bond of the alleged owner or claimant, with two good and sufficient sureties, to be approved by the Commissioner or Crown Lands, or by the agent, in such sum as shall also be approved by the Commissioner of Crown Lands, or by the agent, in such sum as shall also be approved by the Commissioner or agent to pay double the value of the timber in case of condemnation, direct the delivery of such timber to such alleged owner or claimant.

(2) The bond shall be taken in the name of the Commissioner of Crown Lands to Her Majesty's use, and shall be delivered to and be kept by the Commissioner.

(3) The judge or stipendiary magistrate may, upon the application of either party, at a time and place to be fixed by him, of which the other party shall have at least seven days' notice, try and determine such seizure, and whether the same was justifiable or otherwise, and shall either condemn the timber or order it to be released.

(4) If the seized timber is condemned as having been cut in trespass or without authority, the same shall be again delivered up to the Commissioner or to the officer or agent of the Department of Crown Lands, and the Commissioner may again take possession thereof and sell and dispose of the same and apply the proceeds thereof to the use of the Crown, or may allow the claimant or alleged owner to have and take the same, upon the payment of such sum, for the use of the Crown as the Commissioner shall fix and determine. And if the seized timber is condemned for non-payment of the Crown dues, then upon payment to the Commissioner of Crown Lands by the claimant or alleged owner of the unpaid dues with interest thereon and costs and expenses incurred by the Commissioner, the timber may be surrendered to the claimant or alleged owner, and the bond may be cancelled. Otherwise the penalty of the bond shall be enforced and recovered.

4. The following is hereby added to section 22 of the said Act :—

22. Any agreement which may be or which has heretofore been entered into, by her Majesty or by the Commissioner of Crown Lands, with any person for the supply of wood or timber, to be used in the manufacture of pulp or similar material, to be taken from the lands of the Crown, shall not prevent Her Majesty or the Commissioner of Crown Lands from selling, leasing, granting or otherwise disposing of any of the wood or timber of the Crown not specifically sold to or allotted to such person, or from issuing licenses or permits to other persons to cut and take any wood or timber not specifically sold or allotted as aforesaid, or from selling, leasing, granting or otherwise disposing of any of the lands of the Crown, whether such lands are included in such allotments or agreements or licenses issued in pursuance of them or not ; and other agreements may be made with any other persons to cut and take wood or timber from the lands of the Crown for making pulp or for similar or other purposes, without rendering Her Majesty or the said Commissioner of Crown Lands liable in damages in case of the exhaustion of the supply of such wood or timber, or of the inability of any person with whom a prior agreement was made to obtain a sufficient supply thereof during the whole period for which the agreement is to run, or during which the supply of wood or timber is contemplated by any such agreement, unless in respect of any quantity specifically sold to or actually allotted, or the wood and timber upon specified lands actually allotted, or agreed to be allotted to or for such person, and no claim or demand against Her Majesty or said Commissioner shall be made or maintained through or by reason of such sale or other disposition as aforesaid. No such agreement as aforesaid shall extend or run beyond the period of twenty-one years from its date.

5. The Lieutenant-Governor may by special commission appoint any duly appointed Crown timber agent or wood or fire ranger, a justice of the peace for a temporary or limited period, for the purpose of taking cognizance of offences under the Act to preserve the forests from destruction by fire ; and such person so appointed by commission shall, during the time named therein, have all the powers, rights and privileges for the purpose of enforcing the said Act, or of inflicting fines, penalties or imprisonment thereunder and otherwise of a justice of the peace, and such person so appointed as aforesaid may, by writing, under his hand, appoint any person a constable for a temporary or limited period, for the purpose of the said Act, and he shall have all the powers, rights and privileges for the purposes aforesaid of a constable under the Act respecting constables.

A LOGGING RAILWAY.

THE use of railways in connection with logging operations is somewhat limited, partly owing to the large cost of construction. One of the cheapest roadbeds is that of the pole road, which has been adopted in many logging regions. The accompanying illustration shows the trial trip on a road in Nova Scotia.

Construction costs from $75 to $250 per mile. No cross ties are required, there being no lateral pressure. The poles are about 9 inches in diameter at the smaller end. A socket in the larger end permits the smaller end of another pole to rest in it. Curves are constructed of short poles, the joints being opposite. The cars and locomotives are supplied with wide-tired grooved wheels. Where there is a grade it is customary to place the locomotive in the middle of the train, so it can leave half its train of six cars, if necessary, and push the other three to the summit, returning for the remaining three.

INITIAL TRIP OF POLE ROAD IN NOVA SCOTIA.

Bangor, Boston and St. John capitalists have subscribed a large sum of money for building a steam band saw mill at Ashland, N. B. The promoters are negotiating for the purchase of timber lands, and propose to build a mill with a capacity of sixty million feet a year. Nearly all the logs heretofore cut on the Aroostock river have been driven to St. John.

OTTAWA LETTER.

[Regular Correspondence CANADA LUMBERMAN.]

THE past winter has been very favorable for operations in the woods in the Ottawa valley, and the log output has been of an average size. Preparations are being made for river driving, and the mills are resuming operations. In none of the mills have any important improvements been made this spring. The wages of mill men will be about the same as last year, and the shorter hour system will again be followed, the proprietors realizing that they lose very little thereby.

The extensive timber limits of Bryson & Fraser on the Coulonge will be offered for sale by public competition in June next. The limits are valued at upwards of $300,000, and are being sold to liquidate the estate of the late John Bryson, and in order that Mr. Alex. Fraser may realize on his share of the lands. Mr. Fraser owns a half interest, and is also a creditor of the estate for $120,000. The sale will, no doubt, attract considerable attention.

The experiment by Mr. J. R. Booth of sawing in winter has proved successful, and will, in all probability, be carried on next winter. A number of special cars will be constructed for freighting the logs to better advantage. Mr. Booth states definitely that he has no intention of accepting the Conservative nomination for the city for the Dominion House.

INDIFFERENT LENGTHS.

The sawdust of mills is being utilized by the E. B. Eddy Co. for fuel at their sulphate mill.

MR. George H. Perley, late of Perley & Pattee, is getting out a small raft of waney timber on the Rouge river.

Gilmour & Hughson will not run their mill at Chelsea, Que., this season, but will do all cutting at their mill on the Ottawa river. It may be the middle of May before opening, as they have so few logs down.

All booms and bridges on the Bonnechere river have been swept away by the floods, and in consequence no logs will come down that river this season. The Madawaska river is a raging torrent, such as has not been seen for years.

Messrs. McLachlan Bros., Arnprior, are ready to open as soon as the waters will subside sufficiently to allow them. They have completed their new incinerator, which is 160 feet high and cost $6,000.

OTTAWA, Ont., April 25, 1896.

NEW BRUNSWICK LETTER.

[Regular Correspondence CANADA LUMBERMAN.]

ST. JOHN RIVER LOG DRIVING COMPANY.

THE annual meeting of the St. John River Log Driving Company was held at Fredericton, N. B., on the 1st of April. Among those present were Messrs. W. H. Murray, W. C. Purvis, Henry Hilyard, C. F. Woodman, J. F. Gregory, St. John; W. H. Cunliffe, R. F. Mallet, Fort Kent; J. E. McCollum, D. H. Nixon, G. R. Burtt, Hartland; Fred H. Hale, Woodstock; Archie Hale, River du Chute; R. A. Estey, J. A. Morrison, Fredericton; A. J. Beveridge, Andover; Fred. Moore, G. B. Dunn, and others.

Mr. W. H. Murray occupied the chair, and Mr. J. F. Gregory acted as secretary. After routine business had been transacted, Messrs. W. H. Murray, Fred H. Hale, John A. Morrison, R. A. Mallet and D. H. Nixon were chosen directors for the ensuing year.

. The manner in which Frederick Moore & Sons carried out their driving contract last season was discussed, and a court of arbitration was appointed to decide the amount of damage the log owners are entitled to receive. It is understood the claims will reach nearly $135,000, but from this amount will be deducted the value of the logs acquired after having passed the corporation limits.

Steps will be taken to have the river more carefully looked after than heretofore. The log owners this season are to be taxed only for the actual cost of driving. The finances of the company were reported to be in a satisfactory condition.

MILL IMPROVEMENTS.

During the past winter considerable improvements have been made to the mills in the vicinity of St. John, rendered necessary in order to reduce the cost of manufacture and meet competition. The Hilyard mill has been improved to the extent of $4,000, which includes a modern set of boilers. The sum of $2,500 has been spent on Charles Warner's mill. The new Cushing mill will have, when completed, two band saws and a Wickstock gang, the first introduced in St. John. This mill will have a daily capacity of about 140,000 feet, and is modern in every detail. George Barnhill has placed a new pattern edger in his mill, and Mr. Murray has added a planer and a nail-keg stave machine. Patent beds and haul-ups have been placed in the Jordan mill, the King mill and the Miller shingle mill. At Stetson, Cutler & Co.'s mill at Indiantown improved furnaces have been built.

BITS OF LUMBER.

George D. Prescott is fitting up his saw mill at West River.

New machinery has been placed in Crockett & Barnhill's mill on the St. John river.

The Kerr mill, between Chatham and Newcastle, will be operated this season by L. Doyle, who will saw Walsh's cut of logs.

Stetson, Cutler & Co., of St. John and Boston, will handle the lumber cut of Donald Fraser & Sons and R. A. Estey, of Fredericton.

The prospects for river driving are considered good, and lumbermen anticipate no difficulty in bringing down the crop of logs which has been taken out.

Electric light is being placed in a number of the provincial mills, among which are those of J. B. Snowball, Chatham, and Ernest Hutchinson, Douglastown.

A movement has been commenced by the Board of Trade to secure the shipment of lumber from Ottawa to South America via St. John. It has been pointed out that the present harbor facilities are inadequate, but steps will be taken at once looking to the extension of the harbor, and it is hoped to secure a portion of this trade at no distant date.

The second annual meeting of the Tobique River Log Driving Co. was held at Andover a couple of weeks ago. The following directors were elected: A. J. Beveridge, R. A. Estey, Archie Fraser, Geo. A. Murchie, Geo. W. Upham. At a meeting of the directors A. J. Beveridge was elected president, and J. C. Hartley secretary-treasurer.

ST. JOHN, N.B., April 24, 1896.

BRITISH COLUMBIA LETTER.

[Regular Correspondence CANADA LUMBERMAN.]

YOUR correspondent learns that the various mills in this province have a good quota of orders in store, and the opinion is expressed that lumbering on the coast is on the eve of a healthy revival. There is a scarcity of flat cars for eastern shipments, and scows are also in demand for transhipping to various points along the river. The Pacific Coast Lumber Co. and the Brunette Saw Mill Co. are making large shipments east, while also supplying no small quantity for the foreign market. The Royal City Mills present a scene of activity, and are shipping largely to the Northwest.

I hear few encouraging remarks with respect to shingles, although it is believed by some that the trade will experience an improvement of the slow but sure character. The price at the present time is so low that little manufacturing is being done.

The Central Lumber Co., which includes all the shipping mills on the coast excepting the Chemainus mill, is making its influence felt, and is recognized as a strong organization. The price of lumber has been advanced by 50 cents per thousand, and it is the purpose to establish a still higher standard when the opportune time arrives.

A select committee appointed by the government to inquire into the working of the provincial log scaling act of 1895, have presented a report, in which it is stated that the system, which has been in force on Vancouver Island for eight months, has given general satisfaction. Among other things it is recommended that a scale be adopted which would give the solid contents of a log, and that some more efficient check be put on the distinction between dutiable and non-dutiable logs. The enforcement of the act is strongly urged, and that in every case where the scaling is done by a government scaler, he be required to give a copy of the scale to both buyer and seller.

COAST CHIPS.

R. D. Mather is operating a saw mill at Fort Steele.

C. K. Simpson proposes erecting a saw mill at Midway.

G. Lovatt, saw mill, Kaslo, is contemplating removing to Ainsworth.

Thirteen vessels are loading lumber at British Columbia ports for foreign shipment.

The Shawingan Lumber Co. has taken over the business at Wellington formerly carried on by D. Nicholson.

Grant & Mounce, saw mills, Union, have put in a band saw with all latest improvements, adapted for both light and heavy work.

An English syndicate which recently purchased yellow cypress timber on the coast some 200 miles from Vancouver, will erect a mill this summer.

The mill of the Victoria Lumber Co. at Chemainus commenced operations about the 1st of April, employing about seventy hands. Shipments of lumber have been made to China and other foreign countries, and the promoters anticipate a fair season's trade.

NEW WESTMINSTER, B. C., April 22, 1896.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

A LARGE number of the mills have resumed operations, and many of them are running day and night. Operations promise to be quite brisk this season, notwithstanding the fact that trade is slow at the present time. The ice in the Saginaw river has moved out, and Lake Huron will now permit of the passage of vessels. The docks are crowded with lumber, and some anxiety exists less difficulty is experienced in clearing them in time for the new output.

The log drive on the Muskegon river is to be handled this year by the Log Owners Boom Company, which was recently chartered for twelve years. There will be about 30,000,000 feet of logs handled, besides quantities of cedar products.

In ten years the Michigan Central Railroad transported 1,721,774,149 feet of logs to saw mills on the Saginaw river and elsewhere. The business has been gradually declining, and a careful estimate for the present year places the amount to be hauled at 100,000,000 feet, which is possibly a large estimate.

SELECTS.

Gilchrist's mill at Alpena is cutting 25,000 feet of maple flooring per day.

Seven saw mills and six shingle mills will be operated at Alpena this summer.

George A. Mitchell, a prominent lumberman of Saginaw who has been engaged in business there since 1865, is dead.

Fletcher & Sons, of Alpena, are considering the erection of a mill to manufacture paper from the wood pulp produced at their mill.

John Canfield, a wealthy lumberman of Muskegon, Mich., has been sued for $300,000 by E. A. Shores, of Ashland, Wis., for commissions which the latter claims were promised him.

Labor Commissioner Morse will this year make an estimate of the amount of forest timber remaining in Michigan. If properly compiled, the information should be valuable to lumbermen.

The Alpena Lumber and Veneer Co. has been organized at Alpena, and has purchased the Island mill from the Minor Lumber Co. All kinds of lumber will be cut, but hardwood and veneering will be specialties.

Jonathan Boyce, of Bay City, is said to have sufficient timber to keep his mill running for ten or fifteen years yet. He has 200,000,000 feet of standing timber on the line of the Michigan Central road, north of Bay City.

SAGINAW, Mich., April 25, 1896.

A GOOD INVESTMENT.

MR. Richard Lockhart, of Riversdale, Ont., in renewing his subscription to THE CANADA LUMBERMAN, writes: "I would not do without your paper for $5.00 per year.

ANOTHER GOOD OPINION OF "THE LUMBERMAN."

MR. W. W. Carter, of Fesserton, Ont., in renewing his subscription to this journal, writes: "I am always glad to contribute my subscription to your valuable paper, as you are deserving of the support of all lumbermen for the energy and push you have put into your weekly for the past year, and for keeping the lumbermen so well posted on all matters of interest to them."

THE NEWS.

—A new engine will be placed in the saw-mill at Lanark, Ont.

—Ainsworth Bros. have their saw mill at Brechin, Ont., in operation.

—A saw-mill will be erected on the Island of Anticosti by Mr. Mernier.

—Charles Miller has placed a new band saw in his mill at Pokiok, N. B.

—Francis Rousseau, Somerset, Que., will rebuild his saw mill burned recently.

—Joseph Genelle, of the Kault saw mill, has opened a lumber yard at Kamloops, B. C.

—Hughes & Co., lumber dealers, Brandon, Man., intend putting in a planing mill outfit.

—Over 3,000 logs were handled in the Jennings saw mill at Fenwick, Ont., the past winter.

—A new steam planing mill is being erected at St. Catharines, Ont., by C. H. Leicester.

—The five mills of the Ontario and Western Lumber Co. will commence sawing early in May.

—The Port Arthur Pulp & Manufacturing Co., Port Arthur, Ont., is applying for incorporation.

—The old Phelps mill at St. Catharines, Ont., is being fitted up by George Wilson as a planing mill.

—The Collins Inlet Lumber Co., of Little Current, Ont., will, it is said, remove their sawmills to Killarney.

—The saw-mill at Westholme, B. C., owned by Frank Lloyd, has resumed operations. Mr. Lloyd is doing a successful business, his lumber meeting with a ready sale.

—McLachlin Bros., of Arnprior, Ont., are having their large refuse burner re-built on a larger and better plan. It will be about 100 feet in circumference and 200 feet high.

—The North American Bent Chair Co., of Owen Sound, Ont., have secured a large stock of hardwood logs.

—The Sault Ste. Marie Tug Company has been incorporated, to carry on a general towing and wrecking business.

—The Rathbun Company have commenced sawing at their mill at Deseronto, Ont. Robert Farrell is foreman of the mill.

—It is reported that the Whitney Lumber Co. will probably erect another mill on the Ottawa, Arnprior and Parry Sound Railway.

—Hogan Bros., of Fort William, Ont., will shortly erect a planing mill, to be fitted up with the latest and most improved machinery.

—Prospects are encouraging for a pulp mill at Richibucto, N. B. If $40,000 can be secured the work will be proceeded with at once.

—The manufacture of fine mantels for the decoration of fire-places has been commenced at Harrison's saw and planing mills, Owen Sound, Ont.

—Graham, Horne & Co., of Fort William, Ont., are preparing for a good season's business. Their mills will run night and day during the summer.

—At Walker's camp, Medora township, a load of sawlogs numbering 150 and measuring over 5,300 feet was drawn half a mile by a span of horses.

—J. O'Donnell, of Bobcaygeon, has taken out 100,000 feet of hemlock for the Rathbun Co., to be used in the construction of the Trent Valley canal.

—The Eyre Manufacturing Co., Lyn, Ont., has closed operations. They manufactured woodenware, but found overproduction in the Canadian market.

—M. Doody, timber merchant, of Cobourg, loaded four carloads of Quebec timber at Kinmount in three hours, only four men and a team of horses being employed.

—Ritchie Bros., of Aylmer, will operate the Cormier saw mill during the coming summer. They have taken out a large number of logs in the township of Eardley.

—Clarke, Skilling & Co. have two mills running near Newcastle, N.B., and James Aiton also has two mills, one at Grand Down and another at Bartibogue, all cutting timber for spools.

—A lumberman named William Payne returned to Peterboro' from the camp with a substantial wad. He got in with some friends and had a good time, but next morning found himself minus $55.

—Smith Bros., of Fort Lawrence, N. S., have finished sawing for J. E. McAulay at Stewarton, after having cut nearly one million feet. They have one of the best portable mills in the province.

—Crown Timber Agent MacGrady has been informed by the Crown Lands Department, Quebec, that a discount of 33⅓ per cent. will be allowed on all arrears of dues paid before a specified date.

—T. Sheehan, manager for the Moore Lumber Co., is moving his plant to Trout Creek, Ont., and will commence operations on the company's limit in the township of Ballantine, some six miles east of that town.

—The Muskoka Rivers Improvement Co., with a capital of $8,000, has been granted incorporation to improve navigation on the Muskoka, Ox Tongue, Hollow and Musquosh rivers and their tributaries.

—J. B. Smith & Sons have their new mill at Callender, Ont., in running order. It replaces the one burned last fall, and is fitted with the latest and most improved machinery. It will cut 80,000 feet per day.

—Mr. Chas. B. Williams, late of Ontario St., Toronto, has leased the Fletcher mill property at 552 Yonge street, and is carrying on a planing mill and retail lumber business. A satisfactory trade is being done.

—The Kensington Furniture Co. has been organized at Goderich, Ont., to manufacture furniture. They will erect factory buildings and put in the latest and most improved machinery. Mr. William Hinton is manager.

—A company has been formed in Annapolis, N. S., to engage in the wholesale manufacture of hardwood barrels for apple and fish packing. A site has been selected on Lequille river, and special machinery will be purchased.

—Davey & Son, Irondale, Ont., are rebuilding their saw mill destroyed by fire last fall. The mill proper will be 30 x 70 ft. in size, while the power house and shingle mill machinery will be located in an extension 24 x 70 ft.

—Andrew Miller, Elora road north, near Paisley, Ont., felled a giant elm tree which cut three logs 10 feet in length, and two logs 12 feet in length. These measured 2,582 feet of lumber. There was also cut from the same tree 6½ cords of wood.

—The Gilmour Lumber Co. are building their new mill on Canoe Lake, Ont., and it is expected that one band saw will be running by the first of August. The main building will be 180 × 65 ft., and it will have an annual capacity of 50,000,000 feet of lumber.

—The leased limits in British Columbia run 20,000 feet to the acre, and there are 524,573 acres leased. In 1894 the total lumber cut was 67,499,277 feet. The province has an area of 382,300 square miles, and 74 per cent. of this is covered thickly with timber.

—Hon. Mr. Stratton's bill before the Ontario Legislature respecting mill dams was withdrawn, it being decided that the Lieutenant-Governor-in-Council may instead issue an order-in-Council whenever it is thought necessary to alter the width of mill-dams.

—The export of pulp wood is growing to be an important industry in Nova Scotia. The Morgan Falls Pulp Co., of Queens County, have shipped during the past four months ten vessel loads of pulp to the American market, aggregating 1497 tons.

—Mr. Wm. Margach, Ontario crown timber agent, returned recently from a tour of inspection on the Racing river. He reports that lumbering is being successfully prosecuted, and some fine white pine and a large number of railway ties are being taken out.

—The vessels of the Collins' Bay Rafting and Forwarding Company will all be engaged in the timber business until the end of August, principally from Lake Superior and Georgian Bay ports to Collins' Bay, from whence they raft the timber and forward to Quebec.

—Munro & Gordon, of Sudbury, finished hauling their winter's cut of logs some time ago. Over eleven million feet have been taken out. The work was done under the supervision of John Fitzhenry, of Pembroke, and is considered the biggest winter's work ever done in one shanty on the Spanish River.

—The municipal council of Sturgeon Falls, Ont., has agreed to bonus the Sturgeon Falls Pulp Co. to the extent of $7,000, providing the company erect and equip a mill costing about $29,000 and employing from 30 to 40 hands. The Ontario government have granted the company a permit to cut spruce on the Sturgeon river and its tributaries. Mr. Heath, of Huntsville, is interested.

—Thomas Crockett, of River du Loup; Thos. Clair, of Clair, Madawaska; Edward Desbarats Boswell, of River du Loup; Geo. Edward Barnhill, of St. John, and Thos. Malcolm, of Edmundston, have been incorporated as the Kenny Island Mill Co., Ltd., to manufacture lumber. The capital stock of the company will be $5,000.

—The Ontario Legislature has approved of an agreement between the crown and George Clovet and James Whalen, of Port Arthur, and Thomas Bray, of Wolseley, pulp wood manufacturers, giving the latter certain timber limit privileges on the shore of Lake Superior, the privileges to extend over twenty-one years, on condition they employ 100 men for the first three years and 200 men thereafter.

—A Shubenacadie, N. S., correspondent complains of unsatisfactory freight rates charged on car loads of lumber going to Halifax. Charges varying from $8 to $15 per car are made, with the same amount of lumber on each car. Not long since a car load of pine was shipped, and when it reached Halifax it is said to have been charged as hardwood. These conditions, it is claimed, result from the employment of incompetent persons.

—At Bishop's camp, near Sudbury, Ont., there was an exhibition of heavy loads of logs. The competitors, with the amounts of their loads, were as follows: Philip Heral, Newmarket, 49 logs, measuring 14,012 feet; Wm. Jones, Little Current, 38 logs, 14,024 feet; P. McDonald, Beaverton, 47 logs, 14,052 feet; Charles Clarke, Penetanguishene, 47 logs, 14,048 feet; C. Reardon, Barrie, 82 logs, 14,091 feet; P. Wynhe, Penetanguishene, 52 logs, 14,038 feet; Edward Anderson, Midland, 58 logs, 14,068 feet.

—Kelly Bros., River Hebert, N. S., inform us that in cutting down trees they have dispensed with the axe entirely and use only the saw. By means of this, from a foot to twenty inches of the finest part of the log is saved, and in the mill there is considerable time saved, as the saw begins work at once instead of having to cut through the useless scarf first. As for time, a tree can be cut down with a saw as quickly as with an axe, and by less expensive hands. It is calculated that by using a saw a hundred thousand feet of lumber is saved in every million, and that with their cut this winter of three million they will save three hundred thousand feet.

CASUALTIES.

—At John McMillan's saw mill at Blyth, Ont., the son of the proprietor had his arm torn from wrist to elbow by coming in contact with the saw.

—While cutting timber near East Selkirk, Man., Jonas Oddson was seriously injured by the falling of a tree. Both jaws were broken and the face terribly lacerated.

—Robert McDonald, employed as foreman over a lifting gang at Graham, Horne & Co.'s camp near Fort William, Ont., was killed recently by a log rolling upon him. He was 40 years of age.

—A young man in James Tierney's logging camp, about thirty miles from Fort Francis, Ont., was struck on the forehead by a limb of a tree. The blow caused concussion of the brain and resulted in his death.

—George Vogt, late of Hanover, Ont., purchased a saw mill last fall on the Bruce peninsula. The news has been received that his third son, thirteen years of age, has been killed in the mill while assisting in turning a log.

—John Gardner, an employee of W. R. Thompson's mill at Teeswater, Ont., was temporarily left in charge of a machine for cutting maple into blocks. While adjusting the machinery his hand struck the saw, which cut the wrist about half way through.

—The boiler in H. B. Palmerton's saw mill near Elmwood, Ont., exploded on the 20th of March last, killing a young man named Lewis Cole, and injuring others. While Mr. Palmerton and the engineer were fixing the governors the boiler exploded. The deceased was hurled twenty feet and jammed between two logs.

—A serious boiler explosion occurred in the saw, stave and heading mill of Watson Bros., at Ridgetown, Ont., on April 6th, by which four men lost their lives and others were seriously injured. The deceased men are T. J. Buller, Wm. Watson, William Cunningham and Daniel Leitch. The building was completely wrecked. The employees were preparing to commence the day's work, and the fires had been under the boilers for some time. Pieces of machinery were thrown blocks away.

PLANING MILL OF J. R. EATON, ORILLIA.

AMONG the leading planing mill men and contractors of Ontario may be classed Mr. J. R. Eaton, of Orillia. On the corner of Colborne and Andrew streets is situated his neat two-storey mill. Its dimensions are 58x100 ft., and from it upwards of $50,000 worth of business is turned out each year by planing and contracting work. On the ground floor is the office and stock room of moulding, etc., taking up the front half. In the rear is the heavy machinery, consisting of a band re-saw, matcher, planer, moulder, self-feed rip saw, buzz planer, cut-off saw, two rip saws, and an automatic saw filer. In a rear annex of 24x 24 ft. are the engine and boiler, both of the Goldie & McCulloch make, the former of 30 h.p., and the latter of 60 h. p., which will shortly be replaced by a 50 h. p. engine and a 75 h.p. boiler of the same manufacture. An exhaust fan will be instituted in a short fan for the shavings. Besides the boiler room is a Hoyt & Smith dry kiln of 18x30 ft.

In the front part of the top floor are stored the sashes and doors, the rest of the floor being taken up with the lighter machinery, comprising a moulder, tenoner, mortiser, rip saw, cut-off saw, planer, shaper, panel raiser, blind slat machine, sandpaperer, boring machine, jig saw, band saw, turning lathe, door clamp machine, and a mitring machine.

In the mill an average of thirty men are employed the year round. The premises are lighted by electricity and heated by steam. The yard of over half an acre is constantly full of lumber, and in a shed 250x30 ft. in size is kept the supply lumber. Last year from outside sources 600,000 feet was shipped into the yard, besides 400,000 feet acquired from local manufacturers. Mr. Eaton has been successful in securing many large contracts, his trade extending from Sudbury to Cannington. His enterprise has gone a long way towards building up the town in which he lives.

A new boiler is being put into Wm. Allan's saw mill, Perth, Ont., by the Goldie & McCulloch Co., of Galt.

AN ADVANTAGE OF THE BAND.

SPEAKING of the growing use of band mills, the Timberman, of Chicago, says: In a certain Southern mill equipped with two band saws, the lumber product overran the log scale 27 per cent. on an average, for the year 1894. But a short distance from this mill is another, cutting precisely similar timber, with circular saws, which, from sixteen million feet of logs, produced but fourteen million feet of lumber, board measure. These comparative results were not repeated in 1895, except for somewhat better management of the circular mill.

Such a contrast is a most startling object-lesson in the value of the band mill. The mill in which the lumber product fell short of the log scale was carelessly conducted; in fact, it was found that one or two sawyers were bent in getting the logs off the carriage as quickly as possible, and had been sending a large amount of stuff to the burner that should have been worked up into lumber. But it is doubtful if even with ordinary careful sawing the lumber scale would have equalled the log scale. But such a difference cannot be accounted for by saving in saw kerf. The average Southern mill, even though it cut particularly with a view to finish and flooring, cannot effect a saving in the kerf alone of over 12½ per cent., if it can average that.

We believe that one of the chief causes for the better results arising from the use of a band mill is the caution and care taken by the sawyers and other mill hands. The ordinary circular is an incentive to waste. Every sawyer is bound on seeing how much he can cut in ten hours, how quickly he can turn his log, get it off the carriage and have a new one in its place; but with a band there is a disposition, just as marked, to get all out of a log that there is in it. The band saw was invented for that purpose, and the purpose is impressed on all who have anything to do with it. Not that a band saw is a slow tool by any means, for its product in ordinary sized logs is nearly that of the circular, and in large logs is greater, but not so many logs will be put through the mill in the course of a day, and the sawyer feels that he is out of the competition for a saw mill record. He has, therefore, a disposition to make a record for good work, and for the gain he can make over the log scale. There is moral character in the band saw which is infectious, and which constitutes one of its chief advantages.

The cost of timber in China is so great that wooden trestles are out of the question. The railway station houses are all built of light, burned brick, plastered on the outside. The broad platforms are of stone or concrete, filled with earth and cinders.

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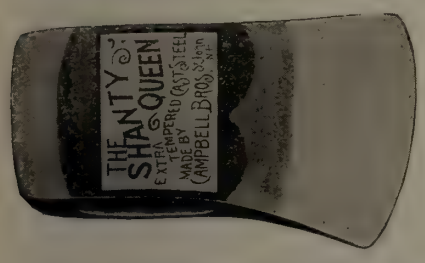
Of 597 trees struck by lightning in the forest near Moscow 302 were white poplars. The planting of these trees as protectors against lightning is therefore recommended.

Experiments show that the tapping of trees for sap or pitch does not weaken the timber. The probable effect of tapping is to decrease the thickness of the new layers of wood-cells.

An automatic match making machine now in operation, is an interesting curiosity, seemingly endowed with almost human intelligence. It cuts 10,000,000 sticks per day, and arranges them mechanically over a vat where the heads are attached at a surprising rate of speed.

The imports of lumber into South Africa via Natal and Delegoa Bay last year were as follows: From United States, 1,020,144 cub. ft.; United Kingdom, 185,121 cub. ft.; Sweden, 2,465,777 cub. ft.; Norway, 1,041,327 cub. ft.; New Zealand, 32, 548 cub. ft.; India and Burmah, 56,679 cub. ft.; South Australia, 1,592 cub. ft.

A great part of Prince Edward Island was once thickly wooded, but at present it produces no more timber and lumber than it requires, and in addition to the local output a very considerable amount is imported from Nova Scotia and New Brunswick. A little pine still exists, and with the other coniferous trees, and some excellent hardwood of various kinds, supplies in part the local demand.



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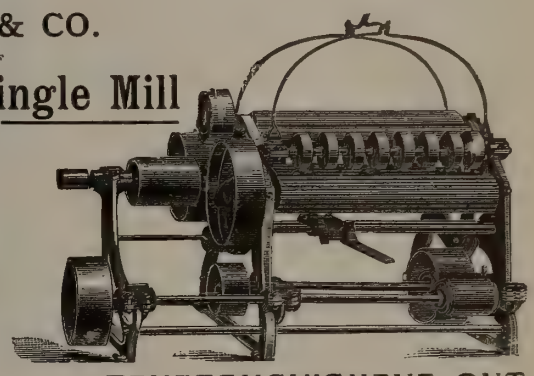

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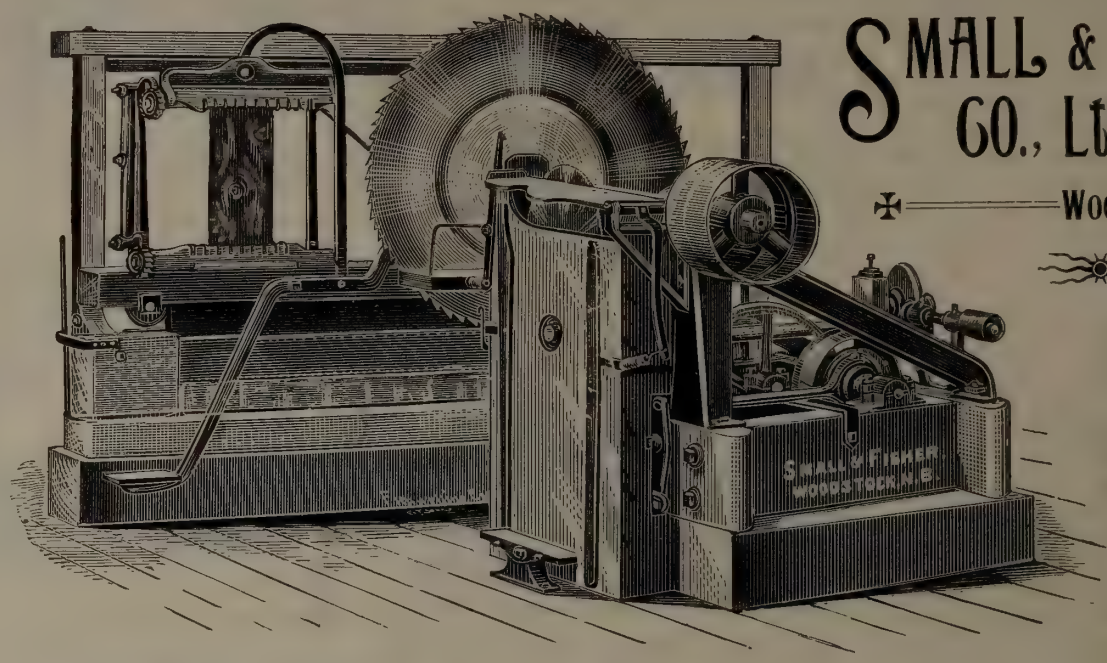

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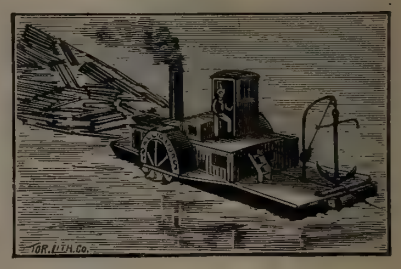

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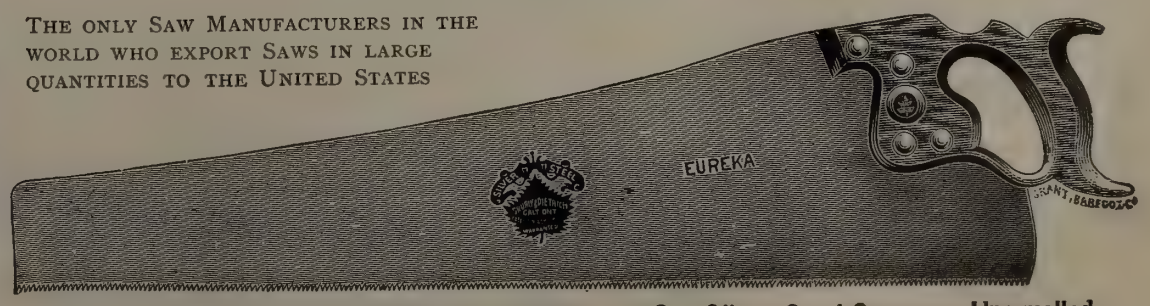

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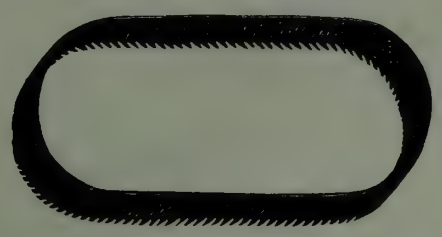

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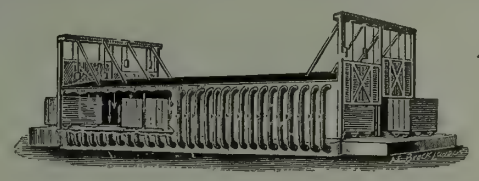

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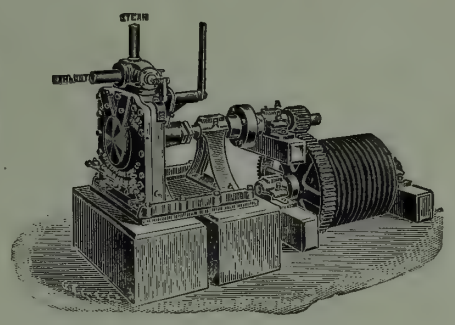

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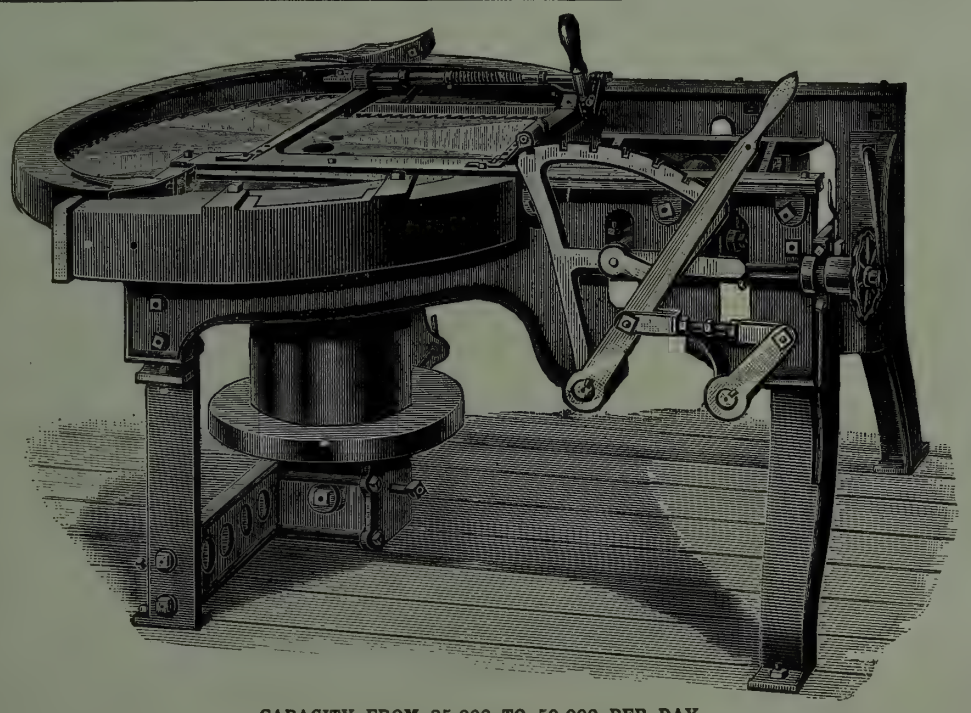

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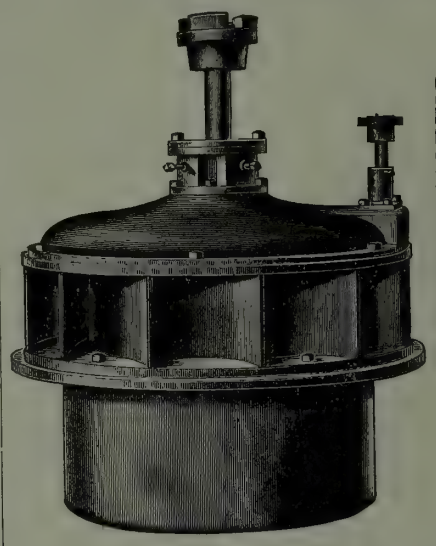

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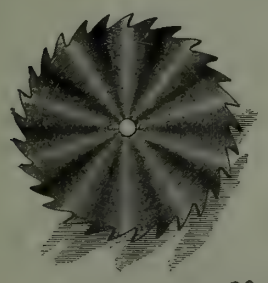

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WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XVII. NUMBER 6. | TORONTO, ONT., JUNE, 1896 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

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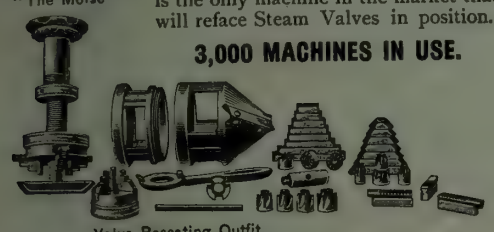

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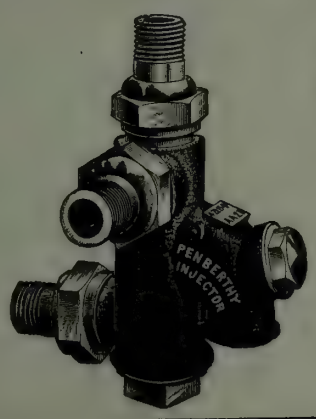

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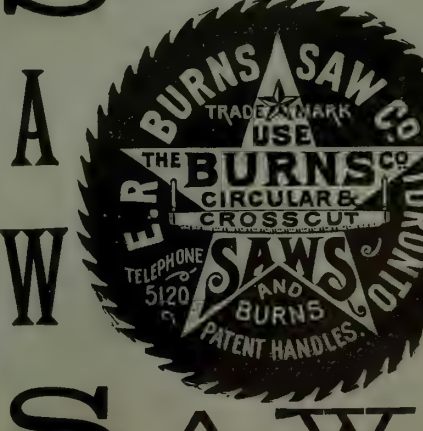

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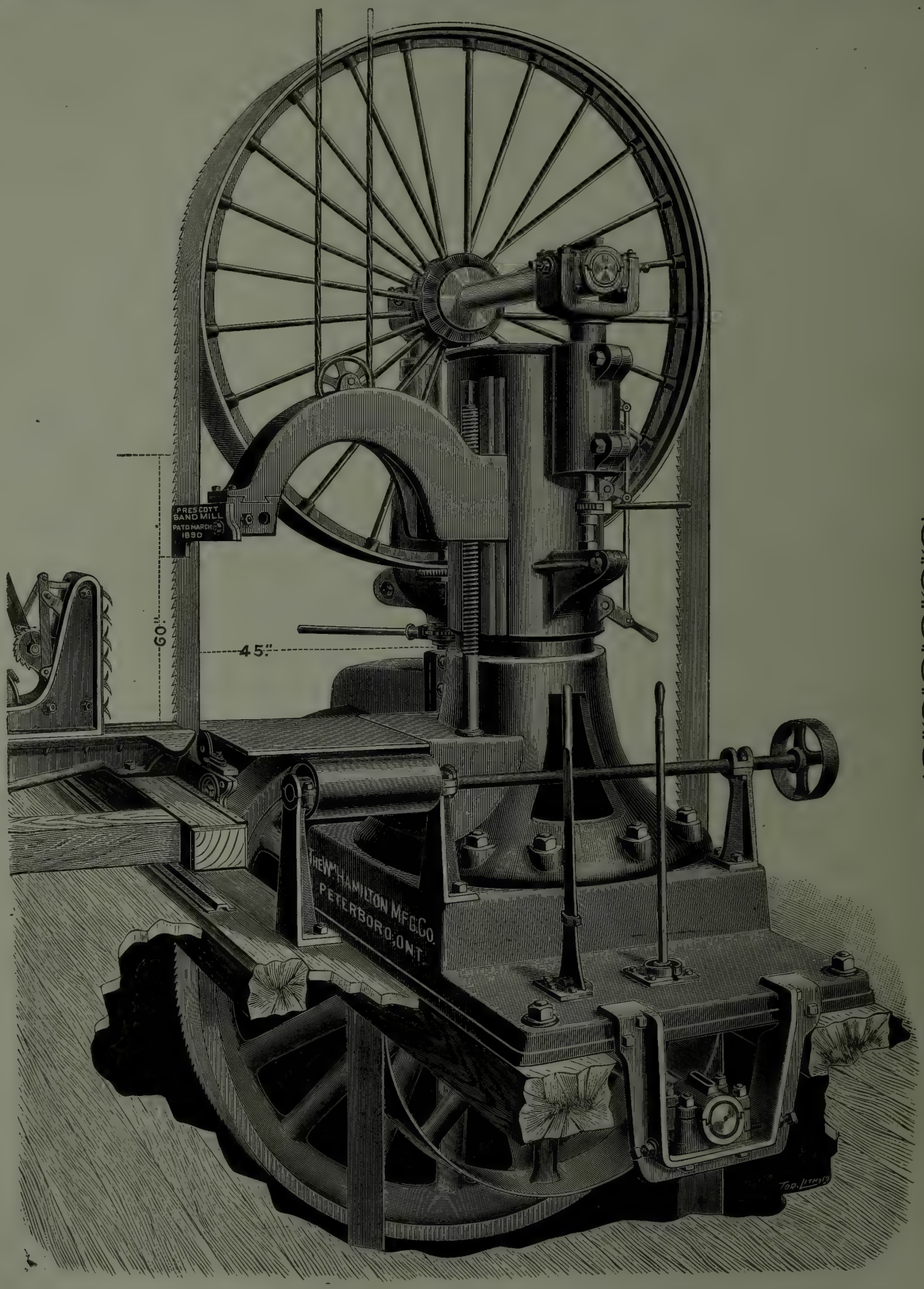

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CASUALTIES IN THE WORKSHOP.*

BY CROMWELL GURNEY.

THERE are more casualties reported as occasioned by circular saws than from any other type of machinery, and, for this reason, too much prominence cannot be given to the danger of carelessness in handling them.

Sometimes it happens that no one is to blame when a fatality occurs, as when a circular saw breaks, as shingle saws and veneer saws are liable to do, being necessarily very thin and running at a very high rate of speed. All circular saws should be made of the best crucible or finest silver steel, and should be carefully and uniformly tempered throughout, requiring great skill and watchfulness on the part of the temperer. Great care is also required in hammering out these saws, as often the process forces the strain to one part, causing a slight bulge, which may crack when some unusual strain is put upon the saw. The crack relieves the strain caused by the bulge, and by boring a small hole at the terminus of the split it will go no farther, the saw being safer than before the fracture occurred. In using a rip saw a wedge should always be inserted behind the saw, in order to keep the cut open, that the wood may not bind the saw. A terrible example of this neglect came under the writer's observation. A clumsy hand was pushing a large piece of lumber upon a saw so fast that the machine almost stopped. At this moment the damp wood bound the saw, with the effect that the heavy lumber was shot, end on, into the man's chest, mutilating him horribly. Most of the accidents, however, are not due to imperfect saws, but to carelessness in the employee, who, as a rule, loses his fingers as a penalty.

Generally speaking, the circular saw is always dangerous when in motion, and care is needed on the part of the attendant when operating any style of saw machine; but there are adjustments or adaptations of saws much more dangerous than others. Those running through a slot in the table are perhaps the most harmless as regards cutting accidents, while those overhanging their frames, and projecting out, are the most dangerous. Sometimes a hammer or wrench, left on the table, will be jarred until it comes into contact with the teeth of the running saw. As the teeth are unable to bite through the metal of the wrench or hammer, the saw itself breaks, sending its fragments with fearful velocity, as may be judged by one case, where a large piece of saw was buried completely out of sight in a neighboring post.

As to covering or guarding all saws, it is impracticable, without very much interfering with the quantity of work turned out. The floor about the neighborhood of a naked saw should be kept altogether free from obstructions which would be likely to cause stumbling, as to stumble against a running saw means horrible mutilation.

In using both emery wheels and saws, the operator should stand slightly out of the plane of the wheel, which puts him out of range, so to speak, if any accident should happen.

Great care should be exercised in putting a belt on a running pulley, as this operation causes many accidents. Every year there are the usual number of broken and dislocated arms reported from this cause. The reason of this is apparent at once to anyone who has felt the tremendous and sudden wrench when a fast-running belt starts unexpectedly while it is being put on. The most significant fact in all belt accidents is that the victims are not, as a rule, green hands, but old and skilled mechanics and engineers, whose familiarity with machinery has made them careless. A belt should never be held upon a pulley with the foot, as there is great danger of the boot getting caught in the joint of the belt. Neither should one be held on by a piece of wood held loosely in the hand, as the stick wrenched from the hand might strike the face or head of the holder.

* Abstract of a paper read before the Engineering Society of the School of Practical Science.

AN ANXIOUS HOUR.

CAPTAIN MARINER :—A mighty good deal depends upon the success of that log drive.
MR. MILLMAN :—My fortune depends on it, that's all. To all appearance that drive isn't in a fair way of getting down, consequently I'm in a fair way of going up.

WOOD-PULP TILES.

A NEW phase of the wood-pulp industry is developed in the manufacture of paper tiles for roofing purposes, which are known to the trade as Norway tiles. They are pronounced superior in quality, appearance and price, and the insurance companies appear favorably disposed and stamp the tiles as a very desirable and safe roofing material. Some of the qualities presented by this new factor in the line of building are its light weight, exceeding hardness, a non-conducting of heat and sound, and sufficient elasticity to meet all the requirements. It is urged that the difficulty of procuring perfectly square stone blocks except at high rates is thus overcome, for the pulp blocks, being cast in a square mold, are necessarily uniform, differing from the stone and brick which absorb so much heat in the summer. It is claimed that the new material prevents dampness, which is usually experienced in the case of stone.

MAINTENANCE OF SAW MILL MACHINERY.

DOUBTLESS our placing circular saw mills in the list of machines that require care will provoke a smile from those who know how very little of such consideration this kind of machinery receives.

It may be of interest to the uninitiated to go with us for a few minutes into one of these institutions with its modern appliances. We may find a little standing room near the sawyer. Through a cloud of sawdust may be seen a large log lunging back and forth, while the savage saw cleaves board after board from its side. The head block man is riding the carriage and hanging on to his levers like a sailor clings to his rigging during a storm. Suddenly the carriage stops. One naturally takes a step backward as two timbers, armed with spike, dart through the floor nearby. The log bounds into the air and drops back on the blocks with a fresh side presented to the saw, and the turning jack disappears. Again the sawdust and bark flies; a great slab drops on the live rolls and wriggles away out of sight. A few more such snatches at the log and it disappears.

We have seen enough and breathe easier when a little farther away, for such violent motions and rasping sounds produce a sense of insecurity. The whole thing seems to be turned loose to do what it can before it accomplishes its own destruction. Of course the practical saw mill man looks upon this slamming and banging of things with a sort of matter of course complacency. Experience has taught him about where the boundary of endurance lies and he works right along that line.

It is only by dint of increased strength and the use of steel where cast iron is commonly used that this kind of machinery is made fairly durable. In view of the rough usage it gets, we need not wonder at its ranking among the most expensive as to cost of maintenance. It may also be said to demand a higher order of skill for its successful management than many might suppose it would require.

We have examined a mill that will cut 50,000 feet of lumber per day, which is quite a different thing from one that can only cut from 3,000 to 5,000 feet. As there are fifty perhaps of the latter to one of these larger mills, we will confine what may be said on the subject to the operation of the greater number.

It would be perfectly useless to attempt to harmonize the views of sawyers on many subjects connected with the management of saws, as well as other parts of a mill. Hence we are not in the field as a missionary to change men's ways of thinking, but, if possible, to throw out a hint here and there which may be of value to some.

First, as to power required: Any good engine with saw in fair order will cut about 3,000 feet of one inch boards in ten hours for each ten h.p. developed. That is to say, a thirty h. p. engine will cut 9,000 feet per day, or at least can be made to do so. We are aware this is more than the average performance; in many cases it is nearly double what is done.

It may be interesting to note how much of the time a saw must be idle during each day or hour. For an example, take 400 revolutions for a saw per minute, and a feed of one inch to each revolution, which is a low average for a 15 h. p. engine. At this rate the saw makes 24,000 turns per hour, and allowing that it is only cutting two-thirds of the time, the balance being consumed in backing the log, then we have 16,000″ cut, or the equivalent of 1,333 feet per hour, and in ten hours 13,330 feet board measure, allowing the timber sawed to be twelve inches wide. An average day's work for such a mill may be estimated at about 5,000 feet, so we may see about how much of the time is consumed in turning the logs, putting them on the blocks and, as we sometimes say, pottering around.

The management of the circular saw seems to be the sawyer's shibboleth. Yet he may not have any well defined line of action. For instance, we know of no rule for determining the number of teeth that a circular saw should have. It is generally understood, however, that where coarse feeds are used, say from three to six inches to a revolution of the saw, that the saw teeth may be spaced to about three inches apart, while with small powers and fine feeds, say one-half to two inches, the saw teeth may be as much as six to eight inches apart. Indeed, we have known some cases where these spaces were doubled with apparent advantage. This was where the power was very limited, of course.

It is readily seen that sixteen teeth and one inch feed, thirty-two teeth, with two inch feed, and sixty-four teeth, with four inch feed, will each require power corresponding to their number of teeth, as in each case every tooth cuts chips one-sixteenth of an inch in thickness. But should we use a saw with thirty-two teeth on a feed of one-half inch we find that each tooth cuts but one sixty-fourth of an inch, or what might be considered as mere scraping, and as much power will be consumed, in all probability, in doing this as would be required to cut a chip twice or three times as thick. Hence, we may see there may be a great waste of power by having too many teeth in a saw.

From the foregoing we may reasonably conclude that one tooth to the horse power to be applied would not be far from the proper thing, that is, sixty teeth for sixty h. p., thirty teeth for thirty h. p, and one tooth for one h. p. But, as saw mills never get much below ten h. p., we would not require any one-tooth saws. They have been made, however, with four teeth, and successfully used, we are told. It is needless to say anything about thick or thin saws further than this: When required as thin as ten to twelve gauge, the motion should be both steady and rapid. Both being very hard to secure with limited power, such as small mills usually employ, it is probably best to use heavier saws in such mills.

Perhaps velocity has more to do with making thin saws work well than any other condition. The effect of centrifugal force, which the rapid speed produces on the saw blades, is well understood by saw makers. This, together with the driving strain, take effect principally at the central portion of the saw, and so stretches the steel at this point that it becomes necessary to provide for this change by hammering when in the hands of the saw maker, and by his knowing the velocity at which a saw is to run, he can make the proper allowance for this expansion.

It is well known that heat, so often produced by friction, is one of the most troublesome things the sawyer has to contend against. The derangement of the saw thus produced by unequal expansion cannot be provided for by the maker.

It sometimes happens, however, that a saw may be hammered a little too "tight" at the centre, and then its performance will be improved by becoming warm at this point. It is often a matter of surprise to see how a very little heat will affect the running of a circular saw, the sun's rays being sufficient to unfit it wholly for work. Great damage often comes to a saw by cooling it with water. Those acquainted with the nature of metals know that when heated and allowed to cool gradually, a thing will come much nearer assuming its original shape than it will do if cooled suddenly, so that saw being frequently cooled in this way will soon require re-hammering.

The preventatives against undue friction and heat are too well known to require much comment. Usually, of course, it results from not giving the saw teeth sufficient spread to make a free curf. Sometimes the cause is more remote, and may be traced to improper setting of the mill frame, or carriage. For instance, if the saw-arbor is not perfectly level, the effect will be to spring the saw, as the latter will obviously lop over at the top, toward the carriage, if this end of the arbor is low, and at same time the under half of the saw will spring in the same direction. Just what the effect of all this will be on the cutting qualities of the saw cannot be foretold, but it is safe to say it will not be likely to cut a truly straight line, and therefore will be very apt to rub on the timber and become warm, or possibly hot in spots.

The same effect may be produced by allowing the trackway to get in wind, as it is called, or in other words, out of level.

It is useless, perhaps, to say much about the forms of dress given saw teeth by different sawyers. A diversity of opinion will doubtless always exist on this subject.

There are really but two prominent differences, i. e., that known as the "briar tooth" and the "chisel tooth." The first, of course, must be bent right and left alternately to give proper width to the curf they cut.

One objection to this form is, that these teeth may be sprung back by the pressure of the cut, and another is, that the lumber cut will not be as smooth as when every tooth is made to cut on each side, as is the case with teeth that are spread at the points equally on each side, giving them the form of a chisel. Some combine these two forms in the saw, by following a chisel tooth with two briar teeth, one right and the other left handed, a form which is sometimes employed in hand saws.

Of the several plans named, we believe that of the uniformly swaged tooth, or chisel shape, is the most generally used.

A word with reference to the manner of upsetting the steel to form this tooth, may not be out of place. This should be done with light strokes of the hammer. Heavier ones are liable to shatter and destroy the texture of the steel.—"Quirk," in the Tradesman.

White poplar weighs 33.06 pounds to the cubic foot.

Well-dried locust weighs 45.05 pounds to the cubic foot.

Seasoned dogwood weighs 47.05 pounds to the cubic foot.

LUMBERING METHODS IN CALIFORNIA.

A recent number of Pacific Coast Wood and Iron, published at San Francisco, Cal., contains an interesting article relating to California redwood, and the methods of lumbering as practised by the Usal Redwood Company, of which Mr. Robt. Dollar, once prominently identified with the lumber industry of Canada, is local manager.

The following description of Californian methods will doubtless have an interest for Canadian readers :

"A logging railroad has been constructed from the landing up along the creek for a mile and a half, and is being extended from month to month as needed. Trees growing along the creek and the slopes near by are cut, and the logs handled by a donkey engine, which hauls a cable with much greater speed than the old ox teams, and loaded on the cars to be hauled to the mill.

To reach out into the more distant hills and up the lateral canyons opening into the main one, a large engine, called a "bull donkey," is placed at the mouth of the canyon, and this machine operates three winding drums or cables. First is the main wire cable, about one inch in diameter, which extends from the bull donkey back up the canyon, or over the hills, for a mile and a half. This is pulled out by a smaller cable from the engine passing over a pulley at or near the point desired to be reached by the large cable. A second small cable is also used to enable the large cable to be hauled up a branch canyon if needed. Two telegraph wires run parallel from the engine up the whole route of the cable, and are connected with an electric bell located right in front of the engineer. By touching both wires at once with an iron rod a circuit is established, and signals can be sent from any point on the line. A small donkey engine is located at the point on the route where they are getting logs. This small machine hauls the logs from the place where they are cut to the line of the large cable, and they are coupled together much the same as railroad cars, from 20 to 26 or 30 logs forming a train. This train is hitched to the large cable, and then the field operator with his rod signals the engineer, who answers with his whistle, and the great log-train starts off, pulling the end of the small cable after it. It may strike a snag, but a quick signal stops the engine until all is clear again. The train may break in two, but at a signal the great cable is hauled back and the broken-off part of the train pulled up and coupled again. Once more it starts, and at last pulls up at the logway, by the side of which the logging train stops for its load.

The locomotive on this road is a peculiar one. It has three cylinders, and these instead of turning the driving wheels directly, as is usual, connect with a flexible shaft which runs lengthwise of the engine, and every wheel of the locomotive is a driving wheel, and driven by a pinion on the flexible shaft. Thus the locomotive has great power to climb steep grades and turn sharp curves.

At the mill the loaded cars are pulled one at a time into the room by a winding drum and cable, and the logs pulled to the saw carriage in the same way. The lumber is all sawed with a band saw, the blade six or seven inches wide, which walks through the logs as if they interposed no resistance. The boards after being sawed pass on by automatic machinery, and are all slit into proper widths and cut to proper lengths, with no human assistance beyond a directing hand, and being delivered then on trucks upon an elevated platform, they are lowered to the piles, rather than lifted to them. Where lifting is required, special cranes are provided.

The thick parts of the slabs are sawed into shakes, and almost everything is worked into merchantable shape. All the edgings and pieces are thrown into a yawning hole, and a grinding "craunch" is heard as the "hog" converts them into chips, which conveyors carry along the boiler furnaces, which are thus fired without human labor. All the sawdust and many of the slabs are carried on endless belts to a fire pit near the foot of the hill, where they are consumed. Probably enough fuel is there consumed to supply one-fourth of the city of San Jose.

A monster main engine of 600-horse power is so well balanced and firmly seated that not a tremble can be felt, and there are one or two auxiliary engines besides. Water pipes pass everywhere with such arrangements that the heat of a burning shaving would at once let loose a sprinkler with a rush of water under 145 pounds pressure. Steam does all the lifting and tugging, pulling and hauling. Keen-eyed and skillful men direct the whole, and although the mill does not run at night, one band saw cuts from fifty to sixty thousand feet of lumber every day. The mill is arranged for another band saw, and a dynamo and arrangements for electric lights are now being put in, so that four times this output will be possible.

Vessels lie just outside the elevated wharf, and are loaded by means of a "traveller" on a tightly-stretched wire cable, a donkey engine furnishing the power."

Fig. 1.—Sectional View of Lumber Conveyor.

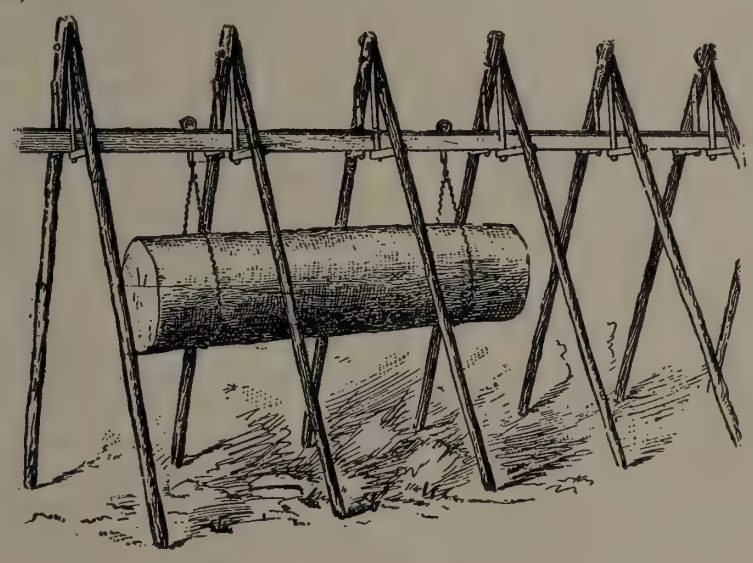

Fig. 2.—Log in Right Position on Conveyor on Way to Mill.

System of Conveying Logs to the Mill.

METHOD OF CONVEYING LOGS.

From a correspondent of Lumber, New York, we obtain the following particulars and illustrations of a system of conveying logs to the mill in operation in California :

The distance from the Blackstone Mill in Mendocino county, Cal., to the logging camp is about 10 miles, being, as is usually the case, through a pretty rough country, where it would be difficult and expensive to build a railroad. The route is mostly along the bed of a creek. At distances of 10 feet apart each were placed inverted Vs made of two saplings about 12 inches in diameter and 30 feet long, as illustrated in Fig. 1. From this is suspended a track as shown in illustration, A being the hanger, B the cross piece, both of 3x8 pine, let into the uprights and into each other, and bolted together. C is the support for the rail, being 4x12 pine. By "pine" in this connection is understood the tough fir, called also Oregon pine. On this is placed a 40-pound T rail. A traveller runs on this, consisting of a flanged wheel, from which is suspended the log. At the loading place in the woods is a platform which is raised and lowered by a simple arrangement. The log is rolled on this and raised sufficiently to clear the ground on its passage, then suspended by chains to the travellers, two of the latter being used for each log, and the platform lowered. By a simple grip the traveller is connected to an endless wire cable, which moves about five miles an hour, and started on its journey to the mill. The position of the log is shown in Fig. 2. At the landing place there is a similar platform, over which the log is stopped by loosening the grip, the platform raised, the chains removed, and the log rolled into the mill pond. The chains are hung on the travellers, which have been placed on the return track D, and the grip being attached, they are carried back to the camp. Small articles of freight are sent up to the camp on these return travellers. There are three telephones along the line, one at each end and one in the middle, in case of accidents. The power is furnished by the mill, through which the cable passes ; but, as the grade tends downward from the woods to the mill, this is not called upon to any extent. Some of the logs are 10 feet in diameter and of immense weight, but the system works perfectly.

Japan is said to have a forestry law that compels the planting of two trees for every one cut, thereby keeping intact the forests.

"I have often wondered what became of the old-style bicycles," remarked a wheelman. "I discovered the other day what had become of one of them. During a ride down in Jersey I came across a saw-mill in the woods. To my astonishment and amusement I found that the motive power for the mill was supplied by a young man and one of the big-wheeled bicycles that were in vogue before the safeties appeared. The bicycle was suspended from the ceiling and connected with the mill machinery by a belt. The young man sat upon the seat of the wheel and worked the pedals with his feet, and in this way kept the saw in motion for hours at a time.—Exchange.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS AND MILLERS' GAZETTE

MONTHLY AND WEEKLY EDITIONS

C. H. MORTIMER
PUBLISHER
CONFEDERATION LIFE BUILDING, TORONTO

BRANCH OFFICE:
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THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the tr[illegible]. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

TO VISITING LUMBERMEN.

Lumbermen visiting Toronto are invited to use the office of the CANADA LUMBERMAN as their own. We shall take pleasure in supplying them with every convenience for receiving and answering their correspondence, and hold ourselves at their service in any other way they may desire.

THE MANUFACTURE OF VENEERS.

IN a recent number of the Canadian Gazette, of London, the statement is made that British capital might find profitable employment in Canada in the manufacture of veneers and cut stock. "There are in Ontario," says the Gazette, "considerable areas of suitable timber for both 'slicing' and 'rotary-cut' veneering —such as maple (four varieties), birch (three varieties), oak (three varieties), elm (three varieties), beech, sycamore, basswood, ash, balm and whitewood—adjacent to a line of railway, so as to be convenient for shipping. The most improved machinery for this class of work can be obtained in Canada; and the veneering or cut stock, properly dried, cut to size and carefully bundled, can be shipped to Great Britain and made into furniture, house decoration, packing boxes, nail kegs, barrels, butter tubs, and an almost infinite number of lesser although by no means small or unimportant lines of goods. A great deal of attention and study has been given this veneer industry, and its development and its extension from one line of manufactured goods to another—such as pianos, organs, sewing machines, etc.—have been such that at this present time large lines that were formerly manufactured of solid material are now 'built up,' so as to be cheaper, more durable and substantial, and much lighter; and many other lines of industry are moving into the using of veneer for constructive material. A trade could, it is believed, be built up reaching into millions per annum; and as the industries provided for are increasing daily necessities, so the business would increase from year to year. The capital for the industry on a large scale, however, would have to come from England."

Several Canadian papers have recently published articles on this subject, echoing the opinions expressed by the Gazette. As the result of enquiries in various quarters, we are inclined to think that the prospects for a Canadian veneer manufacturing industry are scarcely so promising as they have been pictured. In order that our readers may be in a position to judge for themselves on this point, we submit for their consideration a few particulars bearing upon the subject.

First, as to the supply of native woods suitable for furniture veneers—we have only maple, birch and cherry—our oak is unsuitable for this purpose, and our walnut practically extinct. We would therefore be dependent upon foreign countries to a larger extent than the United States for our raw material.

As to the extent of the market for the manufactured product, we have in Canada about one hundred furniture factories, not more than twenty-five of which use veneers, as the majority make only the cheaper grades of stock. We have, perhaps, twenty piano and organ manufactories, which consume a considerable quantity of veneers of the finer grades, such as could not be made from native material. We have also a limited number of casket factories which employ veneer. It is doubtful if from all these sources a sufficient demand would come to keep a single mill of fair capacity running six months in the year. It would be too much to expect that a local mill would succeed in capturing all the home trade. Indeed a well-known piano manufacturer informed the writer that if a mill were established his firm would not think of placing all their orders with it, as they would thereby be depriving themselves of the variety of stock which they now enjoy. There has likewise to be taken into account the fact that Canadian users of furniture veneers are at present supplied from American mills under a tariff of only 10 per cent. Unless a higher rate of duty than this were imposed, the Canadian manufacturer would find it a difficult matter to supplant American goods in the home market. What are the prospects outside the home market? A high tariff and the natural advantages enjoyed by the American manufacturer shuts out the possibility of finding a market in the United States. How is it with Great Britain? Her next-door neighbor, France, is the largest and most skilful producer of veneers in the world. To France, therefore, the British and German manufacturer goes to buy the finer grades of veneers, such as are not manufactured in his own country. There is demand in Great Britain for maple veneer which possibly Canada might hope to supply.

In view of the above facts, there would seem to be no satisfactory opening in Canada for manufacturing furniture veneers. On the other hand, there does seem to exist the opportunity for profitable enterprise in the manufacture of the rougher grades of veneer, such as are used for cheese boxes, butter tubs, fruit baskets, etc. The market for goods of this class has wonderfully developed during the last decade, and is still growing. These goods are principally made of maple and elm, with which material we are abundantly supplied. As these goods are cut from steamed logs, the mill would require to be located at some central point, where cheap labor would be available, and where the veneer could be made at once into the finished article. In this way the great waste which would result from warping and cracking in the event of the veneer being shipped abroad, would be avoided.

We shall welcome any further information on this or any other subject bearing on new openings for enterprise in connection with the profitable disposal of our forest products.

QUEBEC AS A SHIPPING PORT.

THE evolution which has taken place within the past few years in connection with the lumber business is greater than would appear at first glance. The methods in vogue a few years ago have given place to those in keeping with modern developments. While these changes have been in the interest of commerce at large, disaster has sometimes resulted to some particular section or industry. Take, for instance, the city of Quebec, which in earlier years was the principal shipping centre for the timber products of the province and much of the deal trade of the Ottawa valley. In those days the timber in log form was taken to Quebec by the lakes and rivers for sawing, but the logs are now cut into deals and lumber in the vicinity in which they are obtained and the product shipped by rail. Consequently Montreal, being easily accessible by rail, has secured a large portion of the lumber trade of the Ottawa valley, and Quebec has lost much of its old-time prestige as a shipping port.

Further, it was thought that Quebec would be enabled to hold the square timber trade, even if losing the lumber shipping industry, but within the past two years large quantities of square timber have been shipped to Montreal by rail, to be loaded on the steamships for Europe. It is stated that even waney pine timber from points on the United States side of Lake Superior, 1,200 miles distant, is finding its way to Montreal in no small quantities.

The port of Quebec can only retain a fair proportion of the timber shipping trade by reaching out to meet the requirements of the times, and in this connection Messrs. Dobell and Sharples, two of the largest lumber merchants, have pointed out that it is necessary to improve the railway facilities with the lumber districts. The construction of the Parry Sound Railway would give direct communication with the mills of the Ottawa valley and with the timber districts of Parry Sound. An instance of the advantages of such communication is shown by the Lake St. John Railway, which carries a large portion of the trade of Quebec.

The Harbor Commissioners of Montreal have provided, at a large expenditure, ample accommodation for vessels. The announcement has just been made of a reduction of 20 per cent. on harbor dues, to take effect as soon as the necessary by-law receives the sanction of the Lieutenant-Governor. This step is of importance to all having to do with the commerce of the city, and will certainly prove beneficial to the St. Lawrence route, in competing for the carrying trade.

EDITORIAL NOTES.

SOME United States companies are said to have secured orders within the last six months for complete saw-mill outfits for Japan, to be used in the manufacture of boxes. In view of the feeling which is said to exist in Japan in favor of trading with Canada, and of the fact that Japan has vast timber lands, Canadian machinery manufacturers should take steps to secure a portion of this trade.

THE practice indulged in by some lumber manufacturers of labelling cars with the name of the shipping firm is receiving some condemnation at the hands of wholesale dealers. By this means the wholesaler's customer becomes acquainted with the mill man from whom the stock is obtained, and in placing future orders he will probably transact the business direct with the mill man, thereby shutting out the wholesale dealer who had been the means of securing the trade, and who is justly entitled to any benefits to be derived therefrom.

A SUBSIDY of $50,000 has been granted by the Dominion Government towards establishing a fortnightly steamship service between Canada and France, the Canadian ports being Montreal in summer and St. John, N. B., and Halifax in winter. There is already a prospect of considerable business between these countries as a result of the new French treaty. The exports of lumber from Canada have increased, and with the additional facilities provided by a steamship service as above stated, there is reason to anticipate closer trade relations and more satisfactory returns to shippers.

THE lack of cleanliness around lumber camps is a matter to which Mr. John Simpson, superintendent of Algonquin park, draws attention in his annual report to the Commissioner of Crown Lands. The interior of the camps, he says, is left in complete chaos with old clothes, boots, straw, etc. Last spring an attempt at clearing one of the camps was made, but the filth was merely taken and dumped behind a rocky bluff at the back of headquarters. The question is one, we believe, to which too little attention has been given in the past, affecting as it does the health of workmen employed in the woods. Outbreaks of typhoid fever in lumber camps are quite frequent, largely the result, no doubt, of disregard of necessary sanitary precautions. Employers and employees alike should feel an interest in this matter, and it is hoped steps will be taken to effect an improvement along this line in the future.

IT is a matter of regret that the past month has witnessed the destruction by fire of several large saw mills in Ontario, entailing a loss of upwards of $200,000. While in most cases the loss is largely, if not altogether, covered by insurance, the inconvenience caused is of considerable moment to the companies interested, who had completed arrangements for the season's trade and had recently commenced sawing operations. In the case of the Hawkesbury Lumber Company, who suffered the loss of three mills, the difficulty will be overcome by running the three remaining mills day and night for the balance of the season. The Imperial Lumber Company will take immediate steps to rebuild their mill at Warren, while a decision has not yet been reached by the Katrine Lumber Company regarding the reconstruction of their mill. It is hoped that the owners will not be seriously handicapped by the unfortunate occurrences.

CHANGE OF LOCATION.

FROM every side expressions of regret are heard that the wholesale lumber firm of Donogh & Oliver have resolved upon taking their departure from Toronto. Their new location will be North Tonawanda, N. Y., where they have leased the docks and yard of A. M. Dodge & Co., and will continue business under the style of the Donogh & Oliver Company. The change is simply the removal of their main office, now in the Board of Trade Building, to Tonawanda, as the office at the Northern docks in Toronto will be maintained. By this arrangement the members of the firm will be enabled to give their personal attention to their extensive hardwood trade in the east, while their western connection will not suffer by the removal. Their Buffalo yard was sold some time since to the Arthur Hill Company, of Midland.

The loss sustained by the removal from Toronto of such well-known dealers is keenly felt by the trade. During the many years of their business life in Toronto, the members of the firm have always been recognized as honorable and reliable in all dealings, and this has secured for them an extensive connection. The LUMBERMAN wishes them success in their new field.

LUMBER ADVERTISING.

To advertise or not to advertise—that's the question. We shall, of course, maintain that it is a dividend-paying investment. You may not agree with this, and may, perhaps, think the motive which prompts the affirmative of the argument is a selfish or mercenary one; but we shall immediately interpose an objection to the negative of the question on the ground that disbelievers pay but little or no attention to the details of the business, and assume that because buyers do not come flocking after their goods, immediately after inserting an ad in a lumber journal, that advertising is a "dead horse," and are, consequently, not qualified to judge of its true merits.

There is a right way and a wrong way to advertise, and the right way is what we shall, in a few words, consider.

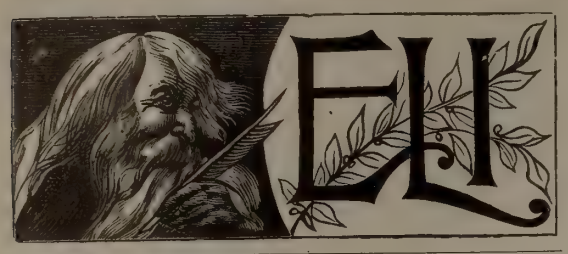
Every ailment demands a specific remedy, whether it be disease or bad trade. If you are sick, and call in the doctor, he doesn't simply prescribe medicine; but, after a thorough diagnosis of your trouble, he decides what is the nature of your ailment, and orders a certain remedy to fit the case. Just so with advertising. If trade is dull, it will hardly be of much value to simply advertise your name and business—that's too general. If you demand specific results from your advertising, you have got to say something specific. For instance, here, you're a lumber dealer; your running an ad in a lumber journal, but nobody seems to write you, asking for several car loads of lumber, and remarking that they know you're in the lumber business because they saw your name in the paper. The result is, after awhile you begin to think advertising don't pay just because buyers don't keep telling you that they read your ads every week. If you wish to be reminded of the fact that your ads are read, just put out a "feeler" in the shape of something the market is short on, and inform buyers that you have the article demanded, for sale, at a bargain, perhaps. You need hardly expect a department-store bargain-counter rush, but the chances are that you will be convinced, in a substantial manner, that people do read ads. If you have a particularly fine lot of piece stuff, say so in your ad, give the dimensions and the amount you have to offer, and if there is anything in the way of "inducement," let your ad tell it to prospective buyers. If there is any reason why it should be taken in preference to any of the thousand-and-one other stocks of piece stuff, tell what that reason is. If you're long on something which the market is short on, there's just the opportunity you're looking for; advertise the fact; tell it with a loud voice; let the people know it. Somebody, from somewhere, will want to know more about it, and will write you. Then—well! then it's your business to sell it. Don't depend on your ad to sell goods. It only gets you into communication with buyers. Suppose to-day you have half a million feet of 6-inch No. 2 fencing, 16-foot lengths, don't it seem reasonable to expect that, under present market conditions, it would be easier to interest buyers in 16-foot boards than it would be to get them to read a lot of stuff about ceiling, siding and finish, or high grades, lowest prices and prompt shipments? Certainly it would.

Change your ad to fit the markets, if you want the best results. The market is usually up or down on certain grades, giving opportunities to spring its "short" features to good advantage in your ad.

Lumber stocks throughout a certain territory are to a greater or less extent alike, and it's a little difficult, sometimes, to find "features" in the different stocks to attract buyers from all of the other stocks to your particular stock, but if you can name no reason which will conserve their interests in coming your way, how can you expect that they are going to single you out from the whole lot of manufacturers as the possessor of the best advantages? No! You can't expect it. You'll just simply have to take your chances with the rest, and miss a good many sales which you could coax your way by offering as a specialty some particular grade of stock which you very well know the market demands.

When the advertising solicitor comes around and expatiates on the benificent effects of advertising, he uses his best argument to sell his space. Do you buy it just to please him, or do you really expect it will profit you? If the latter, then why not give it a fair show to prove its meritorious qualities? Your salesman can't sell lumber by simply calling on the retailer, telling him he represents so-and-so, and asking him what he wants He's got to do some talking, use some argument; and usually, a good deal of it too. Then how do you expect an ad, which only says you have a big stock of everything, is going to breed results?

When you try to talk the dollars out of a man's pocket, whether by salesman or advertisement, you've got to get right down to business, and use the hottest arguments you can command. High grades, low prices and prompt shipments won't do. Everybody claims that, and it seems like a sort of tail piece, just fired on to finish up every ad written, and has no specific value. If you demand specific results for your advertising, make specific offers and make them every week. —Mississippi Valley Lumberman.



WHO thought for a moment, when the wooden rim for bicycles was in its experimental stage, that the lumber trade would ever be affected by its adoption. Yet the bicycle has become so general that no small quantity of rock elm and maple is required in the manufacture of rims, and I know one dealer in particular who is supplying large quantities of such stock for this special purpose, and I have reason to believe that he is realizing a snug little sum thereby.

* * *

MR. DAVID MCLAREN, a leading lumber merchant of Ottawa, who spent the greater part of last winter in England, states that the outlook for the lumber trade across the Atlantic is good. Stocks are lighter than usual at this season, and the demand excellent, with prospects of a continued good consumptive demand. There appears to be a better feeling over there, that manifests itself in increased business generally. Mr. McLaren states that he found a very strong feeling in London in favor of drawing the mother country and her colonies closer together. The expression of loyalty by the colonies during the recent war scare made a strong impression.

* * *

"LUMBER is just now in a transition state," said a keen observer of lumber matters with whom I conversed recently. "A few years ago," he added, "quality was subordinate to quantity, and the mill man endeavored to cut as large a stock as possible with little regard to efficiency. But times are changing, and where a manufacturer formerly cut six or seven million feet, probably nearly all of one length, the wise mill man now prefers to have one million feet, which he cuts to special lengths and sizes to meet the requirements of the market. I must admit, however, that Canadian mill men have been somewhat slow in realizing the necessity for this change, and many of them have not yet learned the advantages to be derived from greater care in the manufacture of stock. In this respect the manufacturer in England is entirely different. There everything is sawed to special lengths. Just to give you an instance of what is required by the English market, at one time a gentleman was taking out a quantity of stock in the Georgian Bay district for that market, and all strips over three feet in length were cut to half-foot sizes and tied up in bundles of 25 each. Of course he got a good price, and could afford to take the trouble. Another point which I might point out," said my informant, "is the necessity for sawing off cull ends of boards. If a board has, say, two feet of cull lumber on the end, it should be sawed off, as the customer to whom it is shipped is obliged to pay freight thereon, while the lumber is of no value whatever. Manufacturers are also experiencing an increasing demand for thin stock, and few have apparatus to manufacture it. When it comes down to ⅞ inch, it requires a very rigid saw frame to prevent springing."

MR. C. M. Beecher, of Vancouver, B. C., and one of the leading lumber dealers of the Pacific Coast, visited the eastern provinces last month. Mr. Beecher is a nephew of the late Rev. Henry Ward Beecher. Interviewed by a representative of the press, Mr. Beecher remarked that when he left home no less than fifteen ocean-going vessels were lying in the harbor of Vancouver, loading cargoes of lumber and other western products for foreign ports. "A cable," said he, "from Vancouver to Australia and the Orient would give a wonderful impetus to the lumber trade, as the British Columbia dealers would then be in a position to communicate daily, at a comparatively low rate, with the island continent, and both countries would no doubt be very largely benefitted. I am a firm believer in preferential trade between the colonies themselves as well as with Great Britain. I believe that were such a policy as that outlined by Sir Charles Tupper, now Prime Minister of Canada, carried into effect, that the progress of the Dominion of Canada during the next decade would be far ahead of any material advancement made in the United States during the last fifty years. I have no hesitation in saying that if Australia were to impose a duty of one dollar per thousand on lumber produced outside the colonies, it would start every saw mill in the province of British Columbia, and give new life to the whole of Western Canada; where we now ship fifteen million feet, our yearly export would go to forty million at a single bound, and I need not tell you what this would mean to all branches of trade on the Pacific Coast." Mr. Beecher stated that his firm sell lumber all the way from the Atlantic to the Pacific, three million feet going yearly to one town in Nova Scotia alone. They also purchase machinery from Nova Scotia, which goes to show that interprovincial trade is steadily on the increase.

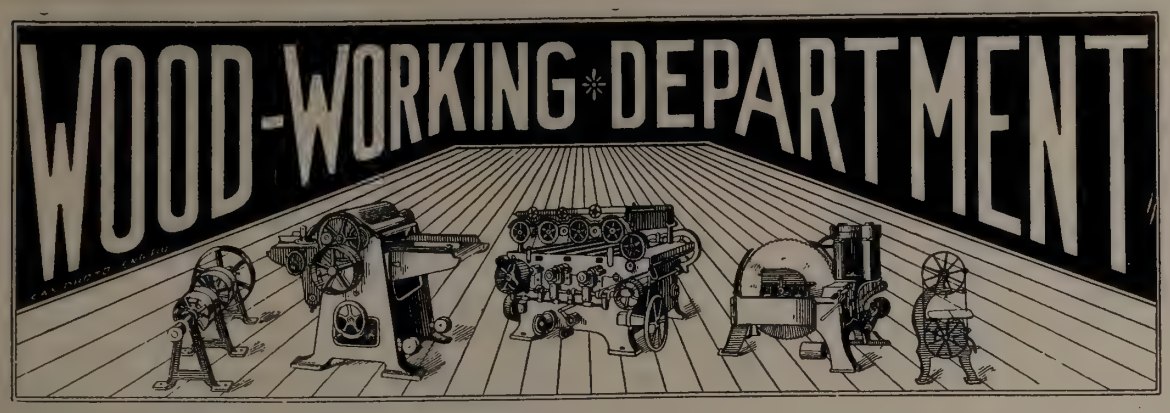
* * *

WHEN I met Mr. John Gray, lumber merchant, of Toronto, he had just returned from the Nipissing district. He informed me that the water in the rivers in that section was as low as is usual in July, and prospects were not very bright for getting the logs out. While admitting that it was rather discouraging to lumbermen to have their logs hung up after getting them out of the woods, Mr. Gray remarked that ultimately it would be a benefit to the trade. "Some of the mills," he remarked, have large stocks of old lumber on hand, and in some cases the cut of '94, which I think will shortly require to be repiled, is still at the mills. The trade is very quiet at present, the great trouble being with the lower grades of pine. No. 1 cuts are always marketable, as I believe there is nothing to take the place of white pine for certain purposes. On a recent visit to Philadelphia I found I could sell all the No. 1 grade I could send along, but when it came to culls, spruce and hemlock were being used largely instead. Lumbermen made a great mistake in cutting their limits. Some years ago they went through them and cut all the best pine, leaving the cull trees, and now when the lower grade lumber is manufactured, there is little or no demand. Had they reversed the order of things they would have been millionaires to-day." Mr. Gray is also interested in timber limits, and took occasion to remark upon the low price at which spruce limits could be obtained. A gentleman who had recently been offered the option of the purchase of a limit in New Brunswick, estimated that at the price at which the limit was offered, the lumber could be laid down in New York at $6 per thousand. "And," he added, "there is a considerable advantage in manufacturing spruce deals for the English market, as any cull stock can be utilized in the manufacture of pulp."

* * *

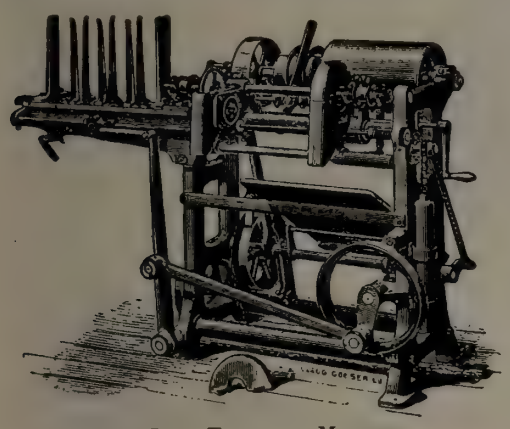
A GENTLEMAN from the west with whom I had the pleasure of an interesting chat recently, was Mr. Wm. Margach, Crown Timber Agent for the Rainy River district, whose headquarters are at Rat Portage. Of the future prosperity of the western country no one is more sanguine than Mr. Margach, and no one, perhaps, is better acquainted with its resources. "The lumbermen of the west," said he, "have experienced a better demand for lumber since the beginning of the year than for the past three or four years, and as our market is entirely in Canada and depends largely on the grain production of the North-west, present indications point to a good year. You are, of course, familiar with the Government system of granting timber licenses. Lumber operators employ scalers to measure the logs after being cut, their measurement being checked by Government officials. It is my duty to see that proper returns are made to the Government. The boundaries of my district are the Ontario boundary line on the west, the United States boundary line on the south, the line between Thunder Bay district and Rainy River on the east, and James Bay on the north. The distance is about 200 miles from east to west, and between 100 and 150 miles from north to south. The timber is pine, spruce and tamarac. In the valley of the Rainy River, which is 80 miles in length, there are to be found immense quantities of spruce. I am quite familiar with the greater part of Ontario, and from my knowledge I believe there is more spruce timber in the Rainy River valley than in all the rest of Ontario. The country offers the best of facilities for the manufacture of pulp, spruce being a natural product of the flat lands, which are about half covered with water, and which means that many water powers are available. There are large rivers, such as the Kaministiqua, the Wabigon and the Eagle, while at the Lake of the Woods the Keewatin Power Company have expended upwards of one million dollars in developing the water power. At Sault Ste Marie, where the finest pulp mill in Ontario has been erected, there are considerable quantities of spruce, but it is only a matter of a little time until it becomes exhausted, and thereafter the Rainy River valley must furnish the supply. The spruce industry is only in its infancy, and the next few years will witness great developments in connection with the utilization of this wood." Mr. Margach remarked that the output of logs in his territory during the past winter had been quite large, in fact considerably in excess of the previous winter. Mining operations, he said, were also quite active, and were resulting in the consumption of no small quantity of lumber.

Canada exports several million dollars' worth more lumber to the United States each year than to Great Britain. The value of Canada's forest products is about $80,000,000 per annum, of which nearly 70 per cent. goes into local consumption.



AUTOMATIC BLIND SLAT TENONING MACHINE.

This machine is automatic, the work to be finished being simply placed in the hopper. The machine, taking each slat in turn separately, cuts it to accurate length, and cutting away the surplus wood leaves a small round smooth tenon at each end. This finished slat is thrown from the front, where it may be caught in a box or basket, while another slat takes its place and is operated on in the same manner. The waste cuttings, which vary in length, are caught on the incline and carried to the back of the machine, where they may be disposed of. The sawdust is caught and controlled for disposal by the hoods,



BLIND SLAT TENONING MACHINE.

which completely cover the saws. The operator sorts and piles the slats in the hopper and the machine finishes them at the rate of 2,500 per hour. The method employed and the construction of the machine insure a large amount of perfect work. The slats are of an accurate length and the tenons round and true.

THE DANGERS OF BELTING.

PROBABLY few persons, whether mechanics or not, realize how many accidents occur in connection with belting, and how many of these accidents are fatal, says the American Machinist. With a full appreciation of the dangers of steam boilers, circular saws, cheap elevators and similar terrors of the mechanical world, the belt seems to be able to hold its own with any of them as an agent of destruction.

As belts are in use wherever machinery turns, so the accidents caused by them are distributed over the whole land, and no complete record of them is ever compiled, no comprehensive view of their malignant work is ever obtained by any individual; but, wherever one may live, he will find the local press occasionally telling of one of these casualties, usually with horrifying details of whirling limbs and scattered brains.

These belting accidents are, as a rule, usually the result of carelessness or ignorance, the latter case too often meaning the carelessness of another who has permitted the ignorant exposure. After nearly every accident it might be truthfully remarked that it need not have occurred, and that it would not have occurred, if everything had been all right, and if someone had not done wrong.

Belting accidents do not occur where belts are running steadily and where they are left alone. They never chase their victims, but they do sometimes suggest the existence of some power of fascination to draw the innocent toward them. When a belt breaks while running, it usually simply drops down in a heap on the floor, although occasionally it winds around the running shaft and catches a victim in its coils as it goes.

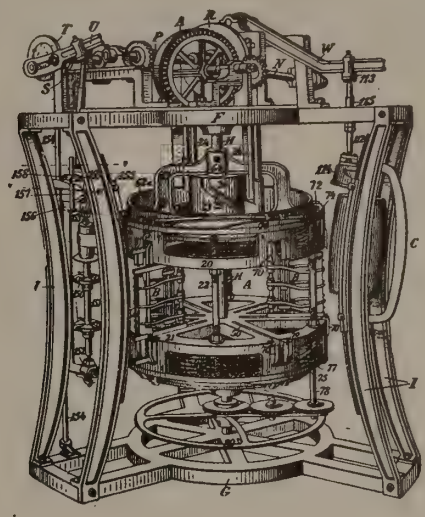
When a belt is being thrown onto a pulley on a running shaft, when it is thrown off a running pulley, when it is dangling from a running shaft in the process of relacing or repairing—these are all times of danger. The responsibility for the events that occur is to be divided between the belt itself, burrs and rough spots upon the shaft, projecting set-screw heads, notches in the edge of pulleys, slipping ladders, loose clothing of workmen, and other particulars all more or less wrong in themselves.

It is idle to think that the handling of belts in connection with running shafting can ever be stopped, any more than the starting of kitchen fires with kerosene can be stopped; but much may be done to make the practice less frequent, and to make it, when necessary, as safe as possible. It is very remarkable that, with the great quantity of belting employed in every industrial establishment, it is so rare to find any man whose business it is to look after the belts and see that they are always in order, and if repairs, taking up or other adjustment is necessary, to do it at times when the shafting is stopped. If belts are large enough to do their work without overstraining, the giving out and the handling of them during running hours would seem to demand an explanation.

Hiram Goo and D. B. Hoppins, of Delevan, N. Y., have patented a box nailing machine, comprising a carriage mounted to slide longitudinally, a rotary work holding device normally forward of the carriage, a tacking device on said carriage, and comprising mechanism for driving tacks in the overlapped ends of the hoop on the work-holding device, mechanism having connection with the tacking device for imparting a step-by-step motion to the carriage, mechanism for rotating the work-holder, and a nailing mechanism comprising a plunger and nail guides or chutes for nailing the work after the tacking operation and arranged to drive nails in a line at right angles to the line of tacks.

RECENT WOOD-WORKING PATENTS.

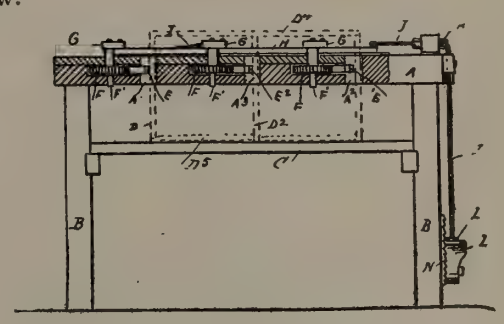
PATENTS for wood-working machinery have been granted in Canada as follows:



MACHINE FOR MAKING STAVES.

Patentee: John O. Storwick, Christiansund, Norway, granted 5th March, 1896; 6 years.

Claim.—In a machine for making staves for casks, barrels, and the like, the combination with means for holding the wood blocks out of which the staves are cut, and a rotatable support or carrier for a number of such holders, of tools arranged around the said rotatable carrier and consisting of a hollow saw, a shaft carrying tools for crozing and cutting and bevelling off the ends of the staves, and a jointing device, said three sets of tools acting simultaneously upon three different wood blocks, and said carrier making one-third of a revolution each working period of said tools. In the combination with a rotatable carrier for the wood blocks of a barrel-formed saw for cutting staves out of the blocks, said saw being keyed to a shaft that has its bearings on a carriage which works up and down on curved guides, so that the cutting section of the saw during the movement of the carriage describes an arch which is a continuation of the curve representing the longitudinal shape of the saw.



BOX MAKING MACHINE.

Patentee: Abner Carey, Cairo, Illinois, U. S., granted 17th March, 1896; 6 years.

Claim.—In a box making machine, comprising a top plate having transverse slots, and clamping bars held movably in the said top plate, to clamp the parts of the box in place, and a table arranged below the said top plate, for supporting the lower ends of parts of the box previous to being clamped by the said clamping bars, with means substantially as described, for simultaneously moving the said clamping bars into and out of contact with the parts of the box to be held in position.

The strength of wood increases with its density.

A cubic foot of the best cedar weighs 32 lbs. green and 28 pounds dry.

NEW MACHINERY WORKS.

THE new and commodious premises of the A. R. Williams Machinery Co., Toronto, which are just being completed, are probably the most complete works of their class in the Dominion. The new building has a frontage 73 feet on Front street, and extends back a distance of 150 feet, being built on the north end of the same lot as originally occupied by the Soho works at the south end. It consists of five floors, the first or ground floor being on a level with the Esplanade, and the next floor on a level with Front street. The structure is substantially built of pressed brick. The offices on Front street will be convenient and commodious, and much more accessible to the public than the quarters formerly occupied by the company.

We understand the ground floor of the Esplanade property will be converted wholly into workshops, thus giving a very important enlargement to this department. The second floor will be extended this summer to cover the whole of the old property, and will be connected with the Front street store.

The business of this company has been greatly hampered for want of sufficient space, but with the present accommodation this difficulty will be overcome, and they will be enabled to classify their machinery upon the departmental principle.

The first and most important department will be found on the Front street floor, and will cover the company's large output of iron working tools and machinery, consisting of the produce of their London tool works and other establishments whose output they control in this line, including lathes, planers, drilling and milling machines, shapers, gear cutters, etc.

Another department will consist of cutting and drawing presses of all descriptions, their variety in this line covering the greater portion of the Bliss and Styles designs as built by the E. W. Bliss Co., of New York.

The bicycle machinery emporium will constitute another important feature, consisting of tools and other special bicycle machinery, including the "Cowdrey" machines for making wood rims, automatic screwing machines, lathes, shapers, friction drilling machines, etc.

One large department of their business will be occupied by planing mill and furniture factory machines of all descriptions, both new and second hand, while in the basement of the building on the Esplanade level will be located the engine and boiler department, or what might be termed "power department," including water wheels, electric motors, boilers and engines of all descriptions—marine, stationary, upright, and portable.

The machinery supply room will occupy the west side of the Front street floor. This department has grown to large proportions, and covers everything necessary in a machine shop, planing mill, furniture factory—in fact, all sorts of factories and factory supplies.

The saw mill department will occupy the next floor off Front street, and will cover all classes of saw mill machinery of the latest and most approved designs. The shingle mill machinery will be located in a portion of the same floor, and will cover the new "Boss" shingle machines, jointers, drag sawing machines, and everything necessary to equip completely a first-class shingle mill.

Contractors' plant will constitute another branch, consisting of stone breakers, rock drills, boilers for same, hoisting engines of all descriptions, with or without boilers, pulsometers, etc.

The pump department will be situated in a portion of the second floor, and will cover their line of duplex Worthington pattern steam pumps, with rotary pumps, pulsometers, etc.

The brass working machinery will be another special feature, and will cover all the latest improved designs, both American and Canadian.

Shafting, hangers, and wood-split pulleys will constitute another large line; while the belting department, covering the best Canadian and Scotch belting, must not be overlooked.

This company are the representatives of the Cleveland Twist Drill Co., and in this department of their business they count among their customers the leading manufacturers of Canada.

The above are some of the leading features, but do not by any means exhaust the list, as this company are prepared to supply machinery for all purposes. Their stock at Toronto, Montreal, Brantford, and London is very complete. The Montreal warehouses are located at 345 and 347 St. James street, and are finely equipped. They are under the able management of Mr. F. C. Wilson. The Brantford branch is located at 193 Colborne street, and under the management of Mr. Robert Kerr, is doing well; while the London Machine Tool Co., at London, under the mechanical superintendence of Mr. William Yates, is kept busy in working upon ordered tools.

This company is thoroughly Canadian in its composition and impulses, and although representing a few leading American firms in lines that are not manufactured in Canada, they are steadily encouraging the production of new goods from American and other first-class designs in Canada, and by Canadian mechanics. In fact, it appears to be their motto to have everything that it is possible to have produced in our own country, as they thoroughly believe it to be our patriotic duty to maintain for Canadians the Canadian market; especially as it is clearly evident to every observer that the American market is not to be opened to Canadian products, especially in the manufactured or partially manufactured lines.

On the whole, we believe this to be one of the most thoroughly equipped machinery establishments in the Dominion or the United States, as they claim to occupy more floor space and cover a greater line of machinery than any other existing concern.

NEW WORKS OF THE A. R. WILLIAMS MACHINERY CO., TORONTO.

NOVA SCOTIA NOTES.

[Correspondence of the CANADA LUMBERMAN.]

THE bright prospects for getting logs down the streams have not been realized in many cases, as the snow gradually melted, with no rain, which is very unusual in this province. Consequently there has not been the usual spring freshet to enable the operators to stream drive, thus holding back a great deal of lumber. Water mills are already feeling the effect of a short supply of water to saw even what logs were gotten to the mills.

The prices for all lumber in the English, American, and other markets have held up well, and the millmen not being able to get out their logs and saw them will feel that it is a serious loss to them. As the lumber gets scarcer the loggers naturally have to go up the smaller branches of the rivers, and these are the places where the logs are stopped in most cases. Some of the larger mills have a small supply of logs at the mills and a reserve, so that they can be obtained with an ordinary spring rain. The farmers are also feeling the need of rain, and unless some comes soon farming operations will be at a stand-still.

In my last notes I gave you a pretty full account of the mills on the south shore as far as Liverpool. Continuing along westward, we find T. G. Nicol operating at Mitchell Brook. He has about a million feet, which is to be sawn by a portable mill—a new departure in this section, there being only three steam mills in about one hundred and twenty miles, or from Bridgewater to Tusket. Mr. Nicol has his lumber sawn principally for the South American and American markets, shipping direct from Port Joli, about one mile from the mill. He is also interested in and the manager of the Gold River Lumber Co., Gold River, an account of whose operations I gave in the April number.

At Granite Village, three miles further west, Mr. Frank G. Nicol has a water power circular saw mill. His cut this year will be about six hundred thousand feet, also for the South American and American markets.

H. W. Freeman, Jordan River, has a water power gang and circular saw mill, with shingle machine, lath machine, and planers for finishing lumber ready for any market. He is getting out a lot of hemlock boards for the American market this season, besides spruce, which he saws into English deals. Mr. Freeman finds that the deal market is the most reliable in price, while the logs cut to best advantage with the least trouble. He will take out about two million feet of spruce and one million of hemlock and pine. The water power at Jordan River is a very fine and strong power, and no doubt will be utilized eventually for manufacturing pulp. Mr. Freeman lives at Shelburne, seven miles distant, and has telephones in his office and house which he finds a wonderful convenience. I must diverge a little to say that the telephone system of the Yarmouth & Queens County Telephone Co. is a great success for the business men, in fact for all classes of the community, which is shown by the fact of it being a paying institution. Shelburne is the next town on the way west, and is a town with a history which would take more space than can be given here to do it justice, or to state the facts, some of which probably have tradition for their basis. It is one of the oldest, if not the oldest, towns of what may be called "British Nova Scotia." The harbor was considered suitable for the British Navy, and was occupied by it for some time. The expectation of the residents of the town was that it would be made headquarters of the British forces in North America; in fact, the land for a mile or so was laid off into blocks with streets that are to be yet seen fenced, graded, and crossing each other at right angles, only wanting houses to make a town. If these expectations had been realized, Shelburne would have been, considering its situation as to harbor and surrounding country, the prettiest town in North America; but their hopes were dispelled when the change was made to Halifax, tradition says through the personal pique of one of the commanding officers. Building was carried on extensively until wooden ships were discarded. Since then fishing vessels, yachts and dories have been built. Some of the vessels built there are now in the sealing trade in the north Pacific ocean. Fishery cruisers for the Government service have also had their first baptism in Shelburne harbor—vessels noted for speed and good sailing qualities—Joseph McGill being the builder. One of the finest was the "Agnes Macdonald."

In my next I shall touch on the lumber interests of Shelburne.

W. J. P.

Spanish mahogany weighs 53.25 pounds to the cubic foot.

The Norway spruce, well dried, weighs 32 pounds to the cubic foot.

Well-seasoned red hickory weighs 62.37 pounds to the cubic foot.

CANADA LUMBERMAN

WEEKLY EDITION

The Lumberman Monthly Edition, 20 pages } $1.00 PER YEAR { The Lumberman Weekly Edition, every Wednesday

THIS PAPER REACHES REGULARLY THE PRINCIPAL LUMBER MANUFACTURERS AND DEALERS THROUGHOUT CANADA, AND WHOLESALE BUYERS IN THE AMERICAN AND FOREIGN MARKETS.

VOL. II. TORONTO, ONT., MAY 27, 1896 No 21.

CANADA LUMBERMAN

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MONTREAL.

Weekly Lumberman, published every Wednesday. Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

Lumberman, Monthly. A 20-page journal, discussing fully and impartially subjects pertinent to the lumber and wood-working industries. Contains interviews with prominent members of the trade, and character sketches and portraits of leading lumbermen. Its special articles on technical and mechanical subjects are especially valuable to saw mill and planing mill men and manufacturers of lumber products.

☞ Subscription price for the two editions for one year, $1.00.

Lumbermen visiting Toronto are invited to call at the office of the CANADA LUMBERMAN. We shall have pleasure in giving them any information desired.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue.

FOR SALE.—CEDAR POSTS, ETC. APPLY to S. R. BEETON, Minesing, Ont.

FOR SALE.

TWO ALLIGATOR STEAM WARPING TUGS, in good working order. For prices and particulars apply to GILMOUR & Co., Trenton, Ont.

SHIPPING MATTERS.

The steamship Genia has arrived at St. John, N. B., to load deals.

Bark Maiden City is chartered to take deals from St. John to Limerick at 41s. 3d.

Steamship Nevada has been chartered to load deals at St. John, N. B., for Liverpool, at 36s. 6d.

Peter's steam barge Saginaw, and consort Wm. Case, are loading lumber at Parry Sound, Ont., for Toledo.

Lumber freights from British Columbia or Puget Sound are quoted as follows: Valparaiso for orders, 35s.; Sydney, 35s.; Melbourne, 45s.; Port Pirie, 45s.; United Kingdom, calling at Cork for orders, 65s.; Shanghai, 50s.; Tientsin, 56s. 3d.; South Africa, 57s. 6d.; San Francisco, $3.25 to $3.75; Buenos Ayres, 46s. 3d.

BUSINESS DIFFICULTIES AND CHANGES.

J. B. Tiernay, planing mill, Blyth, Ont., has been succeeded by M. Floody.

Vincent, Gall & Rumball Co., lumber, Newholm, Ont., have dissolved. Gall and Rumball will continue.

The Donogh & Oliver Company, of N. Tonawanda, N. Y., has been incorporated, with a capital stock of $10,000. Directors: R. H. Silliman, John O. Donogh, and Jos. Oliver.

JUDICIAL SALE OF LICENSES

FOR

CANADIAN TIMBER BERTHS

Pursuant to the judgment in an action in the Common Pleas Division of the High Court of Justice for Ontario of Beck v. Spohn, et al, there will be offered for sale at public auction (with the approbation of the Local Master of said court at Barrie), by Messrs. Dickson & Townsend, Auctioneers, at their rooms, No. 22 King Street West, in the City of Toronto, Ontario, at the hour of 12 o'clock noon, on

Thursday, the Twenty-Third Day of July, 1896:

(A) The following Ontario Government Provincial timber berth licenses:—

Parcel No. 1—License for berth No. 2 in the Township of Finlayson, in the District of Nipissing; area, including road allowances, about 10¾ square miles.

Parcel No. 2—License for berth No. 3 in the Township of McCraney, in the District of Nipissing; area, including road allowances, about 11½ square miles.

Parcel No. 3—License for berth No. 19 in the District of Rainy River; area, about 11 44-100 square miles.

Parcel No. 4—License for berth No. 20 in the District of Rainy River; area, about 5 square miles.

Parcel No. 5—License for berth No. 21 in the District of Rainy River; area, about 4 square miles.

Parcel No. 6—License for berth No. 25 in the District of Rainy River; area, about 11 square miles.

Parcel No. 7—License for berth No 27 in the District of Rainy River; area, about 7 square miles.

Parcel No. 8—License for berth No. 65 in the District of Rainy River; area, about 7 square miles.

Parcel No. 9—License for berth No. 67 in the District of Rainy River; area, about 1½ square miles.

Parcel No. 10—License for berth No. 68 in the District of Rainy River; area, about 4 square miles.

ALSO—(B) The following Dominion of Canada Government timber berth license:—

Parcel No. 11—License for berth No. 292, situated on the north fork of High River, in the District of Alberta; area, about 47 8-100 square miles.

TERMS OF SALE.

Each parcel will be offered separately and subject to a reserved bid fixed by the said Local Master.

The biddings will be of a price per square mile.

The license of each berth will be sold subject to the various conditions contained or to be contained therein, and to the various statutes, orders in Council, regulations, dues and conditions now affecting or which may hereafter be passed or imposed affecting the same.

The price will be computed according to the areas stated above, and no allowance will be made for shortage or for water or for road allowances. No error in any of the above descriptions or in any map exhibited by the Vendor's Solicitors shall annul the sale, nor shall any compensation be allowed in respect thereof.

Ground rent and Government dues will be apportioned to the date of sale and assumed by the purchaser from the date of sale.

No timber on any berth shall be cut until the purchase money of the license thereof has been paid in full.

The purchaser shall at the time of sale pay down a deposit in proportion of $25 for every $100 of the purchase money, and shall pay the balance into court without interest to the credit of this cause, within thirty days after the sale.

The parties to the action, including the Vendor, shall be at liberty to bid.

The other conditions of sale will be the standing conditions of the court.

Maps of the berths may be seen at the offices of the Vendor's Solicitors.

Further particulars may be had from Messrs. BLAKE, LASH & CASSELS, Canadian Bank of Commerce Building, Toronto, Vendor's Solicitors, and Messrs. M'CARTHY, PEPLER & M'CARTHY, Solicitors, of Barrie.

Dated at Barrie this third day of December, A.D. 1895.

J. R. COTTER, Master.

CURRENT TRADE CONDITIONS.

ONTARIO.

From every section comes the report of quiet trade. Early in the month of May there was experienced some demand from retail yards for stocks for the spring trade, but now that these have been partially supplied, and retail dealers throughout the province are adverse to stocking heavily, a quieter feeling prevails with respect to the local demand. The principal call is for barn stock and general building supplies. In long bill stuff there is a fair demand. From the United States there has been little call for lumber, although some representative dealers have lately been looking over stocks with a view to purchase, provided the figure is placed low enough to meet their requirements. In hardwoods the demand is well distributed, but of small volume. Considering the demand and size of stocks, it is encouraging to note that the mill men of Ontario are holding firm to prices. This will enable them to secure a fair figure when the market improves. As competition from Southern pine has been keenly felt by Ontario manufacturers, on account of the disposition to sell regardless of price, it is pleasing to note the movement to form an association in the south to control the output, the main object of which will be to secure more remunerative prices. If successfully carried out, it should result beneficially to the lower grades of white pine, which of late have been largely replaced by the Southern product.

QUEBEC AND NEW BRUNSWICK.

While the outlook for the lumber drives of New Brunswick has improved since our last report, it is now quite certain that some of the logs will be tied up, although the quantity is not likely to be large. On the Upper St. John river the greater number have already reached safe waters, and all the logs along the Tobique have reached the main river. There is a considerable quantity hung up on the Nepisiquit. In Quebec the drives are said to be in an uncertain state. In quite a number of the rivers on both sides of the St. Lawrence several days' continuous rain will be required to drive the logs to the mill. The spruce market continues firm, with a probability of a further advance in prices before the summer season has passed. Before the first of July most of the wintering stock will certainly be shipped, and probably a large portion of the early cut. Consequently the available supply will be small, and a brisk demand would enable holders to secure even higher prices than those ruling at the present time. First quality pine deals, which were in little demand earlier in the season, have improved, while the lower grades are also selling well.

BRITISH COLUMBIA AND MANITOBA.

The mills of British Columbia are accumulating no stocks of lumber, the product being disposed of almost as soon as manufactured. This fact is going a long way towards maintaining the firm tone of the market, and enables manufacturers to obtain the advanced prices recently placed upon the product by the Central Lumber Company. Shipments to foreign ports are being made regularly, while new vessel charters are reported each week. Twelve vessels are loading lumber on foreign account at the various ports of the province, their points of destination being well distributed. R. P. Rithet & Co. report the demand for lumber tonnage to be widening, although freight rates remain at the same level, and one or two charters are reported for rather unusual destinations. Crop prospects in Manitaba continue to brighten, while the local lumber consumption is assuming larger proportions than was anticipated earlier in the season.

UNITED STATES.

A review of the leading markets of the United States reveals the fact that lumber has shown no increased activity during the past week. Apart from special grades, and these only in certain markets, the trade is unsatisfactory and below what might reasonably be expected at this season of the year. Uncertainty has characterized business thus far this season, a week of increased trade often being followed by a very quiet one. The lower grades of white pine are sluggish, with large stocks in hands, and little prospect of any demand which would materially decrease the quantity, even if offered at a reduced price. Some buying is being done to replenish yard stocks, but it is not large enough to influence the market. The car trade has shown the greatest improvement, some dealers having disposed of good-sized lots. The inquiry for red and quarter-sawed oak is the feature of the hardwood market, very light stocks being held, for which good figures are asked. Basswood is moving freely, while there is also some call for finishing stock. Birch is dull, especially the plain variety. In the sash and door industry disappointment prevails through lack of development. Car load purchases are very rare, orders being of a hand-to-mouth character. At Philadelphia there is a stir in yellow and white pine among contractors, who,

realizing that the building season is to be an average one, are purchasing in advance of present requirements. In Boston, apart from quartered oak and spruce, there is little activity. White pine has remained firm, but the amount of business has not added strength to the market. There is, perhaps, more life exhibited at Michigan points than has been the case since the opening of the year, especially in the yard trade, which is looked upon as indicative of a rising demand in the country. A report of some demand for pine comes from Buffalo, but prices leave a very small margin of profit. The demand is said to be irregular.

FOREIGN.

The British market has been rather more quiet, although values have not declined. Consumers have apparently been holding off in the hope of a drop in prices, but a study of the conditions indicates that this is not likely to be the case, certainly not until the season is well advanced. At many points there is a shortage of stocks which must keep prices firm for some time. There is a very good inquiry for batten and scantling sizes, and dealers are experiencing difficulty in filling orders. Floorings are also firm, and show no indication of weakness. Exporters have large orders on hand which it will take some time to fill. Planed boards are also a firm commodity, and those ready for shipment are commanding higher prices. At Liverpool the arrivals have consisted chiefly of spruce deals and birch planks, which are finding a ready market. At the auction sale of Foy, Morgan & Co., London, Canadian goods were represented by a few lots of 3x11 1st pine regulars, which sold at £22 5s., 3x11 2nd ditto, at £15 10s., and 3x9 3rd ditto, at £8 10s. The hardwood trade is somewhat limited, and mostly confined to small lots. There is activity in the shipbuilding industry, which is improving the demand for lumber required for that purpose.

STOCKS AND PRICES.

CANADA.

G. O. Buchanan, of Kaslo, B. C., has a stock of 1,500,000 feet of logs for sawing.

Hy. Hiese, of Preston, Ont., reports a demand for shingles. He is selling a mixture of 1st and 2nd cedar at $2.

Dan O'Connor's saw mill at Echo Point, Ont., is now running to its full capacity, turning out 30,000 feet of lumber daily.

The first consignment of 250,000 ties purchased on Manitoulin Island last winter by G. H. M. Baker, arrived at Collingwood last week.

P. Potvin, of Midland, reports that the output of logs this year will be 60,000,000 ft. from Byng Inlet and 150,000,000 from French river.

Geo. B. Dunn estimates that 5,000,000 feet of logs will go out of the Aroostook river, N. B., this spring, as against 30,000,000 feet heretofore.

The Yarmouth Herald says the lumber business seems brisker on the Clyde river, N. S., this spring than for many years. Three cargoes have already gone, viz., the schooners Elnora, Manzanilla, and Coral Leaf, the two former to Lynn and the latter to Boston. The Elnora has returned and is again loading for the same place. The schr. Roseneath has also gone to Boston with a load of lumber from Jordan river.

Smith & Patterson, of Port Hope, will handle 2,000,000 feet of lumber for J. W. Howry & Sons, of Fenelon Falls, to be shipped to Oswego.

About a million feet of lumber is hung up about the South Branch Falls, N. B., comprising all the logs cut at South Branch lake the past winter. The Smith Brothers have their drive out.

Playfair's barge and tug line has the contract from the Rathbun Company to carry about 200,000 ties from Manitoulin this season. Most of the ties will be delivered at Midland for shipment by rail.

UNITED STATES.

The Saginaw Salt and Lumber Co., of Saginaw, Mich., have so far this month disposed of 3,000,000 feet of lumber.

John McAlpine, of Ashland, Wis., has sold 6,000,000 feet of logs to the South Shore Lumber Company, of Washburn, at $8 per thousand.

A. Tyler, of North Tonawanda, N. Y., has purchased the dry stock of the R. D. Pike Lumber Co., of Ashland, Wis., at $15.50 per thousand.

A sale of lumber reaching $60,000 has just been completed between Perley, Lowe & Co., of Marinette, Wis., and A. S. Kibbee & Son, of Albany, N. Y. There was 3,000,000 feet in the lot. About 1,000,000 feet was also disposed of by the same firm to the John Spry Lumber Company, of Chicago.

THE UPPER ST. JOHN DRIVES.

The following particulars of the lumber drives on the Upper St. John river, N. B., were collected May 20th, by Mr. A. E. Hanson, of Connor's Station :

McIntosh & Kilburn's drive of 9,000,000 ft., for W. H. Murray, is at Simmon's Farms, 40 miles from corporation limits, with the exception of 2,500,000, which are hung up at the Northwest Rapids, St. John river.

W. J. Noble's drive of 8,000,000, for Cushing & Dickey, is hung at Red Pine Grove, 80 miles from limits, with the exception of 1,500,000 left in Burnt Land brook.

Tower Bros., for F. H. Eaton, with 3,500,000, are tied in Chememsicook stream.

Gilman Bros., for W. H. Murray, 7,500,000, are still in Black river, 30 miles from limits, with small hopes of getting through.

John Sweeney, for King Bros. and J. A. Morrison, with 6,000,000, is at Poplar Island bar, 9 miles from limits, with good prospects.

Flavien Cheonard, for W. H. Murray, with 3,000,000, at head of Big Rapid, 6 miles from corporation limits ; prospects good.

John Stevens, for E. L. Jewet, with 3,000,000, at Allegash Falls ; good prospects of getting into limits.

Cunliffe Sons, for W. H. Murray, with 6,000,000, about 10 miles from Allegash Falls, with prospects good of getting into corporation limits.

Guy McCallum and Morrison Bros., for Miller & Woodman, and Oliver Genrette for W. H. Murray, combined drives of 9,000,000, in St. Francis river, with fair prospects of getting into corporation limits.

FISH RIVER.

Laliberte's drive of 2,000,000, on Wallagrass, for George E. Barnhill, is likely to reach the corporation limits about the 26th inst.

Page & Mallet's drive of 4,000,000, for Miller & Woodman, is safe to reach the limits about June 1, except 1,000,000 hung up in the Red river and Penington brook.

Send four 3-cent Canadian postage stamps for a copy of the LUMBERMAN'S VEST-POCKET INSPECTION BOOK, containing rules for the inspection of Pine and Hardwood Lumber in the leading markets of Canada and the United States.

THE SITUATION.

REFLECTED THROUGH CORRESPONDENCE OF THE "WEEKLY LUMBERMAN."

The Hamilton Cigar Box and Packing Case Co., who do a retail lumber trade, report prices low and trade fair. The box trade is good.

J. D. Roche, Masham Mills, Que.: Stocks are moving freely, especially 3 inch deals, and prices are firm. Large stock of coarse lumber on hand.

N. Wenger & Bro., Ayton, Ont.: Soft elm is in most demand. Have recently made sales of 1 car soft elm, at $11, and 2 cars common maple, at $6, f.o.b. Ayton.

Jno. Gillies, Preston, Ont.: Although prices are difficult to maintain, business is fairly good. The town is doing a lot of building in a small way, and the outlook is fair.

T. Kribbs, Hespeler, Ont.: Business is fairly good and prices are much the same. Prospects are fair, as much small building will be done. Will cut 800,000 feet this year, and import a large quantity.

Hon. J. K. Ward, Montreal: The retail business is fairly good, 3 inch culls and common lumber being in most request. Good spruce lumber is advancing in price, but common pine shows a tendency to decline.

D. Atchison & Co., Hamilton, Ont.: We have only lately opened up our yard and factory, and find business a little dull. Sashes and general building stuff are in slight demand, and business may improve as the season advances.

Robert Watt, Wiarton, Ont.: Stocks are moving actively. Are shipping 40 to 50 cars per month. Hemlock for building timber receives most call. Have recently sold a cargo of basswood. Stocks of hemlock on hand are large, and prices are declining, as some mill men are cutting prices.

The Leishman, Maundrell Co., Woodstock, Ont.: Although inquiry for lumber is not brisk, stock plank and boards and building supplies are in fair demand. We sold a small cut of elm, No. 1 and 2, at $11. Very few logs were taken out in this section, and prices, if anything, are declining.

T. & W. Flatt, foreign exporters of square timber, Hamilton, Ont., buy from Ohio and Michigan and ship direct to Great Britain. Their orders run from $30,000 to $80,000 each hipment. Prospects are fair, and from what they learn from their buyers in the United States, lumber may shortly improve. Millions of logs are stuck in the rivers of Michigan for want of rain.

FIRES.

Jasper Martin's shingle mill at Hillsdale, Ont., was burned last week. Loss about $3,000; no insurance. Mr. Martin will rebuild.

The saw mill and brick and tile works of Jervis & Kellar, at Stratford, Ont., have been burned. Loss, between $3,000 and $4,000 ; partially insured.

A saw mill at Norwood, N. S., owned by Capt. D. A. Saunders, together with 180,000 feet of lumber, has been burned. Loss, $4,500; insurance on mill, $1,300, on lumber, $1,000.

The village of Deseronto, Ont., was swept by fire on the 26th inst. Mills, elevators, thousands of ties and posts, and millions of shingles, the property of the Rathbun Company, were burned, together with many dwellings. The loss will be nearly $300,000.

LUMBER FREIGHT RATES.

Lumber freight rates on the Canada Atlantic Railway are as follows: Ottawa to Toronto, 10 cents per 100 lbs ; Ottawa to Oswego, $1.90 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Montreal, $1.00 per M ft., (3,000 lbs. and under per M ft.); Arnprior to Montreal, $1.50 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Buffalo, 12 cents per 100 lbs.; Ottawa to Port Huron and Detroit, 14 cents per 100 lbs. Ottawa to New York, water delivery, lots of five cars and over, $3.00 per M ft ; under five cars, $3.25 per M ft. (subject to extra towage) 3,000 lbs. and under per M ft. Arnprior to New York, lots of five cars and over, $3.50 per M ft.; under five cars, $3.75 per M ft. (subject to extra towage) 3,000 lbs and under per M ft. Ottawa to Boston, Portland and common points, local 15 cents ; exports 13c. per 100 lbs.; Arnprior to Boston, Portland and common points, local 17 cents ; export 15 cents per 100 lbs.; Ottawa to Burlington, 6 cents per 100 lbs.; Ottawa to Albany, 10 cents per 100 lbs. Arnprior to Albany, 12 cents per 100 lbs.; Ottawa to St. John, N. B. and common points, 20 cents per 100 lbs.; Ottawa to Halifax, N. S. and common points, 22½ cents per 100 lbs. Minimum carload weight for shipment of lumber, lath, shingles, etc., is 30,000 lbs., and rates quoted above are in cents per 100 lbs., except when quoted per M ft. the minimum carload charged is 10 M ft., lumber not exceeding 3,000 lbs. to the M feet. Ottawa rates apply on shipments from Rockland and Hawkesbury.

Lumber freight rates for pine on the Grand Trunk Railway have been made a fixture, as below. Of any intended change due notice will be given lumbermen.

General instructions in shipping by Grand Trunk are embodied in these words in the tariff schedule: On lumber in carloads, minimum weight, 30,000 lbs. per car, unless the marked capacity of the car be less, in which case the marked capacity (but not less than 24,000 lbs.) will be charged, and must not be exceeded. Should it be impracticable to load certain descriptions of light lumber up to 30,000 lbs. to the car, then the actual weight only will be charged for, but not less than 24,000 lbs. The rates on lumber in the tariff will not be higher from an intermediate point on the straight run than from the first named point beyond, to the same destination. For instance, the rates from Tara or Hepworth to Guelph, Brampton, Weston or Toronto, would not be higher than the specific rates named from Wiarton to the same points. The rates from Cargill and Southampton to points east of Listowel and south and west of Stratford will be the same as from Kincardine, but in no case are higher rates to be charged than as per mileage table published on page 9 of tariff.

Rates from leading lumber points on pine and other softwood lumber, shingles, etc., are as follows : From Glencairn, Creemore, Aurora, Barrie and other points in group B to Toronto, 6½c.; Collingwood, Penetang, Coldwater, Waubaushene, Sturgeon Bay, Victoria Harbor, Midland, Fenelon Falls, Longford, Gravenhurst and other points in group C, to Toronto, 6½c.; Brace, bridge to Toronto 7c.; Utterson, Huntsville, Navor-Emsdale, Katrine to Toronto, 7½c.; Burk's Falls, Berriedale and Sundridge, to Toronto, 8c.; South River, Powassen and Callender to Toronto, 9c.; Nipissing Junction and North Bay, 10c. Rate from Goderich, Kincardine and Wiarton to Toronto, 6½c. These rates are per 100 lbs. Rates from Toronto east to Belleville are 7½c. per 100 lbs.; to Deseronto, 9c.; to Brockville and Prescott, 10c.; to Montreal and Ottawa, 11c. The rates on hardwoods average about from 1c. to 2c. per 100 lbs. higher than on softwoods. For rates on railway ties, mahogany, rosewood, walnut, cherry, and other valuable woods, application must be made to the district freight agent.

On the Canadian Pacific the rates on pine and soft woods may be illustrated as follows : Cache Bay, North Bay, Sturgeon Falls and Warren, to Toronto, 9c ; Algoma, Cook's Mills, Massey, Spanish River and Whitefish to Toronto, 12c.; Ottawa to Toronto, 10c From Ottawa, Hull, Aylmer and Duchesne Mills to station on the Lake Erie and Detroit River, Erie and Huron, Toronto, Hamilton and Buffalo, and Michigan Central Railways, the rate is 14½c. per 100 lbs. Regulations apply as to minimum size of carload of 30,000 lbs., and an advanced rate is charged for hardwoods.

MODIFICATION OF HARDWOOD RATES.

THE Grand Trunk Railway and Canadian Pacific have made the rates on hardwoods from certain points to Toronto and Hamilton as follows. The regulations are over the signature of Mr. John Earls, W.D.F.A., of the G. T. R., and given in reply to a letter from Toronto hardwood men :

"After careful consideration we have come to the conclusion that, on and after Jan. 1st, 1895, a modification will be made in the present arrangements for hardwood lumber, to the effect that the rate will be 7½c. per 100 lbs from our Northern and Northwestern branches to Toronto and Hamilton. This rate, however, will not apply from main line points and the straight run between Toronto, Sarnia and Windsor ; also that so far as rates on common lumber to points like Guelph, Galt, London, Woodstock, Ingersoll, etc., from all lumber shipping stations the rate will be the same on hardwood as on pine." On the old principle, we suppose, that half the loaf is better than none, hardwood men have something, possibly, to be thankful for, though there is no good reason why the rates generally on hardwood should not be as low as on pine. It is understood that the C. P. R. rate will be made uniform at 7½c from same points.

Telephone 5332 Established 1851

JOHN B. SMITH & SONS,

MANUFACTURERS OF

LUMBER Lath, Shingles, Doors, Sash, Blinds, Mouldings, Boxes, &c.

BILL LUMBER a Specialty

Cor. Strachan and Wellington Avenues, TORONTO.

MILLS

Having Brown Ash 12, 14 and 16 ft. firsts and seconds, inch Bass firsts and seconds 12 feet, or any other Hardwood Lumber, can sell same for cash by addressing

H. D. WIGGIN

No 89 State St., BOSTON, MASS.

Inspection at mill.

Do You Use Mahogany?

If so don't buy until you have seen or inquired about our now famous . .

TABASCO MAHOGANY

Finest figured wood on the market ; is hard and takes elegant finish. Brings highest prices in Europe, but we sell here about same prices as ordinary mahogany. Specially adapted for fine cabinet and interior finish . . . . . .

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Importers and Manufacturers BOSTON, MASS.

Boston Lumber Co. Wholesale Dealers in

Red Oak, Basswood, Black Ash, Soft Elm, Cedar Shingles, Spruce . . . .

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HUDSON RIVER LUMBER TRANSPORTATION. Water Connection from Albany with lumber points in Canada via Canadian Pacific Railway to New York Harbor, Long Island Sound and inland waters of New Jersey. . . .

CONNECTION—Canadian Pacific Railway ; Rome, Watertown & Ogdensburgh ; New York Central & H. R. Rd.; Ronan Line.

OFFICES—Lumber District, Albany, N. Y.; 20 South St., New York. Telephone 711 Broad.

PARKER C. RONAN, Manager.

CANADIAN EXPORTERS AND WHOLESALERS

Thos. Meaney & Co. .

London Canadian Chambers

103 Bay St. - Toronto, Ont.

LUMBER

MILLMEN—Send us list of dry hardwoods.

DONOGH & OLIVER oooo

Wholesale Dealers in **Lumber, Lath and Shingles**

TORONTO: 204-205 Board of Trade Building. -:- BUFFALO: Dock foot of Hertel Avenue.

Huntsville Lumber Co., Ltd.

—: HUNTSVILLE, ONT. :—

MANUFACTURERS OF LUMBER LATH AND SHINGLES

WE are open to cut White Pine and Hemlock Bill Stuff. Have for Sale a Quantity of Dry Mill Stocks and Sidings, also 16 in. Pine Shingles and 4 ft. Lath 1½ in. wide.

CORRESPONDENCE SOLICITED

THE PEMBROKE LUMBER CO. LTD.

MANUFACTURERS AND WHOLESALE DEALERS IN

DIMENSION TIMBER OF ALL SIZES AND KINDS, JOISTS, CAR DECKING, CAR SILLS, SHIP DECKING, AND ALL KINDS OF ROUGH AND DRESSED LUMBER.

Write us for Quotations on all Bills — PEMBROKE, ONT

FOR SALE

Red Pine Dimension Logs, can be any length up to 50 feet to suit purchaser, and would contract for two to three million for next summer delivery at Spanish River. Special long lengths could be loaded on cars at Rayside, C. P. R. Will have five to six million feet of WHITE PINE, first cut on limit at Spanish River. And have about five million feet at mouth French River which could be delivered at opening of navigation . . . . . .

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BOOTH & GORDON - Sudbury, Ont.

WM. MASON & SONS . . . Manufacturers of..... and Dealers in

LUMBER and **DIMENSION TIMBER** LATH and SHINGLES

We have the largest and best equipped Dimension Saw Mill in Eastern Canada. All our machinery is of the latest and most improved pattern, and we are prepared to quote prices on and supply at the shortest notice any orders that may be submitted to us.

Address, P. O. Box 1020, OTTAWA, ONT.

JAS. G. CANE & CO.

WHOLESALE **HARDWOOD** • LUMBER •

35 Adelaide East, Toronto, Ont.

Send us full description and lowest price for any lumber you have for sale.

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Contractors for Railway Supplies
BILL TIMBER a Specialty . . . — MIDLAND, ONT.

WANTED :—

A Small, Well-Assorted Stock of

Dry 2 in. Hemlock from 2 × 4 to 2 × 12—10 ft. and up

State Lowest Price and when cut, with sizes and quantity. | The Reid Co., Ltd., Toronto

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MANUFACTURERS OF . . . . . .

British Columbia Red Cedar Lumber and Shingles
Kiln-Dried Bevel Siding, V Siding, Ceiling, Wainscotting
Door Stock, Base, Casings, Mouldings, etc.

We do accurate work and make reasonably prompt shipments. NEW WESTMINSTER, B.C.

6, 8, 10 and 12 in. Box and Common all Sold

J. W. HOWRY & SONS • LUMBER • FENELON FALLS, ONT.

STILL HAVE A FEW GOOD MILL CULLS . .

Our Mill is Running.
Send Us Your Bills.

Also One Million Good Cull Shingles and Two Million 4 x 18 in. made from live white pine.

KILN-DRIED BIRCH FLOORING SHEETING .. and .. CEILING **$20.00** SAMPLES BY MAIL **KNIGHT BROS.** Burk's Falls, Ont.

FOREIGN EXPORTERS AND IMPORTERS

WE want to buy FOR CASH the following kinds of Lumber : : : : :

Red Oak, Soft Elm
Basswood (all thicknesses)

Write us promptly, stating what you have to offer in each kind and quantity of each thickness, also dryness, etc., with lowest prices.

Empire Lumber Co. - Buffalo, N. Y.

WILLIAM B. YOUNG Successor to Young & Keeler Co.

WHOLESALE DEALER AND MANUFACTURER

ELM, BASSWOOD, BIRCH AND MAPLE

Canadian mill men invited to offer stocks. -:- 88 Kent Ave., BROOKLYN, N.Y.

Public Lumber Storage Yard, Brooklyn.

POOLE & HOTCHKISS oo

Wholesale Dealers in

PINE AND HARDWOOD LUMBER

Shingles and Lath

Correspondence invited. 270 West Genesee St., BUFFALO, N. Y.

Write us if you have any . . . .

DRY SOFT ELM for immediate shipment.

SCATCHERD & SON - 1053 Seneca Street, BUFFALO, N. Y.

Lumberman's Inspection Book

Send four 3-cent Canadian postage stamps for a copy of the LUMBERMAN'S VEST-POCKET INSPECTION BOOK, containing rules for the Inspection of Pine and Hardwood Lumber in the Leading Markets of the United States and Canada.

Address:

The CANADA LUMBERMAN, Toronto, Ont.

WANTED 1", 1¼", 1½", 2", 3" and 4" 1sts and 2nds

Grey Elm. Also 1⅛" Rock Elm, Log Run.

Please quote prices delivered Black Rock, Buffalo, N. Y.

T. SULLIVAN & CO. ◎ Buffalo, N. Y.

BUFFALO HARDWOOD LUMBER COMPANY

940 Elk St., BUFFALO, N. Y.

50,000 ft. 2 in. Nos. 1 and 2 and Common Soft Elm.
100,000 ft. 1¼ in. Nos. 1 and 2 and Common Soft Elm.
} **WANTED** {
30,000 ft. 2½ in. Nos. 1 and 2 and Common Rock Elm.
100,000 ft. 1 in. Nos. 1 and 2 and Common Rock Elm.

Are also in the market as CASH BUYERS for other kinds of Hardwoods. CORRESPONDENCE SOLICITED.

CANADA ATLANTIC RAILWAY

Ottawa, Arnprior & Parry Sound Ry.

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OTTAWA & NEW YORK LUMBER LINE
OTTAWA & BOSTON LUMBER LINE
CANADA ATLANTIC FAST FREIGHT LINE

R. A. CARTER, Contracting Agent, 115 Board Trade, Montreal
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Shortest and Quickest Route from

OTTAWA, ROCKLAND, HAWKESBURY, ARNPRIOR and all points on Grand Trunk Ry. TO . . .
BOSTON, PORTLAND, NEW YORK, DETROIT, TONAWANDA, ALBANY, &c., MONTREAL, TORONTO, QUEBEC, HALIFAX, ST. JOHN, &c.

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WHOLESALE PRICES CURRENT.

TORONTO, ONT.

TORONTO, May 27, 1896.

CAR OR CARGO LOTS.

1¼, 1½ and 2 inch cut up and better	33 00	36 00
2 inch picks and uppers	35 00	37 50
1x12 dressing and better, 60% 16 ft	24 00	26 00
1x10 fine dressing and better	23 00	25 00
1x10 and 12 Canadian dressing and better	20 00	22 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 mill run	16 00	18 00
1x10 and 12 common	13 00	15 00
1x10 and 12 mill culls	9 00	10 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	11 00	12 00
1 inch siding ship culls	10 50	11 50
1 inch siding mill culls	8 50	9 00
Cull scantling	8 00	9 00
1 inch strips 4 in. to 8 in. mill run	13 00	14 00
1 inch strips, common	11 00	12 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		2 30
XX shingles 16 inch		1 35
Lath, No. 1		1 60
Lath No. 2		1 30

HARDWOODS—PER M. FEET CAR LOTS.
Quality, 1s and 2s unless otherwise specified.

Ash, white, 1 to 2 in	$26 00	$28 00	Cherry 1 to 1½	$50 00	$60 00
" " 2½ to 4	30 00	32 00	" 2 " 4	60 00	65 00
Ash, black, 1sts and 2nds, 1 to 1½ in	17 00	19 00	Elm, soft 1 " 1½	14 00	15 00
Ash, black, 1sts and 2nds, 2 to 4 in	19 00	21 00	" " 2 " 3	15 00	16 00
Ash, M. R., 1 " 2	15 00	18 00	" rock 1 " 1¼	16 00	18 00
Birch, 1 "	20 00	22 00	" " 1½ " 3	20 00	22 00
" 1½ " 2	22 00	24 00	Hickory 1½ " 2	28 00	30 00
" sqrs. 4x4 " 8 x8	24 00	26 00	Maple 1 " 1½	16 00	17 00
Basswood 1 " 1¼	16 00	18 00	" 2 " 4	17 00	18 00
" 1½ " 2	19 00	20 00	Oak, red, p'n 1 " 1½	28 00	30 00
" m. r. 1 " 1¼	14 00	16 00	" " 2 " 4	30 00	32 00
Butternut 1 " 1½	23 00	25 00	" white " 1 " 1½	28 00	30 00
" 2 " 3	25 00	28 00	" " " 2 " 4	30 00	35 00
Chestnut 1 " 2	24 00	26 00	" quart'd 1 " 2	46 00	50 00
			Walnut 1 " 3	85 00	100 00
			Whitewood 1 " 2	32 00	36 00

OTTAWA, ONT.

OTTAWA, May 27, 1896.

Pine, good sidings, per M feet, b.m	$30 00	35 00
" ine, good strips, " " "	26 00	30 00
Pine, good shorts, " " "	18 00	25 00
Pine, No. 1 dressing sidings, per M feet, b.m	17 00	20 00
Pine, " " strips, " " "	15 00	18 00
Pine, " " shorts, " " "	13 00	14 00
Pine, 10 s.c. and better stock, " " "	13 00	16 00
Pine, 8 s.c. " " " "	11 00	12 00
Pine, " sidings " " "	13 00	15 00
Pine, " strips " " "	9 00	12 00
Pine, " shorts " " "	7 00	9 00
Pine, box culls " " "	9 00	11 00
Pine mill culls " " "	8 00	10 00
Lath per M No. 1	1 00	1 25
Lath per M No. 2	80	1 00
1x10 No. 1 barn	18	20
1x10 No. 2 "	16	18
1x8 & 9 No. 1 "	16	18
1x8 & 9 No. 2 "	15	17

QUEBEC, QUE.

QUEBEC, May 27, 1896.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For interior and ordinary according to average, quality etc., measured off	16 @	22
For fair average quality, according to average, etc., measured off	20	26
For good and good fair average " " " " "	25	30
For superior " " " " "	32	40
In shipping order " " " " "	36	42
Waney board, 18 to 19 inch " " " " "	36	42
Waney board, 19 to 21 inch " " " " "	38	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	40	49

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	22	30

BIRCH.

16 inch average, according to average and quality	21	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

DEALS.

Bright, according to mill specification, $117 to $125 for 1st, $80 to $84 for 2nd, and $42 to $45 for 3rd quality.
Bright spruce, according to mill specification, $42 to $45 for 1st, $25 to $30 for 2nd, $25 to $27 for 3rd, and $21 to $25 for 4th quality. F.O.B. batteau.

SAGINAW, MICH.

SAGINAW, Mich., May 27, 1896.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$45 00	Selects, 1in., 8in. and up wide	$40 00
1¼, 1½ and 2 in.	45 00	1¼, 1½ and 2 in.	41 00
2½ and 3 in.	53 00	2½ and 3 in.	47 00
4 in.	56 00	4 in.	50 00

FINE COMMON.

1 in., 8 in. and up wide	33 50	2½ and 3in., 8in. and up wide	42 00
1¼, 1½ and 2 in.	36 00	4 in.	45 00

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	23 50	2½ and 3in., 7in. and up wide	37 00
1¼, 1½ and 2 in.	30 00	4 in.	40 00

STRIPS, A AND B (CLEAR AND SELECTS).

1¼ in., 4, 5 and 7 in. wide	34 00	1 in., 4, 5 and 7 in. wide	32 00
6 in. wide	36 00	6 in. wide	36 00

FINE COMMON OR C.

1¼ in., 4, 5, 6 in. wide	30 00	1 in., 6 in. wide	30 00
1 in., 4, 5 in. wide	25 00		

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24 00	1 in., 4, 5, 6 in. wide	22 00

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in	16 00	1 in., 4, 5 and 7 in.	15 00
1 in., 6 in.	17 00	1 in., 6 in.	17 00

SHELVING.

No. 1, 1 in., 10 in. stocks	25 00	No. 2, 1 in., 7 and 8in. stocks	19 00
1 in., 10 in. and up wide	26 00	1 in., 10 in. stocks	21 00
1 in., 12 in. stocks	29 00	1 in., 12 in. stocks	24 00
1 in., 12 in. and up wide	30 00	1 in., 10 in. and up wide	23 00
1¼ in. 1½ and 2in., 8in. and up wide	29 00	1 in., 13 in. and up wide	25 00

BARN BOARDS OR STOCKS.

No. 1, 12 in.	20 00	No. 2, 9 in.	13 50
10 in.	16 50	8 and 7 in.	13 50
9 in.	16 00	No. 3, 12 in.	12 50
8 and 7 in.	16 00	10 in.	11 00
No. 2, 12 in	16 00	9 in.	11 00
10 in.	14 00	8 in.	11 00

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$ 9 00	1 in., 13 in. and up wide	$11 50
1 in., 6 in. wide	10 00	1¼, 1½ and 2 in., 7 in. and up wide	11 50
1 in., 7 in. wide and up	10 50		

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9in. wide	17 00	1 in., 10 in. and up wide	18 00
1 in., 6 in. wide	18 00	1¼, 1½ and 2 in., 8in. and up wide	20 00

COFFIN BOARDS.

No. 1, 1 in., 13in. and up	20 00	No. 1, mill culls	8 00
No. 2	17 00	No. 2, or red horse	6 50

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23 00	No. 2	18 00
No. 1 (nearly clear)	21 50	No. 3	14 00

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16ft.	$ 8 50	Hemlock, 2x4 to 10, 12 to 16 feet	8 00
18 ft.	10 50	2x12.	8 50
20 ft.	11 50	Add $1 to each additional 2ft. in length.	
22 and 24 ft.	12 50		

SHINGLES, 18-IN.

Fancy brands, XXXX	3 00	Standard brands, river made, XXXX	2 75
Clear Butts	1 90	Clear Butts	1 75

WHITE PINE LATH.

No. 1	1 60	No. 2	1 20
		Hemlock	1 25

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA N. Y., May 27, 1896.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in	$45 00	47 00	
2½ and 3 in	50 00	55 00	
4 in	54 00	57 00	
Selects, 1 in.	39 00	40 00	
1¼ to 2 in.	39 00	42 00	
2½ and 3 in.	47 00	50 00	
4 in.		52 00	
Fine common, 1 in	35 00	37 00	
1¼ and 1½ in.	34 00	36 00	
2 in	34 00	36 00	
3 in.		45 00	
4 in		45 00	
Cut'g up, No. 1, 1 in.	28 00	30 00	
1¼ to 2 in.	33 00	34 00	
No. 2, 1 in.	15 00	17 00	
No. 2, 1¼ to 2 in	22 00	24 00	
No. 3, 1¼ to 2 in	15 00	17 00	
Shelving, No. 1, 13 in and up, 1 in.	30 00	@31 00	
Dressing 1¼ in.	24 00	25 00	
1¼x10 and 1		26 00	
1½ in.	24 00	25 00	
2 in	25 00	28 00	
Mold st'ps, 1 to 2 in	31 00	33 00	
Barn, No. 1, 10 and 12 in.	19 00	21 00	
6 and 8 in.	18 50	20 00	
No. 2, 10 and 12 in.	15 00	16 00	
No. 3, 10 and 12 in.	13 00	14 00	
6 and 8 in	12 50	13 50	
Common, 1 in	15 00	16 00	
1¼ and 1½ in.	17 00	18 00	
2 in	18 00	20 00	

WHITE ASH.

1st & 2nd, 1 inch,	32 00	33 00	
1¼ to 2 in	33 00	34 00	
2½ to 4 in.	28 00	30 00	
Strips	17 00	18 00	
Culls	9 00	10 00	

BLACK AND BROWN ASH.

1st & 2nd, 8 inch up,	20 00	22 00	Com. & good culls 10 00 12 00

BIRCH.

1st & 2nd, 6 inch & up, red	28 00	30 00	1st & 2nd, white, 6 in. & up, 18 00 Com. & good culls 10 00 12 00

ELM.

1st & 2d, rock, 8in. & up,	18 00	22 00	1st & 2d, soft, 8 in. & up, 16 00 18 00

MAPLE.

1st & 2d, hard, 6in. & up	18 00	20 00	1st & 2d, soft, 6in. & up, 17 00 19 00

WHITE OAK.

1st & 2nd, plain, 8 in. & up	26 00	28 00	Clear squares, 5x5 to 8x8 35 00
Good common	15 00	17 00	1st & 2nd quartered,
Good culls	10 00	12 00	6 in. up 45 00 50 00
			Common quartered 25 00 30 00

RED OAK.

1st & 2nd	25 00	27 00	Quartered 1st & 2nd 42 00 44 00
Common	14 00	16 00	Common 22 00 26 00
Cull	9 00	10 00	

NEW YORK CITY.

NEW YORK, N. Y., May 27, 1896.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply, rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$28 00	@ 40 00	Building orders $27 00 @ 37 00
Decking	44 00	50 00	

SPRUCE.

6 to 9 in	14 00	14 50	10 to 12 in	16 25	17 00
6 to 12 in	14 50	15 75	Lath	1 85	1 95
9 to 12 in	15 75	16 25			

HARDWOOD.

4/4 and thicker, No. 1 and 2			Black Ash, 10 to 16		23 00
" " "			Soft Elm, "		17 00
" " "			Hard Maple, "		21 00
" " "			Basswood, "		20 00
" " "			Birch, "		23 00
" "	Black Ash, Com. and Shipping Cull, M.C.O.				14 00
" "	Soft Elm, "	"	"		12 00
" "	Hard Maple, "	"	"		14 00
" "	Basswood, "	"	"		12 00
" "	Birch, "	"	"		14 00

ALBANY, N.Y.

ALBANY, N. Y., May 27, 1896

PINE.

Uppers, 3 in. up	$50	$52	Dressing boards, narrow	$19	$21
2½ in.	50	52	West India shipping boards.	16	17
1 to 2 in.	45	48	Box boards	12	14
4 inch uppers	50	52	10-in. dressing and better	26	30
Selects, 2½ in. up	42	44	10-in. common	14	15
1 to 2 in.	38	42	12-in. dressing and better	26	32
Fine common, 2½ in. and up	40	42	Common, 1x12	14	16
1 to 2 in.	36	40	No. 1 barn, 1x12		20
No. 1 cut, 1 to 2 inch	25	35	1x10	18	21
No. 2	18	25	1x8	16	18
No. 3	17	20	No. 2 barn, 1x12	17	19
No. 1 molding, 1 to 2 in.	33	36	1x10	17	19
No. 2 molding, 1 to 2 in.	25	28	1x8	17	19
Stained saps		20	Shaky or star clear, 1 to 2 in.	19	21
Bracket plank	30	35	Dressing	16	18
Shelving boards, 12-in. up	30	32	Common	11	15

LATH.

Pine	$2 25		Spruce $2 00

SHINGLES.

Sawed Pine, ex. XXXX	$4 25	$4 30	Bound butts, 6 x 18	$6 00	$6 15
Clear butts	3 25	3 35	Hemlock	2 15	2 30
Smooth, 6 x 18	5 40	5 50	Spruce	2 20	2 30

OSWEGO, N.Y.

OSWEGO, N. Y., May 27, 1896.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$45 00	@46 00	
Pickings, " "	36 00	38 00	
No. 1, cutting up, " "	31 00	35 00	
No. 2, cutting up, " "	24 00	23 00	
In strips, 4 to 8 wide, selected for moulding trips, 14 to 16 ft.	30 00	32 00	

SIDING.

1in siding, cutting up			1¼ in selected	38 00	@43 00
1icks and uppers	32 00	@39 00	1¼ in dressing	20 00	22 00
1in dressing	19 00	21 00	1¼ in No. 1 culls	15 00	16 00
1in No. 1 culls	13 00	14 00	1¼ in No. 2 culls	13 00	14 00
1in No. 2 culls	11 00	12 00	1 in. No 3 culls	11 00	12 00

1X12 INCH.

12 and 16 feet, mill run				21 00	24 00
12 and 16 feet, No. 1 and 2, barn boards				19 00	20 00
12 and 16 feet, dressing and better				27 00	31 00
12 and 16 feet, No. 2 culls				13 00	14 00

1¼X10 INCHES.

Mill run, mill culls out	$24 00	@24 00	No. 1 culls	17 00	18 00
Dressing and better	27 00	35 00	No. 2 culls	14 00	15 00

1X4 INCHES.

Mill run, mill culls out	17 00	21 00	No. 1 culls	14 00	15 00
Dressing and better	24 00	30 00	No. 2 culls	12 00	13 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	18 00	25 00	6, 7 or 8, No. 1 culls	15 00	16 00
6, 7 or 8, drsg and better	23 00	30 00	6, 7 or 8, No. 2 culls	13 00	14 00

BOSTON, MASS.

BOSTON, May 27, 1896.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$11 50	12 00	¾ inch	$ 9 25	9 50
Coarse No. 5	15 00	15 50	11-16 inch	8 50	8 75
Refuse	13 00	13 25	⅝ inch	8 00	8 25
Outs	9 00		Clapboards, sap ext.	45 00	46 00
Boxboards, 1 inch	10 75	11 00	Sap clear	41 00	42 00
⅞ inch	9 75	10 00	Sap, 2nd clear	34 00	36 00
			No. 1	23 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in	$50	@52 00	Fine com., 3 and 4 in	46 00	52 00
1¼, 1½ and 2 in.	52 00	53 00	No. 2, 1 in. Fine com.	29 00	31 00
3 and 4 in	58 00	62 00	1¼, 1½ and 2 in	30 00	32 00
Selects, 1 in	44 00	45 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in.	45 00	47 00	No. 2	36 00	39 00
3 and 4 in	52 00	55 00	No. 3	26 00	30 00
Moulding boards, 8 to 11 in. clear	37 00	39 00	Cut ups, 1 in	20 00	32 00
60 per cent. clear	32 00	34 00	Cut ups, 1¼ to 2 in	24 00	38 00
Fine common, 1 in	40 00	41 00	Coffin boards	20 00	22 00
1¼, 1½ and 2 in	40 00	41 00	Common all widths	22 00	26 00
			Shipping culls, 1 in	14 50	15 50
			do 1¼ in.	15 50	16 50

SHINGLES.

Spruce	1 30	1 50	Second Clear	1 75	1 90
Cedar, extra	2 65	2 90	Extra No. 1	1 25	1 50
Clear	2 25	2 50			

HEMLOCK.

Boards, rough	11 00	@11 50	No. 2	8 00	@ 10 50
Planed	11 75	12 00			

LATH.

Spruce			By cargo	1 80	@ 1 90
By car	1 80	@ 2 00			

OTTAWA LETTER.

[Regular Correspondence of the CANADA LUMBERMAN.]

Mr. Alfred Cross, of Liverpool, Eng., was in the city a fortnight ago. He represents some wealthy English firms who are large importers of hardwood for furniture manufacture, the object of his visit being to become acquainted with the timber resources of Canada. Formerly most of the lumber required has been obtained from the United States, but after viewing some of our hardwood forests, Mr. Cross decided to secure sections of maple and silver birch, as these are the woods that he most desires. Mr. Cross's backers in England also think it desirable that a mill should be established here for sawing up the lumber, and the probability is that it will be somewhere in this locality.

The death of Mr. James W. Agret, of this city, has removed one who formerly took an important part in the lumber trade of the Ottawa valley. He was in his day considered to be the best bushman and raftsman of these sections, being endowed with great energy of mind and bodily strength. At one time he owned one of the most valuable timber limits on the Ottawa, and was also one of the contractors of the C. P. R. line.

Mr. Peter Colter, well known as a lumber agent and explorer, returned early in May from a three months' trip through the different lumbering districts.

Mr. McLeod Stewart has had printed and distributed in pamphlet form the paper upon the physical features and geology of the route of the proposed Ottawa canal, between the St. Lawrence river and Lake Huron, by Dr. R. W. Ells and Professor Barlow, read at the last meeting of the Royal Society of Canada.

OTTAWA, Ont., May 22, 1896.

BRITISH COLUMBIA LETTER.

[Regular Correspondence of the CANADA LUMBERMAN.]

ANOTHER association of lumbermen has recently been organized in this province, to be known as the "Associated Lumbermen of British Columbia." It is intended to include dealers who ship their lumber into the eastern market, and who are not connected with the Central Lumber Company. At an early date I hope to be able to give some further particulars of the organization, of which, I learn, Mr. F. H. Moore is the efficient secretary.

A recent issue of the British Columbia Commercial Journal contains the following with respect to lumber matters: "A Vanconver gentleman, Mr. C. M. Beecher, has interviewed several members of the government with a view to securing protection to the lumber industries on this coast. We are not aware what shape it is desired that this protection should assume; but it was supposed by many people that, under the operation of the lumber combine which recently went into operation, all that was desired in the way of protection was in that way to be obtained. If the combine is supreme on both the United States and Canadian sides of the line, it is hard to see where protection comes in, unless the effort is being made by some who happen to be outside of the combination. On the other hand, if it be better forest protection that is being sought, we would suppose that the provincial authorities are those who ought to be approached. In any case it would be of interest and possibly of general benefit to know what is desired. Meantime, we have not yet learned that the combine has proved to be a failure."

At present there are eight vessels loading lumber at British Columbia ports for foreign markets, which is below the average number since the opening of spring. Their destinations are: Melbourne, Delagoa Bay, Cork, Antoniefta, Tientsin, Shanghai, Santa Rosalia and San Francisco.

The Brunette Saw Mills Co. shipped some of the longest lengths of sawn timber yet shipped per rail from their mills. These were 94 feet long, and 7 × 18. Other timbers in the shipment were thicker though not so long. They will be used in the construction of some hopper scows for the Dominion government.

COAST CHIPS.

The Sutton Lumber Co., of Uculet, have removed their head office to Victoria.

The Royal City Mills recently filled an order for 80,000 feet of spruce for the English market.

Lloyd's saw mill at Westholme, B. C., was recently damaged by fire to the extent of $500.

The Nelson Saw Mill Company has taken over the business of John Bell at Trail and Rossland.

Mr. J. H. Ramsdell, for several years superintendent of the Moodyville mill, has resigned his position.

The British Columbia Mills, Timber and Trading Co., of Vancouver, propose opening a branch in Rossland.

Grant & Monnee, saw millers, Union, have lately put in a new band saw, adapted for both light and heavy work.

Mr. A. E. Griffiths is manager of the Turkish Harbor Timber Co., of Vancouver, who propose erecting a mill this summer.

Mr. J. G. Woods, for many years manager of Leamy & Kyle's mill at Vancouver, has been appointed superintendent of the Moodyville mills.

NEW WESTMINSTER, B. C., May 19, 1896.

NEW BRUNSWICK LETTER.

[Regular Correspondence of the CANADA LUMBERMAN.]

INTEREST for the past two weeks has been centred upon lumber drives. The season thus far has been an unusually dry one, while the snow melted so gradually that the streams were not benefitted much thereby. The result is that difficulty has been experienced with driving, particularly on the smaller streams, and at the time of writing grave fears are held lest much lumber will be hung up. In some cases larger crews have been put on, who have pushed the drive along at full speed, but even then some have been unable to get to their destination. A few days' rain would be welcomed by lumbermen, who, in view of the strong demand in Europe for deals, are feeling no little anxiety in the matter.

The purchase of the Rourke mill and property at St. Martins by Maine capitalists has not taken place, and in all probability Messrs. Rourke will carry on operations themselves this season.

Messrs. Currie & Co., of Eel River, have completed their new mill and commenced sawing. The dimensions of the mill are as follows: Main building 70 × 30 ft., with an extension on the south side 50x30 ft. The power is furnished by a 120 h.p. T. M. Nagle engine and boiler, both furnished by the Robb Engineering Co., of Amherst. The mill will contain four shingle machines, rotary double edger, lath machine, planer and matcher.

The Point Wolfe property on the Bay Shore is one of finest in New Brunswick, and contains a large growth of lumber. It is estimated that 175,000,000 feet have been cut there in the past 26 years.

The Dominion government will likely subsidize two or more lines of steamers from this port to Europe next winter. This will enable lumbermen to place their product regularly upon the English market, as was done during the past winter.

BITS OF LUMBER.

C. & I. Prescott's mill at Albert has begun sawing.

R. C. Tait is having a new rotary put in his mill at Shediac, which will largely increase its capacity.

Jas. E. Porter, M.P.P., has commenced re-building his mill at Andover, which was consumed by fire last autumn.

The new saw mill of Messrs. Purvis at Carleton has commenced sawing. This will provide employment for a large number of men.

J. C. Wright and Chesley Smith, of Hopewell Hill, have purchased the steam rotary mill belonging to Dowling & Fletcher at Alma.

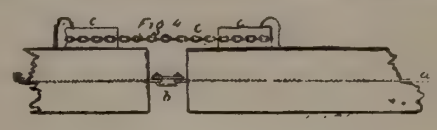
Frank and Henry Swim, of Doaktown, are building a new mill there with rotary, planer, clapboard machine, etc., to be ready by June 1. The old mill will be used for cutting board stuff.

ST. JOHN, N.B., May 20, 1896.

A recent issue of the Montreal Herald says: An agent of Howry & Sons, the well-known lumber agents of Fenelon Falls, Ont., and Saginaw, Mich., called on Mr. J. Prescott, head of the Montreal Municipal Labor Bureau, on Saturday, and enquired whether he could provide two hundred skilled lumbermen to go to South Africa to work in the bush there, and teach the natives how to fell trees and trim logs for market. Mr. Prescott replied that he could fill the contract, and he is now awaiting final arrangements before he picks his men. According to the agent it is intended that the men after teaching the natives the practical work will become bosses.

CANADIAN PATENTS.

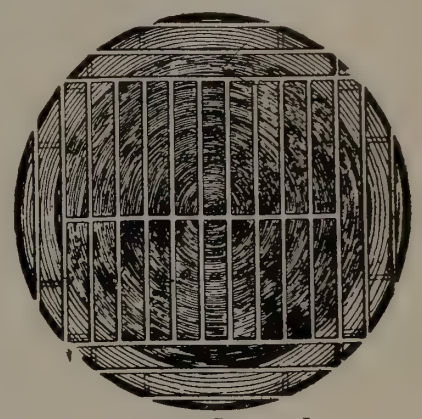
DENIS GAHERTY, of Montreal, was granted a patent on March 9th for a log boom, as shown by the accompanying illustration. It is comprised of any number of lengths or panels, each of which are formed of 2, 4, 6 or more pieces of timber bolted together, between which are laid



LOG BOOM.

longitudinally in grooves one or more wire cables, a, figs. 1, 2, 3, 4 and 5, and all the lengths or panels held together by means of the wire or cables, a, and wrought iron couplings, b, and the ordinary coupling C, C, C, substantially for the purpose set forth.

A patent has been granted in Canada to Annie S. Dees, of Moss Point, and George H. Howard, of Washington, U. S., for a device for sawing logs, as shown herewith. It consists in a saw mill, the combination of two carriages on opposite sides of the saw and rigidly secured together gauges on both carriages, stops to regulate the inward movement of the gauges, and means for operating the



DEVICE FOR CUTTING LOGS.

gauges, tracks on the under side of the carriage, rollers journalled to the floor for supporting the carriage, and bearings on the opposite side of the carriages. In the combination of a gauge one part capable of a predetermined movement toward the saw and an indefinite movement from the saw, with similar gauge on the other part, the two like parts being firmly united together with a saw, and means for moving them in either direction, whereby the material to be cut supported on one part is measured by the gauge on the other part.

ELECTRIC TREE FELLER.

AN apparatus has been brought out for felling trees by electricity. There is no saw proper, its place being taken by a drill, which, according to the nature of the wood may be used to perforate the base of the tree with a number of holes, placed so close together that nearly all the fibres have been cut, or it may be used to make a sweeping cut, as the cutting edges are on the side of the tool. This is the usual method. The machine is fastened to the tree and a cut of suitable depth is taken across its surface; the drill is then advanced an inch or two, and another cut is taken across its surface; the drill is then advanced an inch or two, and another cut is taken until about half the thickness of the tree has been gone through. Wedges are then forced in to keep the cut from closing up, and the operation is continued until it would not be safe to cut away more wood. The fastening chains are then loosened and the machine is removed, after which the final separation of the tree is accomplished by a hand saw or axe.

Cassier's Magazine for June contains interesting articles from the pen of well-known writers, among which are "Peat Fuel in Germany," by Louis Stem, "Steam Superheating," by W. H. Patchell, and "Economic Workshop Output," by W. E. Hall.

A valuable publication has been issued by the Century Company, of New York, covering a study of the white pine, with tables and volume of yield. It is edited by Gifford Pinchot and Henry S. Graves, and includes 102 pages, in cloth binding.

THE NEWS.

CANADA.

—R. H. Young, of Turtle Lake, Ont., is rebuilding his mill.

—E. Humphrey, Wiarton, Ont., has sold his saw mill to Thos. Moore.

—It is said that Porter Bros. will erect a large saw mill near Kaslo, B. C.

—A company is being formed at Westville, N. S., to manufacture shingle mills.

—The Brennan Mfg. Co. have placed new machinery in their mill at Huntsville, Ont.

—Bateson Bros. have leased the lath mill of the Ontario Lumber Co. at French River, Ont.

—Chew Bros.' mills at Midland, Ont., have resumed operations. Additional improvements have been made.

—The Ontario and Western Lumber Co., of Rat Portage, Ont., is applying to the Ontario Government for incorporation.

—The Sault Ste. Marie Pulp & Paper Co. have let the contract for the erection of another pulp mill at Sault Ste. Marie, Ont.

—E. I. White, a Nova Scotia lumberman and ship builder, has bought the Samuel Longfellow homestead at Machias, Me.

—P. C. Heuser, of Collingwood, Ont., has purchased a planing mill at Thornbury, and purposes adding considerable machinery.

—The Annapolis Manufacturing Co., of Lequille, N. S., is seeking incorporation. It is proposed to do a general lumbering business.

—The citizens of Westmeath, Ont., will raise the sum of $1,000 to assist Tucker & Hodges in rebuilding their mill recently burned.

—A button, upon which a monogram of the association is engraved, is now worn by members of the Western Retail Lumbermen's Association.

—Mr. Kilgour Shives, the well-known millman of Restigouche, N. B., has purchased an electric dynamo to be used in lighting his shingle mill at Campbellton.

—An American syndicate is said to be desirous of purchasing from the Vale Barrel Machine Co., of Hamilton, Ont., the right to manufacture the machine in the United States.

—The Ottawa Specialty Manufacturing Company, Ottawa, is seeking incorporation, with a capital of $45,000, to manufacture wooden and metalware furniture, interior fittings, etc.

—The Manitou Wood Manufacturing Co., of Toronto, which is seeking incorporation, will manufacture lumber, staves, heading, veneers, pulp, etc. The factory will probably be located at Midland.

—Rhodes, Curry & Co., of Amherst, N. S., have received two cars of Douglas fir from British Columbia, to be used in the manufacture of railway cars. Some of the pieces of timber are 75 feet long.

—The North American Paper and Lumber Co., with headquarters at Halifax, N. S., are seeking incorporation, with a capital stock of $2,500,000. It is proposed to manufacture lumber, pulp, paper, wooden goods, etc.

—Hiram Walker is said to be negotiating with some eastern parties for the erection of a large saw mill on the site of the old sugar refinery above Walkerville, Ont. The mill will be stocked by logs rafted down from the north.

—Some eight or ten portable mills will be operated between St. John and St. Martins, N. B., this summer. A couple of them will be located at or near Loch Lomond, three at Tynemouth Creek, and the remainder along the shore.

—Incorporation is announced of the Masterman Pulp Company, Ltd., of Montreal, with a capital of $300,000, the objects being to manufacture and deal in pulp, timber, woodenware, etc. The promoters are John A. Banden, Wm. Arthur, S. Frederick and W. H. Masterman.

—George Waite, who in December last, while employed in John T. Kerr's saw mill at Iona Station, Ont., met with an accident which resulted in the loss of a leg, has entered an action against Mr. Kerr, claiming $5,000 damages.

—An order-in-council has been passed making the regulations for the sale of timber of Indian lands in Ontario and Quebec, approved by order-in-council of 15th September, 1888, and amendments thereto, applicable to all Indian lands throughout the Dominion with the exception of British Columbia.

—A Port Arthur exchange says: The steam barge Wesley will shortly arrive to take on a cargo of three hundred cords of Hazlewood & Whalen's pulp wood at Big Pic river. It is estimated that it will employ an aggregate of one hundred men all summer to load their pulpwood on the lake steamers.

—The Milton Pulp Mill Company, Milton, N. S., are operating their mill day and night. The mill has run for fifteen months without losing a day. The company employ 38 men, and the pay roll is about $1,200 monthly. These figures include only the men employed in manufacturing the pulp. Large quantities of wood have been brought to the mill during the past winter, and still a greater quantity is now on its way down the river.

—Knight & Morrow, of Bedeque, P. E. I., are running their mill night and day, and are meeting with a brisk demand for their product. The mill is 150 feet long and 60 feet wide. It is run by steam and has a rotary saw, cross-cut, shingle saw and a cylinder saw for sawing staves. It gives employment to about 25 men, under the supervision of John McPhee, engineer. The lumber used for sawing is obtained in New Zealand, and brought to the mill by cars.

—Mr. S. B. Benson, of Midland, who spent the past winter inspecting the timber limits of the Haliburton Land and Emigration Co., formerly known as the nine townships of the English Land Co., reports that a large number of wolves infest a portion of the country he explored. It is his opinion that the game laws are but slight protection to the deer while these wolves are at large. He noticed many carcasses of the deer slain by the wolves, and that only parts of the carcasses were eaten, thus showing that the spirit of slaughter rather than hunger caused the wolves to hunt the deer. He believes that the game wardens should employ men to exterminate these wolves with poison.

FOREIGN.

—During last year America shipped to Africa $4,500,000 worth of merchandise, of which more than one-third was lumber from the Pacific Coast, the actual amount being $1,807,610.

—The Seattle Lumber Exchange has been organized at Seattle, Wash., which promises to be of great benefit to the lumber industry of the western coast. The opening of the exchange was the occasion of much merriment.

—The Standard Oil Company will make an attempt, this spring, to tow a barge across the Atlantic Ocean, from either New York or Philadelphia to some English port, probably Liverpool. This has never yet been tried. The Standard Oil Company has been considering the plan for four years, and was about ready to make the trial last summer, but the idea was given up.

CASUALTIES.

—D. J. St. Eloi had his leg broken on J. R. Booth's drive at Nipissing, Ont.

—Raoul Methot, 16 years of age, was killed in his father's mill at St. Antoine, Que., by a log rolling over him.

—While putting a belt on a pulley in a saw mill at Chelmsford, Ont., Charles Adams was instantly killed by being dashed against the pulley.

Erastus Durling was killed at Done Settlement, N. B. He was rolling logs off a brow, and was caught between two of them, being crushed to death.

W. H. Ellis, in the employ of W. & R. Butler, Woodstock, Ont., received serious internal injuries by being struck by a piece of lumber from a planer.

—Alex. Stewart, a lad of eighteen years, while working in Steinhoff & Gordon's mill at Wallaceburg, Ont., accidentally fell upon the saw, receiving serious injuries.

The clothes of an employee of J. R. Warner & Co., St. John, N. B., named Peter Carey, became entangled in the machinery, and he was carried around one of the shafts. Both legs were broken and other injuries received.

—A young man named James R. McDonald, employed at Macpherson & Schell's saw mill at Alexandria, Ont., was seriously injured by a floor-scraper, which, being caught by a saw, struck him on the back of the head.

—Word has been received at Ottawa of the drowning of Joseph Monette on Bissett's creek, which flows into Lake Nipissing, by the breaking of a jam. He had been in the employ of Bronson & Weston for a number of years.

W. C. B. Rathbun, the Toronto representative of the Rathbun Co., of Deseronto, Ont., while cleaning a revolver, was accidentally shot in the left side below the chest. At first it was thought the wound would prove fatal, but strong hopes are now entertained of his recovery.

PERSONAL.

Mr. W. C. Caldwell, the well-known lumberman of Lanark, will oppose Hon. John Haggart in South Lanark for parliamentary honors.

Mr. H. H. Cook, president of the Ontario Lumber Co., has accepted the Liberal nomination for East Simcoe for the Dominion parliament.

Mr. Maurice Walsh, lumber merchant, of Bridgewater Cove, near the city of Quebec, died suddenly on the 4th ultimo, from heart failure.

Mr. Edward Mackay, of the firm of Carswell & Mackay, lumber merchants, Renfrew, Ont., died on the 12th of May, at the age of 40 years.

Hon. E. J. Flynn, Commissioner of Crown Lands for Quebec, has accepted the invitation of the Lieutenant-Governor to form a cabinet, as successor to Hon. Mr. Taillon.

It is rumored that Mr. Henri Vassal, lumber manufacturer, of Drummondville, Que., will be the Conservative candidate for the counties of Drummond and Arthabaska at the appoaching general elections.

Mr. E. C. Grant, of the Ottawa Lumber Company, has been elected a member of the American Lumber Corporation. He is said to be the first Canadian to obtain this distinction.

Mr. J. W. Todd, of Watson & Todd, lumber merchants, Liverpool, Eng., with branch offices at Ottawa and Montreal, is at present in Canada, superintending the season's shipments of pine deals, boards, etc.

Mr. Jas. B. Klock, head of the lumber firm of R. H. Klock & Co., of Klocks Mills, Ont., recently returned home from a business trip to Europe, and was given a reception by the townspeople. In all probability he will contest the Nipissing district in the Conservative interest at the Dominion elections.

The death is announced at Nappan, N. B., of Mr. Thomas Bulmer, in his 74th year. He was an extensive lumberman and contractor, being one of the pioneers in stripping the northern part of the county of Cumberland of its pine, in the forties, and a few years later went into the making of hackmatack knees and timber. He is said to have amassed considerable wealth.

Mr. John Macdonald Grant, Clerk of Patents in the Crown Lands Department of Ontario, died in Toronto on the 17th ultimo. Mr. Grant entered the service of the government in 1860, since which time he has filled the position with much efficiency. He has been succeeded by Col. C. J. Jones, formerly registrar of the department, Mr. Frank Yeigh, Secretary to the Commissioner, becoming registrar.

Probably the oldest tree in France, if not in all Europe, is the famous "Chieftains' Oak," standing near Martigny-les-Baines, in the department of the Vosges. The age of this monarch of the forest is certainly over a thousand years. It was already noted for its size at the time of the revolt of the Jadquerie in 1358, to which its name can be traced, and it no doubt served the leaders of the enemy as a rallying point during Louis XIII's war of conquest in Lorraine in 1634-46. The giant is now decaying at the top and evidently has almost completed its term of existence. It measures one hundred feet in height, forty feet in circumference near the ground, and seventy feet around the branches.

In Finland the best forests are now in the hands of the government. The feeling in Finland is that although they scarcely show a profitable investment at present, the time will come—probably within the present generation—when the State forests will be a source of great wealth to the country, and that, therefore, the State should continue to acquire as much additional forest territory as possible. This important movement is beginning to make itself felt. There are firms who have to restrict their purchases to crown logs for securing large-sized timber, and the cost of these is very high. The revenue of the crown forests in Finland for the first six months of this year was about $440,000, as against $380,000 for the corresponding period of last year.

THE MASTERMAN PULP MILL.

THE new Masterman pulp mill, which has recently been put in operation at Mill Cove, N.B., is one of the most complete establishments of its kind in America. The site is on the banks of the Miramichi river, at the mouth of a large brook which empties into the river. From this brook water power is obtained for operating the mill, there being two dams, the larger for reserve, covering 200 acres.

Seven large buildings, with one or two smaller ones, contain the plant in its entirety. All are built on stone foundations. The walls of the digesting building, which is 84 x 32 ft. in size, are built up of stone to a height of 30 feet, with a thickness of from four to two feet. The walls above that are of wood, making a height of 60 feet. The other buildings are of wood, sheated with iron. The store-room is 100 x 50 ft. and the paper mill of the same size. To the rear of these is the engine and boiler rooms, 100 x 40 ft. Two other buildings through which the pulp passes in different stages of its manufacture are 20 x 100 ft. and 50 x 40 ft. The large digestor building, 84 x 32, has a tank-house adjoining of one storey, 84 x 30, while at the back of these is the sulphur burning and acid building, 60 x 70, and the wood-cutting building, 40 x 70.

Into this latter structure the slip, 240 feet long, leads from the water. The logs when raised to the top of this are carried against saws, which cut them into lengths. These pieces are then stripped of their bark by machines similar to those used in shingle mills, and the knots are then bored out by other machinery. The sections are then thrown into the grinders, which cut them into small chips of three-fourths of an inch across. All sawdust and fine particles having been shaken out, these chips are carried down to the digesting building, situate on a 40 or 50 foot lower level. Here the stuff is stored in immense bins till it passes below to the digestors, six in number, where it is cooked for 12 or 15 hours, and after going through different operations, passes on to the buildings containing the paper mills, which reduce it into the sheet form and leave it in rolls ready for shipment.

The acid, which amounts to 76,000 gallons a day, is run by gravitation into the digesters. Throughout the whole plant gravitation is made use of in the conveyance of materials to a large extent, thereby effecting a great saving in machinery for pumping.

The mill is lighted throughout by an electric light plant placed in the building. The equipment is almost entirely of Canadian manufacture, the fittings being supplied by McAvity & Sons, of St. John, and the boilers and engines and most of the machinery by E. Leonard & Son, of London. The water power is also an important factor in cheapness of operation. A raceway 1,700 feet in length carries the water from the lower dam with a 25-foot head on the wheel, which is a 240 horse power turbine of the improved Leffel pattern, made by Paxton & Tait, of Port Perry, Ont.

The capacity of the mill will be thirty tons of dry pulp per day, while the largest mill in the United States only turns out fifty tons of wet pulp in the same time, wet pulp being 30 to 40 per cent. moisture. Upwards of 80 cords of wood per day will be converted into pulp, for which from $2.50 to $2.75 per cord is generally paid.

A cubic foot of logwood weighs 57.07 pounds.

Satinwood weighs 55.31 pounds per cubic foot.

Lancewood, without knots and well dried, weighs 45 pounds to the cubic foot.

AN HISTORIC TREE.—An historic elm tree at Plymouth, Pa., was cut down recently for fear it would collapse during a heavy blow and cause damage. The elm was voted on March 2, 1774, by the town meeting as a place of public rendezvous, and was then referred to as "the noble tree upon which our ancestors have gazed." Subsequently to 1774 it served as an auction mart, village market, and whipping-post. A count of the rings upon it showed that the tree was 372 years old.

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J. H. WALKER Manager

FOREST FIRES.

FROM nearly every section comes the report of forest fires, owing to the extreme drought of the present season. The United States, as well as Canada, has suffered considerable loss, especially in the east. In Canada, the provinces of New Brunswick and Nova Scotia have been the seat of a number of fires, but the largest ones have been confined to Ontario, their location being along the line of the Ottawa, Arnprior and Parry Sound Railway.

A despatch from Whitney, dated May 12, says: What proved to be the greatest fire this district has ever known started on Saturday not far from here. Every one thought that when it reached the Madawaska river, which is almost a quarter of a mile wide here, that this would afford a fire break. But the wind carried the cinders across into the bush on the opposite side, and away the fire continued in its career, feeding on brush and dry leaves and other vegetation of years' accumulation. At one part of this river McLachlin Bros.' rivermen, who were engaged in driving logs, had to take all their supplies, place them in a boat and put out into the river. Some of the men who were less fortunate had to wade into the river until they were up to their chin in water and remain there until the flames were past. The fire kept along the Madawaska river until it reached the Egan estate, some twelve miles east of Whitney. By this time the wind was dying down, and the cool shadows of evening seemed to check the raging of the flames. The fire burned all night, however, and left in its track thousands of trees burning. At different places where there were gummy knots in the trees the spouting flame afforded a fine spectacle. Sunday morning the wind sprang up again, but altered its course so that the fire partly burned back over its course of the previous day, but settlers, who were unfortunate enough to be near its course, had all their belongings packed up ready at any minute to run to a place of safety. The efforts put forth by Mr. Booth's efficient firemen and also the officials of the O., A. and P. S. Ry., rendered valuable service in saving property and protecting their right of way, none of which was damaged to any extent, as large forces of men were kept on hand to watch the fire closely. The fire is thought to have been caused by the burning of the right of way.

TRADE NOTES.

Mr. John Carew, of Lindsay, has purchased an improved shingle mill from the Kingston Locomotive and Engine Co., of Kingston.

The McEachren Heating & Ventilating Co., of Galt, Ont., will shortly ship a dry kiln outfit to Nova Scotia, being the fourth shipped to that province since March 1st.

Incorporation is being asked for by the MacGregor-Gonrlay Co., of Galt, Ont., to manufacture wood and iron working machinery, castings, etc. The capital stock is to be $300,000.

The William Hamilton Mfg. Company, of Peterboro, Ont., recently shipped two steam loggers to British Columbia, one for Gilley Bros. and the other for the Hastings Saw Mill Company, Vancouver.

Owing to increase of business the Penberthy Injector Company, of Detroit, Mich., have found it necessary te add a large number of monitor lathes and improved machinery to their equipment, and to put in a new engine to supply additional power required by increase of plant. The stock department has been moved to another building in order to make room for additional machinery.

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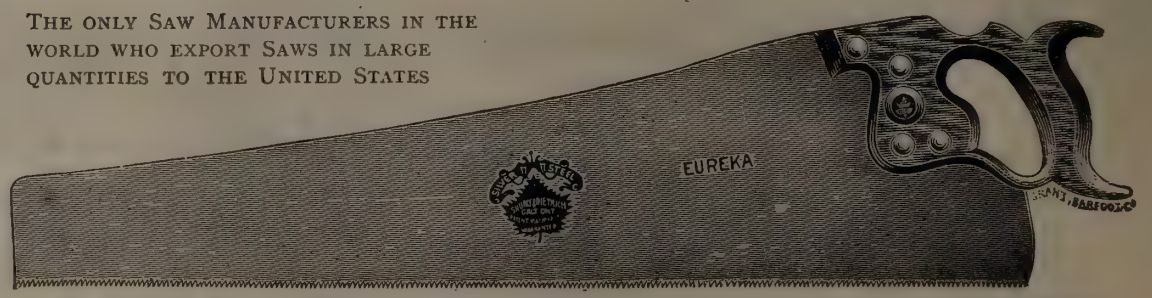

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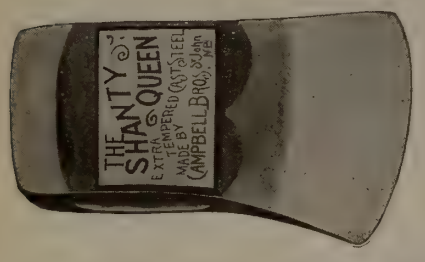
It is estimated that 3,000,000 wood bicycle rims will be used in the United States this year. They are nearly all made of rock elm. Only 20 to 25 per cent. of the elm produced is suitable for good rims On the basis of 2½ feet to the rim, 3,000,000 rims require 7,500,000 feet, hence the furnishing of this particular quality of stock requires the handling of fully 35,000,000 and possibly 40,000,000 feet of rock elm lumber.

There are two kinds of teak wood, the Indian and African. This wood is very valuable in ship-building. The Indian teak (Telcona grandis) is a tree of the natural order Verbeneecæ, is slow of growth, a beautiful tree, and attains a height sometimes of 200 feet. Its white flowers are used medicinally. The leaves are used for coloring purple. The timber is stroug and resembles mahogany. The most extensive forests are in Pegu. The trees grow in lumps forming their own forests. Elephants are used in the teak districts to carry the timber and for piling it up.



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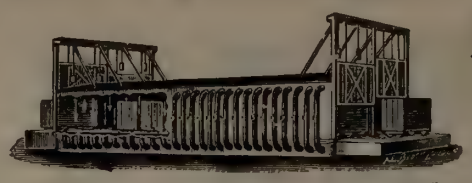

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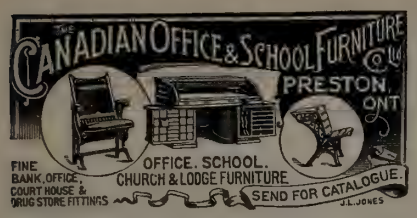

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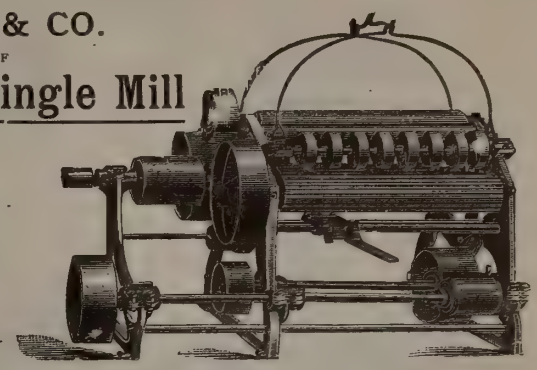

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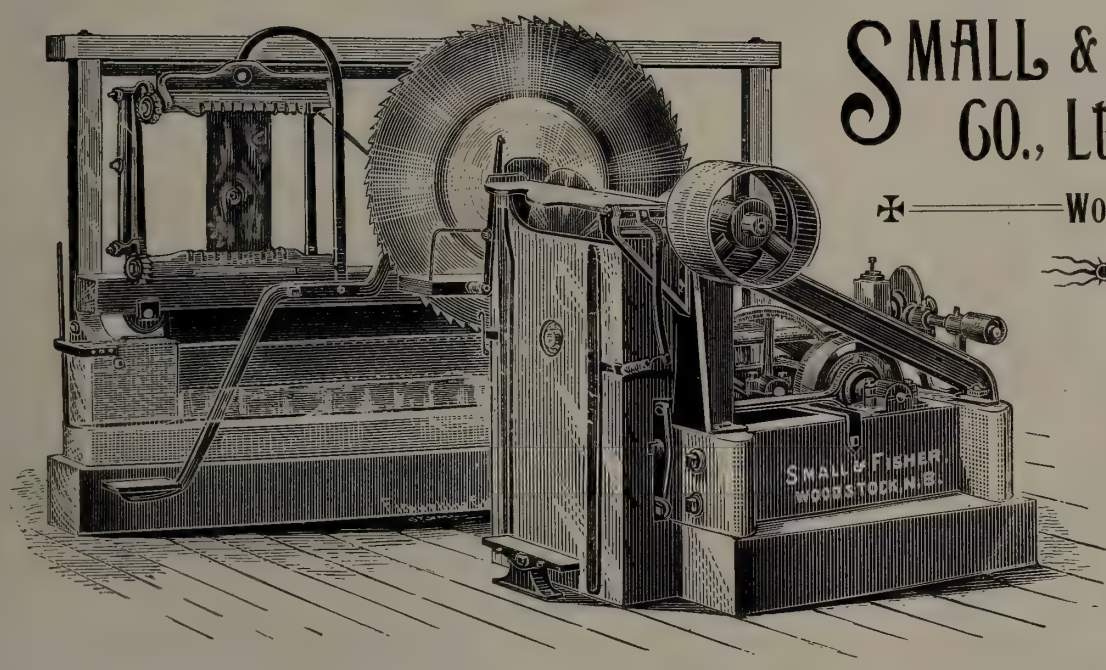

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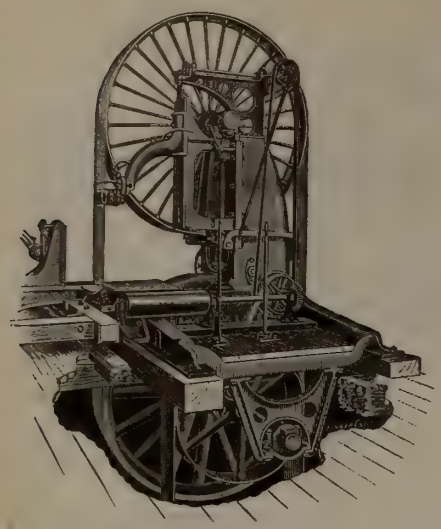

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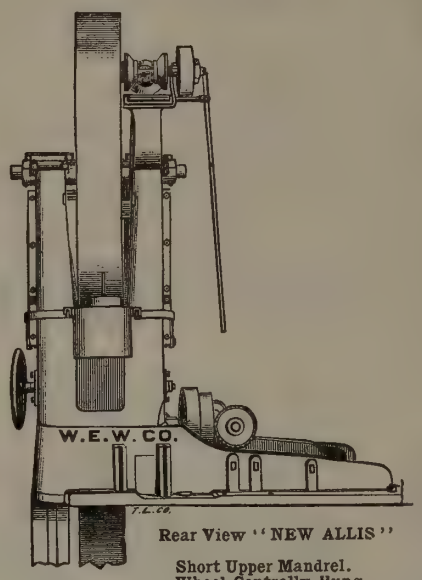

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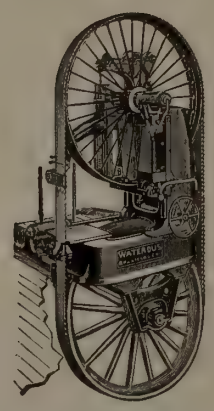

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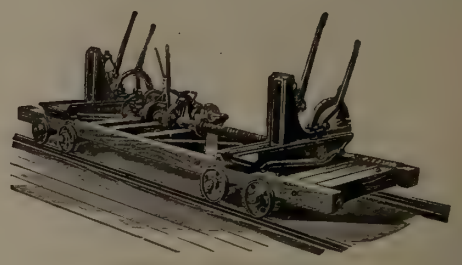

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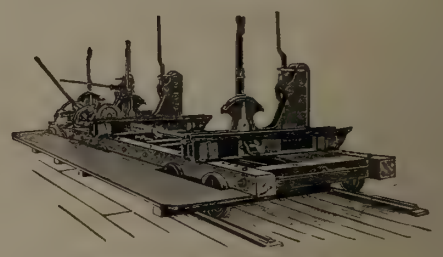

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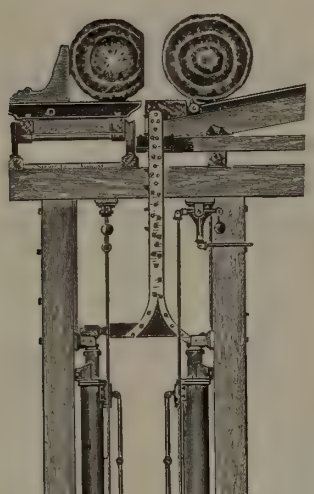

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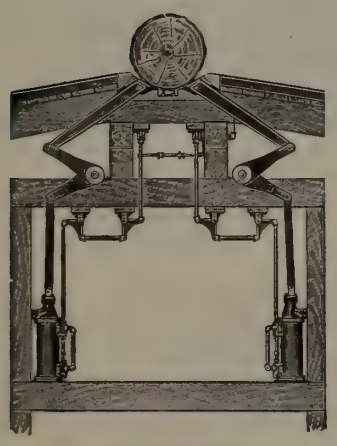

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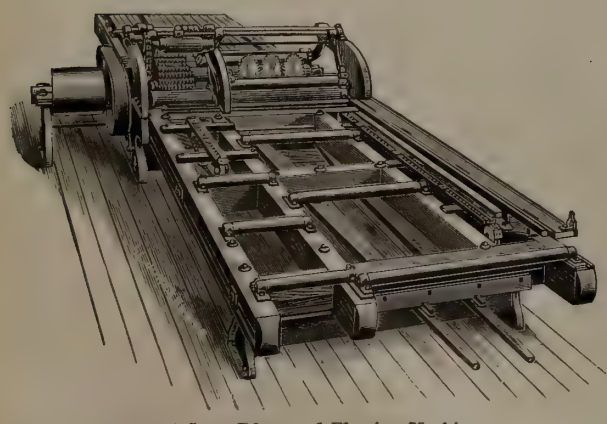

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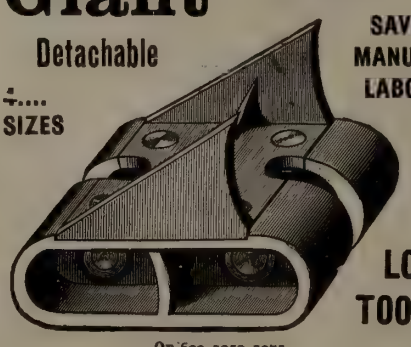

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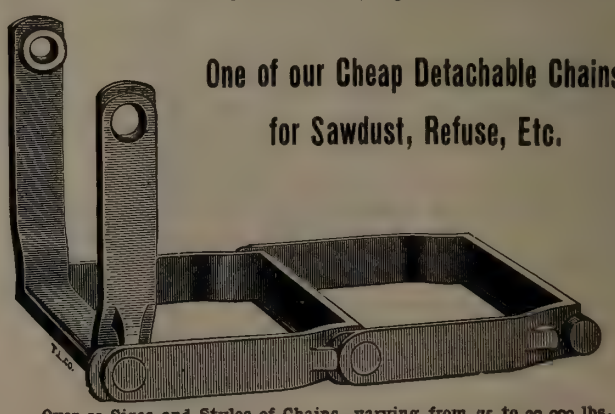

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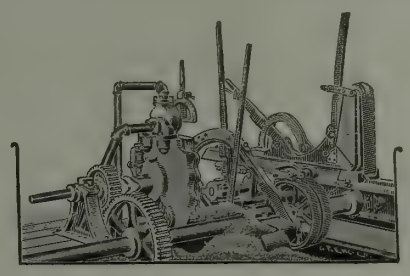
The accompanying cut shows the Dake Engine as attached to saw mill carriage set work. The engine, as shown, is reversible, advancing and receding head blocks at the will of the operator. Does away with coil springs used for receding head blocks, and is a practical assistant to a saw mill carriage, enabling the setter to handle the heaviest logs with ease. Steam is carried to engine by means of steam hose, or by swinging steam pipe with knuckle joints, taken from near the center of carriage travel. As applied to carriage work, it has been in actual operation for over a year.



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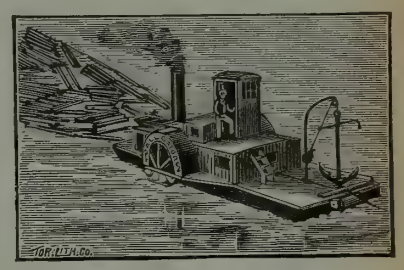

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••Saw Mill Machinery••

Dauntless Shingle and Heading Machine

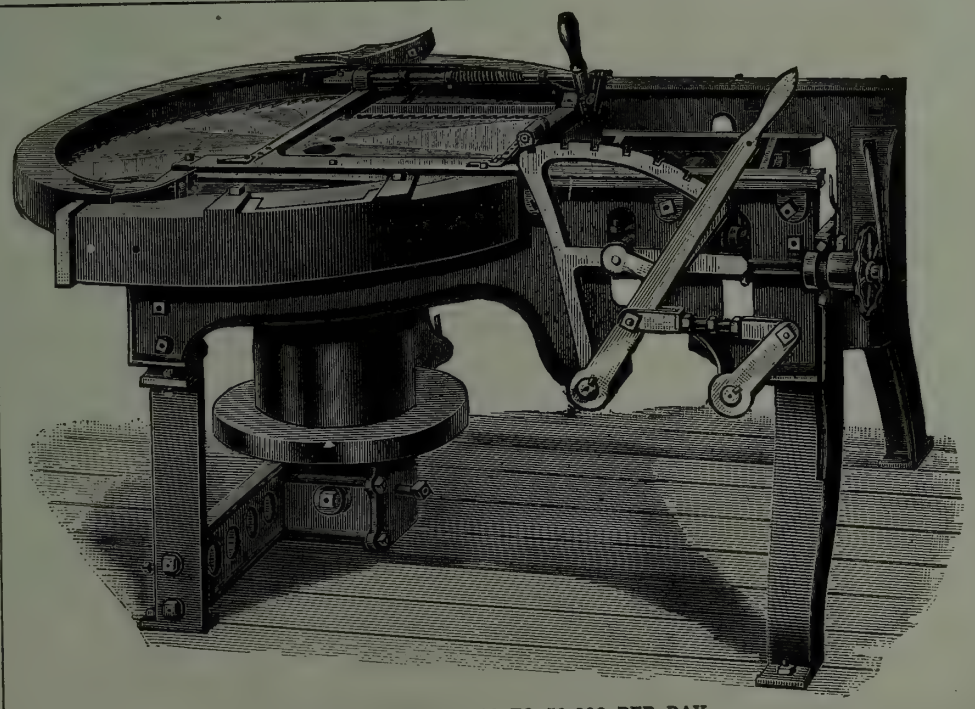
∴ WILL make more Shingles per day than any self-acting machine with vertical saw in existence, and more Shingles from the same quantity of timber.

THE FRAME

... Is of Iron throughout, very heavy and rigid, strongly bolted and braced.

THE CARRIAGE

... Is very light and strong, made of forged Cast Steel Plate, running on steel ways or tracks. Will take in a block 18 inches wide and 19 inches long, adjustable for 16-inch or 18-inch shingles.



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Your Saw Mill is equal, or nearly equal to any we have seen of much heavier make, and far in advance of any light rig in the market. The capacity per day is fully up to your guarantee, 40 M per day. We have tested with eight men.

The Shingle Mill cannot be beaten for any kind of timber. Ours being in a manner a custom mill, we have good, bad and indifferent timber, but for all it does the work satisfactorily.

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Yours truly,

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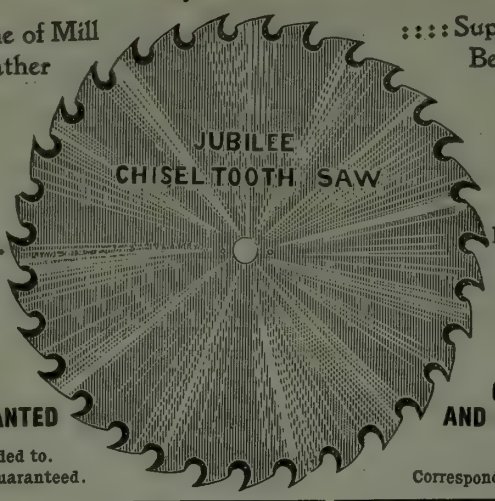

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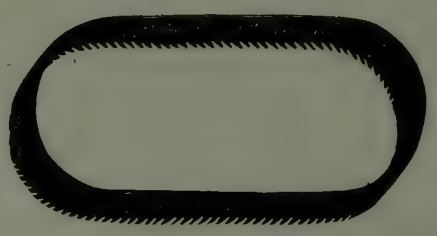

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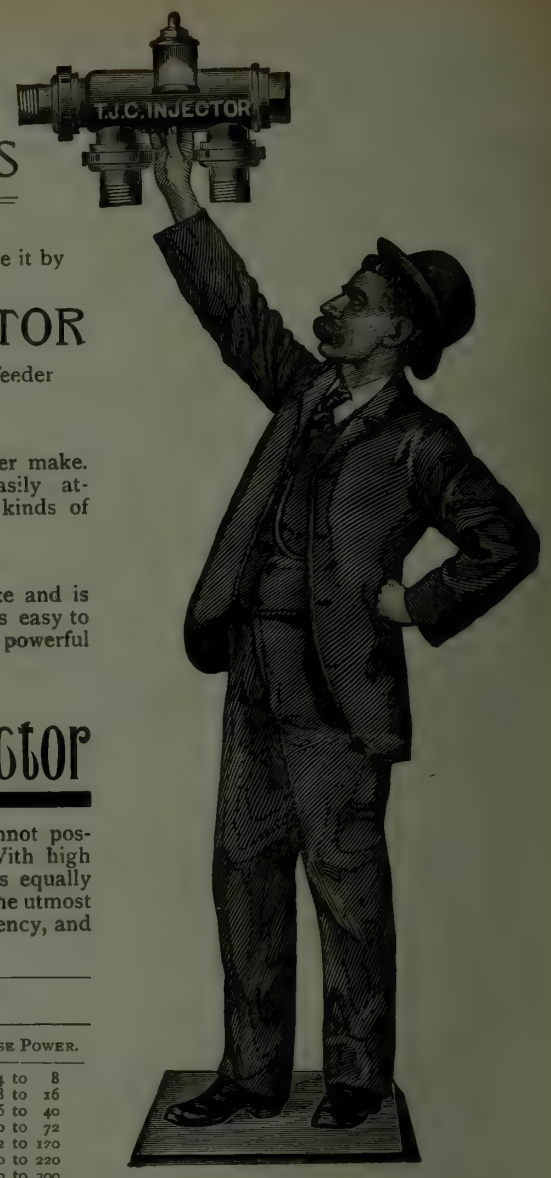

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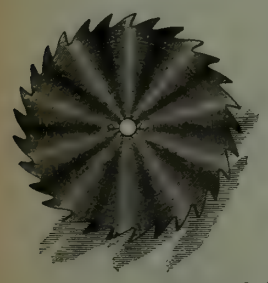

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THE CANADA LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XVII. NUMBER 7. | TORONTO, ONT., JULY, 1896 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

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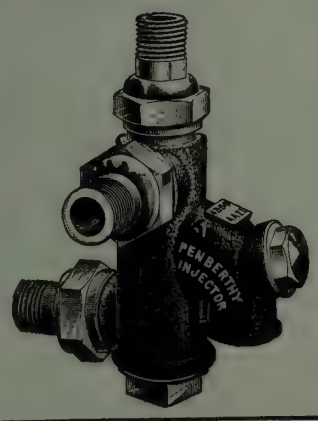

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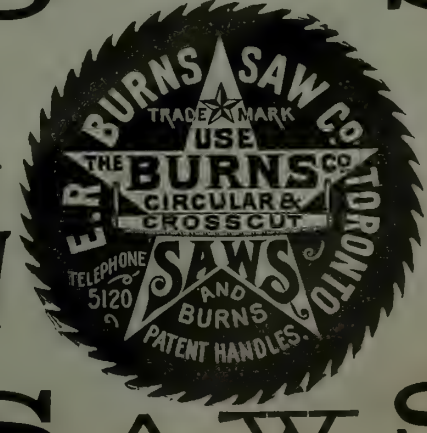

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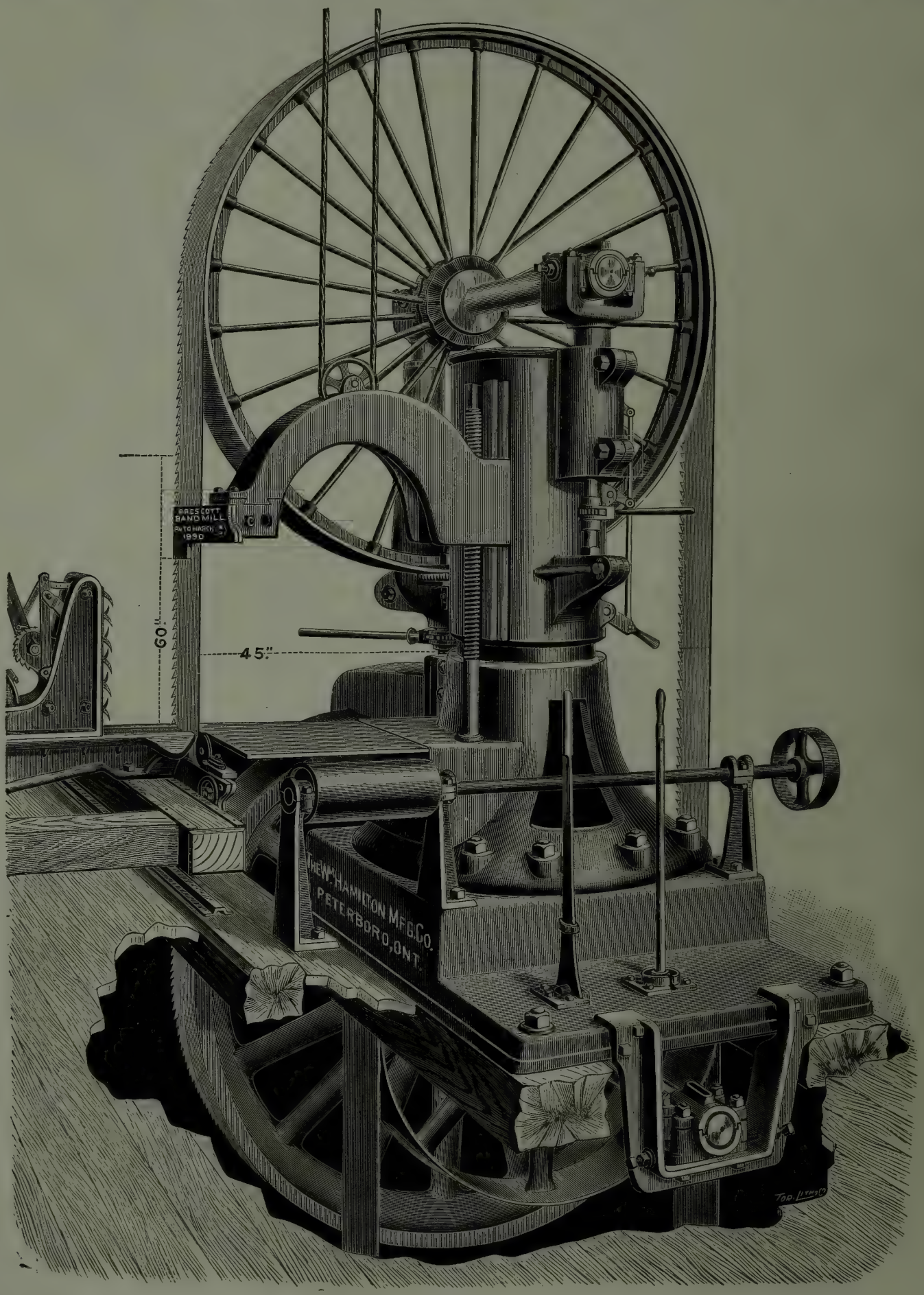

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THE CANADA LUMBERMAN

VOLUME XVII. NUMBER 7. | TORONTO, ONT., JULY, 1896 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

SPOOL-MAKING.

THE making of white birch spools has of recent years become an important industry in some parts of New Brunswick and the Eastern States. From the Lumber World, of Buffalo, we obtain the following description of the method of manufacture:

The rough sticks are sawed into bars an inch to 2½ inches square and four feet long. These bars are piled in high stacks out of doors and left for about three months to dry and season thoroughly. Then they are stacked in the dry house. There are three dry-rooms in the mill, each about 16 feet square. Here the birch sticks are left generally for about six hours, or until they become thoroughly dried. This process of drying is of considerable importance. When the wood is taken out of the dry-house, it is ready to be used. Workmen take the four foot sticks and cut them up into blocks the length of the desired spool. The machines they use are called roughing-machines, and the men are known as roughers. The long stick, in less than a quarter of a minute, is cut off into proper lengths. These blocks have been bored throughout, and their eight corners are rounded off. From the roughing-machines the "blocks," as they are now called, slide down into barrels and are carried across the mill and dumped into huge bins.

From the bins the finishers shovel out the blocks as they need them. The finishing machines are marvels of mechanical ingenuity. Sets of keen knives are so arranged that, by one movement of the attending workman, a rough block is turned into a spool that needs only polishing to make it perfect. And the entire change has been made in less than a second. The spools are made to polish themselves. Sixteen barrels, two feet in diameter, made of slats and bound together with steel hoops, are filled with spools. A cake of wax is thrown into each, and then all are made to revolve by means of pulleys and belts. It generally takes about two hours for the spools to become polished by their continual rubbing and chafing against one another. The lump of wax rubs against them and aids in making the spool smooth.

From the revolving barrels the spools are turned into boxes ready for shipping. But they cannot be pronounced perfect until the gager has inspected them. Armed with steel gages which measure exactly the proper size of the spool desired, the gager picks out several spools from the box before him and measures them. They must fill the gage exactly. There are 15 different sizes of spools made at the mill. The 14 smaller sizes are made by the same process, but the larger size, called a bobbin or long-length spool, has to be made in pieces. There are three of these pieces, the "barrel" and the two ends or heads. The barrels are turned from white birch sticks about two teet long and from two to 2½ inches square at the ends. The heads are fashioned from blocks that are from four to five inches square at the ends. What they call a Weymouth lathe rounds off the big blocks. Then the parts are taken to another machine, where they are glued and driven firmly together. The gluing is done by hand.

The freshly-glued bobbin is taken to a third machine which drills holes in the two heads. Then stout pegs are driven in, and the bobbins are taken to the dry-house to remain until the glue has become hard and firm. It is then the finishers turn to take the big bobbins in hand, and when they are done with them, the clumsy-looking sticks have been fashioned into perfect bobbins that need only a little sandpapering and some shellac on one end to be called finished. One has little idea of the amount of waste that is made in a spool mill. When the roughers start in with their long sticks, there are knots and bad pieces that must be cut out and thrown away. It is the easiest thing in the world, with machinery that is whizzing and whirring so fast that the eye cannot follow its movements, to bore a hole a little from the centre of the block or make some other slight mistake, and then the block is of no further use and is thrown in with the waste. Sometimes the finishing machines run so fast that the heads of the spools become the least bit scorched and colored. That is enough to make the spool imperfect, and it is thrown away. There is a constant picking out of bad pieces and throwing them out, all through the process of making spools. Over half of the lumber brought into the mill is thrown into the waste heap.

THE OPENED GATE.

UNCLE SAM:—"Well, after Judge Wheeler's decision, I s'pose I'll have to let you in and call that load dressed lumber."

YOUNG CANADA:—"If you'd called it anything else, I'd have called your head a manufacture of wood."

STRENGTH OF WOOD.

"As a result of nearly 40,000 tests of timber made at the laboratory of the Washington University of St. Louis, under the direction of the forestry division of the Department of Agriculture," says Railway Engineering and Mechanics, "the following facts have been determined: Seasoned timber is about twice as strong as green timber, but well seasoned timber loses its strength with the absorption of moisture; timbers of large sections have equal strength per square inch with small ones when they are equally free from blemish; knots are as great a source of weakness in a column as in a beam; bleeding timber does not impair its qualities."

With some kinds of piston rod packing, when the engine stands still over night, there is a deposit of packing and rust on the rod where the packing comes in contact with it. This evil may be greatly lessened by locating a sight feed oiler so that it will drop cylinder oil on the rod continually while running. Give it a trial.

NOVA SCOTIA NOTES.

[Correspondence of the CANADA LUMBERMAN.]

IN our ramblings for June we parted company in the historic town of Shelburne, and I promised to give you something regarding the lumber business in my next. Before going into details, I will say that sawmilling at Shelburne and on the Shelburne river is one of the oldest industries of the province. Most of the mill-men now doing business in Shelburne and up the river are the grand-sons of men who began the business, so that in most cases the present operators were born and bred to the sawmilling business, and are consequently practical and in most cases successful mill-men. When I say "successful" I do not mean to compare them to some of the western lumbermen, who have made "millions," and whose positions and standing are looked upon by some as the natural and ultimate goal of all in the lumber busines. What I do mean to say is that by dint of hard work, energy, and economy, together with their practical training, the majority of them have acquired a fair competence, which they richly deserve.

In the town of Shelburne James R. Bower has a steam saw mill, with shingle machine, planers, band saws, cylinder barrel, stave and heading machines and turning lathes, in which he does a good business, manufacturing barrel stock for fishermen, thin boards for fishermen's dories or boats, framing timber, ship builders' stock, such as futtocks and knees (of which the frames and bracings of deck beams, etc., are made), culling and planking timbers, deck plank, treenails, stanchions, rails, etc., etc., and besides he sends cargoes of lumber and shingles to Newfoundland and the West Indies. He also does considerable local sawing for the building trade. Mr. Bower began this business here only a couple of years ago, but through his indominatable energy and push has worked up a nice business.

Bower Bros. have a water power saw mill at the head of Shelburne harbor, about one mile from the town, with gang mill, shingle machine, barrel and heading machinery and planers, in which they do a good business. Some two years ago they had the misfortune to lose their mill by fire, and when they rebuilt the machinery was modernized. The class of work done is somewhat in the same line as James R. Bower, but they ship more of their stock to the West Indies and American ports. This section of the country is noted for its oak, which they supply for car works and furniture, the principal furniture manufacturers in the province getting their stock of oak from them.

Andrew Bower & Son have a band saw in their mill, which is on the Shelburne river, about four miles above Bower Bros. This is the first log band saw mill in Nova Scotia. When Mr. Bower heard of the band saw he judged it would be a good thing, although band saws were only in their infancy at the time; yet he had the courage to try the experiment and is thoroughly satisfied with the result. Both Mr. Bower and his son being practical mill-men, it did not take them long to master the difficulties that usually attend the change from one style of saw to another. They also have a fine water power and manufacture lumber, lath, pickets, shingles, ship plank, treenails, and anything else that can be made out of the round log, and find a ready market for their products.

George W. Durfee, Shelburne, has a water power mill in which he makes staves and heading for fish barrels, ships, blocks and pumps, and also does planing for builders in the town, and does a good shingle business besides. Mr. Durfee has an eye for a fast horse and usually has one ready to give your correspondent a spin when he has the pleasure of being in Shelburne. Mr. Durfee is a thoroughly practical man in his line of business, and pays strict attention to business—when there is no horse trot on. The old saying, "All work and no play makes Jack a dull boy," is as applicable to mill-men as to any class; their work is exacting and an occasional change is a benefit to them.

Frederick R. Muir has a small mill in the town, planing, sawing, turning lathe, etc., also a cording mill, steam power.

John T. Ryer & Son had a fine rotary mill, but it was burned down. They have not rebuilt yet, but hope to do so at an early date.

At Ohio, some eight to sixteen miles up the Shelburne river, there are a number of mills, all water power; they are small, but in the aggregate saw a lot of lumber, some of which is for the local trade and the rest is shipped from Shelburne. Robert Bower has a nice rotary mill; then there is James Bower, David A. Bower, John J. Bower, and T. H. Bower & Son, and they all do about the same class of work, sawing lumber, shingles, staves and heading.

J. A. & J. H. McKay have a water power sawmill at Clyde river, some fourteen miles west of Shelburne; they have rotary, edger, lath and picket machines, planer and shingle machine. Their logs come down the Clyde river. They also saw a large quantity of oak, finding a market for it in the furniture factories of the province, and a lot of spruce and pine, which is shipped from Port Clyde, a few miles away. There is a good demand for oak ship plank.

Mr. Joseph A. McKay owns and runs the hotel of the place, in which the weary traveller can have his wants well attended to and go on his way rejoicing. Both Mr. and Mrs. McKay do all they can to make the "wanderers on God's footstool" feel at home, and in this respect they are quite successful. Mr. McKay is a J. P., and woe betide the unlucky wretch that has been brought before him and proved to have broken any of the statutes enacted by the representatives of Her Majesty, Queen Victoria, yet I think his disposition would be to "temper justice with mercy." Mr. McKay is prominent in the affairs of the county of Shelburne, and also prominent in the political parties—both local and federal—with which he identifies himself.

Clyde river and Port Clyde at one time were the headquarters for ship-building and lumbering in the south-western part of Nova Scotia, but wooden ships having gone out of date, that industry has dwindled to very small proportions, and the lumbering mills, burned some years ago, were not rebuilt. While the owner, Hon. Thomas Coffin—a member of the MacKenzie administration—was doing business there the place was a live, busy spot. It is to be hoped that the ebb tide has been reached and the flood tide of prosperity will bring back some of the old time prestige.

W. J. P.

TWO BERLIN PLANING MILLS.

THE planing mill of Mr. Jacob Kaufman is situated on the main street of the thriving German town of Berlin, Ont. It is a brick structure, three stories high.

Mr. Kaufman started a planing mill and lumber business in 1877, and since that time has turned over between $50,000 and $70,000 per annum. The present building was erected a short time ago, and thirty men are kept constantly employed in and around the factory.

On the ground floor is the heavy machinery, with offices in front. This machinery is comprised of two planers, two rip saws, a moulder, a resaw, and a sand-paperer. In the basement is a Goldie & McCulloch Wheelock engine of 45 h.p., supplied by a 60 h.p. boiler along side of the same make. On the first floor is a band saw, pony planer, buzz planer, three cross and rip saw machines, turning lathe, shaper, moulder, tenoning machine, mortiser, and blind slat machine.

The top flat is used for a store-room, in which are stored mouldings, doors, sashes, blinds, etc.

In two annexes are dry kilns of 20′ × 18′ and 15′ × 18′ dimensions, made by the Sturtevant Company.

In the yard is a large store house for dressed lumber, and 1,500,000 feet of lumber is kept piled in the yard. Mr. Kaufman has another yard further up the street in which he keeps lath, shingles and cedar posts.

All the lumber used in this mill is supplied from Mr. Kaufman's own saw mill at Trout Creek, where he cuts annually 2,000,000 feet of lumber. He reports prospects fair for a steady building season and is now busily engaged filling orders for building material.

Situated in the same town is the planing mill of Mr. John Hall, a short distance below that of Mr. Kaufman. To this mill and yard are shipped annually from 150 to 200 cars of lumber. The building is a three-storey frame structure, with brick faced front and concrete covered sides. A new 45 h. p. Wheelock engine supplies power to the mill.

The ground floor is filled up with the following heavy machinery: matcher, planer, two rip saws, cross-cut saw, and moulder. In front are the offices, projecting out from the building. On the first floor are the usual amount of machinery in a well-equipped planing mill, comprising: turning lathe, mortiser, tenoning machine, sand-paperer, boring machine, band saw, dadoing machine, rip saw, and buzz planer. This planer in two days will run through 13,500 feet of lumber. The second floor is used for bench work and a store-room. The other store-room is in a rear annex, and to one side is a dry kiln of a capacity of 30,000 feet.

In the yard of half an acre is piled the rough lumber, and in a shed 80′ × 20′ is stored the dressed lumber. The mill and premises are lighted by gas and the building is heated by steam. About 30 men are employed.

"THE LUMBERMAN" IS APPRECIATED.

THE Sauble Falls Lumber Co., Sauble Falls, Ont., in remitting their subscription, write: "We greatly apprsciate THE LUMBERMAN, which continues in well sustained interest and value to to its patrons."

FROM LES QUINZE TO QUEBEC.

MR. Peter J. MacIntyre, of Edinburgh, Scotland, in the Mattawa Tribune, gives the following interesting description of a trip on a timber raft from the head waters of the Ottawa river to Quebec :

"The longest trip on a raft which it is possible to make is from the head of Lake Temiscamingue to Cap Rouge boom, near Quebec.

The timber is made in remote shanties, far above Lake Expanse. It is then floated down Quinze lake in a boom, and soon arrives at the foot of the Rapides des Quinze, fifteen in number, one of them nearly as wild as the Chaudiere at Ottawa.

At the foot of Les Quinze the timber is rafted up. The foundation of a crib consists of two long pieces of timber called floats ; at each end of the stick is a large wooden pin ; long traverses are then put on the pins and the timbers are tightly wedged in below. Above all this, the three long loading sticks are placed, then the footboards, row-locks, thole-pins and calumet-pins are put in their places, and the crib is finished. The cribs are then banded up together with "kirkshaws," cap pieces, pickets and rope. About a hundred and thirty-six cribs make a large raft.

We are then towed down Lake Temiscamingue to the head of the Long Sault Rapids. At low water this is a very dangerous place, and only single cribs can be run at one time.

Next comes the Mountain Rapids, then the Les Erables, after which follows La Cave and Demishars, none of which are very rough.

Our next place of interest is Mattawa, at the mouth of the Mattawa river. Here plenty of visitors come on board to get a meal of pork and beans. Here the old shanty "Chansons" are often heard :

Some are bound for England and some are bound for France,
But we are bound for Quebec town, to give ourselves a chance.

A RAFT ON LAKE TEMISCAMINGUE.

Rowing down the river with the side oars we arrive at the Deux Rivieres Rapids, which at high water are very wild and dangerous at the last pitch. Cribs have been known to "jack-knife," or tumble over backwards, drowning all hands.

Flies of all kinds are the greatest annoyance to the hardy river-men ; mosquitoes, sand-flies, black-flies and other noxious insects torment the men all night. Oil and other devices are tried, "smudges" of grass are made, but it seems to be of little use, and all through the hot summer nights fiery French Canadian oaths are heard.

The Rochier Capitaine (or Captain Rock) is our next snubbing place. This is one of the rapids on the Ottawa which the raftmen fear, for at the foot are the graves of many who have perished in its waters, to be nameless and forgotten till the judgment day.

Some canoes were being built here, which remind us of the Canadian poet who sings :

"O light canoe where dost thou glide ?
Below thee gleams no silver'd tide,
But concave heaven's chiefest pride."

Below Rockliffe is Rhinds Rapids ; we can run in bands.

Des Joachims rapids next engage our attention. At low water they are very dangerous, and great difficulty is experienced in keeping clear of the bridge at the foot. Here the smashed cribs are wafted up, and the steam tug "E. H. Bronson" takes us in tow. This part of the Ottawa is called Deep River. We soon come to the famous Oiseau Rock. There is an old story of a "papoose" having been carried to the top of this rock by an eagle, and rescued by its mother.

The next place of interest is Fort William, now a fashionable summer resort, and once a Hudson's Bay Company's trading post.

Passing through the Narrows we arrive in Allumette Lake, and get a fine view of the town of Pembroke. At the foot of the lake are the Allumette Rapids, which may be run in bands.

The next snubbing place is at the head of the Pauquette Rapids, which also may be run in bands.

After a long tow down the river, we arrive at the head of the Calumet Rapids, which are allowed to be the worst on the river. At the mill we see the grand chute of the Calumet—a seething mass of whiteness, relieved now and again by the shining of the black rocks. At this historic place we see the grave of a hero. A large white marble monument built in the shape of a cross marks the spot. The simple inscription on the stone is "A la memorie de Cadieux."

The legend says he married an Indian maiden of the Algonquin tribe. All was peace and quietness until the Iroquois made a sudden attack on them. Cadieux kept the foe at bay till his wife escaped with others in a canoe. Cadieux also escaped, but starved in the woods, and beside him was found "La Lament de Cadieux," his death song, and which is a great favorite in the woods and on the river.

Many graves are seen all around here, and the river song comes to mind, which, when translated, means :

For there's danger on the ocean when the waves are mountain high,
And there's danger in the battle-field when the angry bullets fly,
And there's danger at the Calumet, and death lies solemn there,
When I fell a helpless victim all in that deadly snare !"

Such is the fear which raftsmen have of this place that many of them leave, under which circumstances they are said to have the "Calumet fever !"

Our next stoppage is Portage du Fort, a series of rapids, the worst of which is the "Grand Traverse." Two runs only can be made here in a day, and the men are driven back in wagons.

Passing down in Chats Lake (or Lake of the Wild Cats), we run through the Snow Rapids, dividing the raft into four bands. In the distance we see Farrell's Wharf, once the nearest point of communication for the town of Renfrew.

A little further down is the mouth of the Bonnchere. Sailing on we pass the village of Sand Point, Braeside and the town of Arnprior. We then snub on to a pier in the middle of the Chats Lake and at the Chats Rapids. Still further down comes the Chats timber slide, at the foot of which is Fitzroy Harbor. A fine view is now obtained of the seven chutes of the Chats, all coming straight down from an immense height into the lake below.

The tug again takes us in tow, and next morning we are in Lake Duchene, snubbed safely in Brittania Bay. Opposite us is Aylmer, a place of importance as a lumbering centre. Banding up at the foot of the Duchene Rapids, we again resume our journey till we snub at Skead's mills. Cribs then run through the "Rimmicks," the "three kings," the Mars Channel and the Chaudiere timber slide, at the foot of which the cribs band up.

Leaving our snubbing place below the parliament buildings we are towed out, and in two days we come to Grenville, at the head of the "Long Sault" Rapid. This is a very wild rapid and can be run in bands of six cribs.

Passing a good many French Canadian villages, we come to Carillon, where a fine timber slide has been built. On the opposite side of the river is the great government canal.

We soon run the "Big Sault" and Isacore Rapids, then a little river near Montreal. It was here the famous raftsman and hero was born, whose praises are sung in many a remote lumber camp :

Some say he's very handsome, some say he's very tall,
They call him big Joe Muffaraw, the bully of Montreal.

Our next call is Bord a Plouffe, after which comes La Prairie. Here all the Iroquois Indians leave and return to their home, at the village of Caughnawaga, near Montreal.

The raft is now banded up compactly for the last time. Calumet pins, etc., are taken out ; everything is swept and cleaned.

The steamer Hudson then takes a hold of us and we are soon again on our journey. We enter the broad bosom of the St. Lawrence at Sorel. Here the river is quite green in color. Next morning we are passing Three Rivers, having safely crossed the rough Lake St. Peter, and soon by the efficiency of the pilot and the skill of the crew we arrive safely at Cap Rouge boom. Here the raft is broken up and loaded on to the ocean going steamers. All hands are then paid off. Sharpers and agents of the worst description surround our poor raftsmen, and between whiskey and everything else he is perhaps robbed after being twenty-four hours in Quebec.

I have now finished, and if I have told you anything about our glorious Ottawa river, the true beauties of which the English traveller seldom sees, and above all, if I have interested you on behalf of our simple-hearted rivermen, I feel that I have not written in vain.—Au Revoir."

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

MONTHLY AND WEEKLY EDITIONS
C. H. MORTIMER
PUBLISHER
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ADVERTISING RATES FURNISHED ON APPLICATION

THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

TO VISITING LUMBERMEN.

Lumbermen visiting Toronto are invited to use the office of the CANADA LUMBERMAN as their own. We shall take pleasure in supplying them with every convenience for receiving and answering their correspondence, and hold ourselves at their service in any other way they may desire.

PROSPECTS FOR CANADIAN LUMBER.

IF the articles which appear from time to time in the leading lumber trade journals of the United States are to be depended upon, it is only the question of a few days until the re-imposition of an import duty shall become an assured fact. But we are inclined to the belief that Canadian lumbermen need have little fear in this direction for a time at least. Certain it is that nothing will be done by the present government, and granting that the Republicans will regain control of affairs at the approaching election, the duty would not be imposed without a sufficient time being afforded for a reasonable consideration of all questions affecting the lumber trade. A duty on lumber entering the United States would probably mean that an export duty would at once be imposed upon saw logs by the Canadian government, and this step would prove disastrous to the Michigan manufacturers who now obtain their supply of logs from the Georgian bay district, and also to the pulp mills which are now supplied with spruce wood from our eastern provinces. The results of an import duty on lumber entering the United States would probably not be as serious as some may imagine. Glance at the figures representing the value of exports to that country of boards, deals, planks and sawn timber for the past eight years. During the McKinley Act, when sawn lumber was subject to a duty of $2.00 per thousand feet, they were: In 1888, $7,497,78; 1889, $7,804,163; 1890, $7,744,954. In 1891, during which year the duty was reduced to $1.00, the exports were $8,498,046. Under the reduced tariff the figures for the following years were: 1892, $7,539,766; 1893, $8,217,331.; 1894, $6,134,204 In 1895, with free lumber, the exports were $6,859,532. The above figures show almost as high an average for the three years under the $2.00 duty as for a similar period with the reduced duty, while with free lumber last year the exports were below that of any other year with the exception of 1894. Allowance must be made, however, for the depression in the lumber trade which has prevailed in both countries during the past two years, and also for the fact that the market for white pine has of late been seriously affected by the increasing favor shown to the cheaper southern pine. A certain quantity of our lumber is bound to find a market in the United States, duty or no duty, and we believe Canada is in a better position to-day to battle with an American import duty than she was during the operation of the McKinley tariff. Each year she is becoming less dependent upon the United States for the disposal of her timber products. The English market in now consuming large quantities of our lumber and deals, while other nations are importing to a considerable extent and looking to Canada for their future supplies. Among these may be mentioned France, which under the new treaty is likely to be a large importer, the West Indies, South America, Spain, and Australia. In addition to the foreign demand, it is not improbable that the next few years will witness the establishment of a number of pulp mills, which will create a demand for spruce and other wood suitable for pulp manufacture. Already English capitalists are interesting themselves in the matter and are looking round for suitable spruce limits.

TREE CULTURE.

WE are pleased to see that at least a few persons in Canada appreciate the fact that at the rate at which the forests of Canada are at present being cut down, it will not be very long before good merchantable timber will be a scarce commodity in this country. One of the persons who is thus looking into the future is Mr. Thomas Conant, of Oshawa, Ont., who, in the last two years, has planted about 12,000 trees, consisting of black walnut, red cedar, and shell bark hickory.

It is a well known fact that pine and other soft woods have of late been largely superseded in building operations by various kinds of hardwoods, more particularly maple and oak. In view of this change, and of the improbability that there will ever be a return of former conditions, the wisdom of replenishing our supply of hardwoods is clearly apparent. There are in Ontario alone thousands of acres of uncultivated land which might profitably be devoted to the growth of hardwoods for which there is likely to be the most demand in the future. Walnut for example is in the greatest demand at the present time owing to its extreme scarcity, and there is no doubt that this wood will always bring a satisfactory price. Buyers in the Glasgow market are at the present moment deploring the fact that it is impossible to obtain shipments of Quebec walnut such as they were accustomed to receive in former years, owing to the fact that the supply has become exhausted. This evidences the wisdom of the advice given the farmers of Quebec by the Hon. Mr. Joly some time ago to turn their attention to the cultivation of walnut.

We in Canada have been so accustomed to being surrounded on every side with an abundance of wood that few of us realize the rate at which it is disappearing and the nearness of the time when our forests will, to a large extent, have disappeared. It behooves us to make provision for the future.

DISHONEST BUSINESS TACTICS.

JUDGING by the reports which come to hand from time to time of attempts made by certain business establishments in the United States to swindle Canadian lumber dealers, one would naturally conclude that the opinion was prevalent that Canadians were possessed of a very meagre equipment of business sense and shrewdness. These would-be "sharks" will probably find out ere long that as a rule Canadian lumbermen are not easily caught in their traps. We have so frequently referred to this matter that we feel an apology is necessary for making any further reference to it, but a case in point cannot, in the interest of the trade, be allowed to pass unnoticed, showing, as it does, how every opportunity is taken advantage of to defraud shippers out of their just receipts.

A traveller for an Ontario wholesale dealer was given an order by an American firm for ten cars of 5/8 and 3/8 bicycle rim stock. Upon the order reaching the office the wholesaler, who had learned to be cautious when dealing with certain United States customers, did not feel justified in shipping the ten cars at once, but offered to send forward one sample car for acceptance before shipping the balance, which was finally agreed to by his customer. Placing the order with a mill man he sent his inspector to ship the car. The inspector discovered, however, that some of the pieces had been cut too small, and suggested to the mill man to remedy the matter. As the stock was carefully tied up in bundles, the miller agreed to send the car forward subject to inspection there. When the car was received a report came to the wholesaler advising him of the above fact, when he instructed his customer to reduce the 5/8 stock which was too small to 3/8 and reject any 3/8 stock which did not meet the requirements as to size. The account rendered by the wholesale dealer was as follows:

10,175 pieces 5/8 at 2½c.	$254.37
3,800 " 3/8 " 1¾c.	66.50
	$320.87

Acting under instructions from the wholesaler, the stock was reduced and an account forwarded to him as below:

Freight	$98.26
19¼ hours, time, 2 men and saw, at 75c. Edging strips too wide for planer	14.63
400 pieces short at 2½c.	10.00
Discount of ¾c. each on 9,225 pieces, 5/8 run down to 3/8, they being too poor for 5/8	69.16
9,768 pieces 3/8 rejected at 1¾c.	170.94
	$363.02
Balance	$42.15.

By the account the wholesale dealer was brought out in the debt of his customer to the

extent of $42.15, and a draft for that amount was sent forward, with a request that prompt payment be made. Correspondence was at once opened by the wholesale dealer pointing out the fact that an error had certainly been made, and requesting that the matter be looked into, but several letters were replied to in the same tone, that they could not swerve from the position already taken and must request payment of draft at once. This fact again emphasizes the necessity of shippers of lumber guarding themselves in every possible way from being made the victims of sharp practices of this nature.

It will be observed that 9,225 pieces of 5/8 stock were reduced to 3/8, "they being too poor for 5/8," but as a matter of fact, a large portion of the reduced stock must have afterwards been rejected, as according to the account there was a shortage of 400 pieces, which would leave only 13,575 pieces in the car load. A strange condition of things indeed, that the shipper should be obliged to pay $42.15 to his customer for taking the lumber off his hands, in addition to losing the lumber.

EDITORIAL NOTES.

The many fatal accidents in saw mills which are chronicled from month to month suggests the desirability of employers taking every precaution to prevent the same. Many of the accidents are no doubt unavoidable, while others are the result of carelessness, induced by familiarity. While it is probably impracticable, under all circumstances, to cover or guard saws, every possible chance of a workman stumbling and falling upon them should be removed. A code of rules governing the operation of the machinery, and compiled with a view to protection, would also be of advantage if properly enforced.

A commendable step has been taken by the National Association of Manufacturers of the United States towards the establishment of more intimate trade relations with South America. It is proposed to organize a party of representative business men for the purpose of visiting the Argentine Republic, the Republic of Uruguay, and the United States of Brazil, at the invitation of the governments of these countries. The tour will cover the months of July, August and September. The party will be considered as the guests of these nations, and after visiting the manufacturing establishments in the cities will be conducted through the provinces by a special train.

The decision of Judge Wheeler in the United States circuit court, in the "dressed lumber" case, mention of which was made in our "Weekly Edition," is undoubtedly in accordance with the spirit of the law. Unless carried to the Supreme Court the decision will be final, and that an appeal will be made is extremely improbable. Americans are ready to admit that the decision of the board of general appraisers, "that the term 'dressed lumber' meant only such lumber as had been surfaced on one or two sides, and that when further worked it became a manufacture of wood," was manifestly unjust. The decision should result beneficially to Canadian planing mill operators, who have been shut out of the United States market by an unfair interpretation of the tariff.

Reference was recently made in this journal to the unsatisfactory freight classification of lumber by the railway companies. In the United States the same difficulty seems to have been experienced, and a committee of the United States senate have taken up the matter. Senator Cullom, on behalf of the committee, has reported a bill, directing the Inter-State Commerce Commission to prepare and publish the classification of freight articles and rules, regulations and conditions for freight transportation. This is to be prepared by the first of March next, and three months thereafter is to be given for the hearing of complaints against such classification. The failure of any carrier to observe such classification shall be punishable as a violation of the act to regulate commerce.

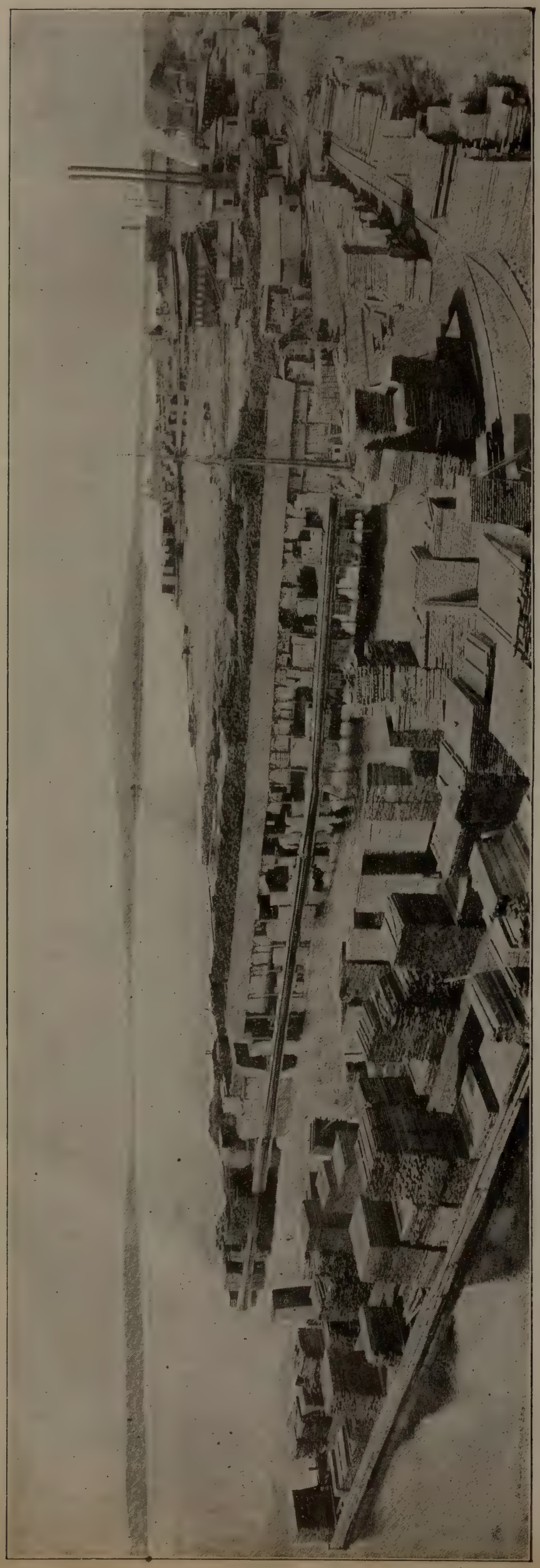
Are Canadian lumbermen making every possible effort to improve the condition of the trade and to discover new markets for their product? In answer to this question it may be said that the past year has witnessed an improvement in this direction, although there still remains an opening for further advancement. The Department of Trade and Commerce at Ottawa has received a letter from Mr. J. G. Colmer, secretary to the High Commissioner for Canada, in which it is stated that the Johannis Mineral Water Company, of 25 Regent street, S. W., one of the largest exporters of mineral water in the world, had intimated that the company would be glad to receive communications from Canadian manufacturers of box shooks, with a view to placing orders therefor. This company are said to require large quantities of shooks each year, and the growing scarcity of suitable woods in Europe has induced them to look to Canada for their supply. Canadian manufacturers should not permit opportunities of this kind to pass without taking prompt action to secure the trade, otherwise the business will turn in other directions. Having large quantities of lumber suitable for box shooks, and which it is difficult to dispose of, the trade should prove a profitable one for our lumbermen.

The port of Quebec, which has of late years lost a large portion of its lumber shipping trade, promises to assume renewed activity as a result of the development of the wood pulp industry. The initiatory steps in this direction have been taken by the Laurentide Pulp Company, of Grand Mere, Que., who recently shipped seven car loads of pulp to Liverpool. The cars were placed alongside the steamer, and the goods are said to have been loaded with the greatest facility. As Quebec is the natural port of a heavily timbered spruce district, the prospects for an important and rapidly increasing export trade are considered promising. Of the quality of the pulp produced in Canada there is no question. It is increasing in favor with the paper manufacturers of the United Kingdom, being superior to that produced by Norway and Sweden. In 1893 Canadian pulp was sold in England at an average of $28.40 a ton, as against $20.77 for the Scandinavian product. The growth of the industry is shown by the following figures: In 1889 it did not appear in the customs returns; in 1890 the quantity exported was valued at $168,180; in 1891 at $208,619; in 1892 at $355,303; in 1893 at $455,893; in 1894 at $547,217, and in 1895 at $590,874.

Mr. E. C. Grant, of the Ottawa Lumber Company, who, by the way, is the only lumberman in Canada represented on the Committee of Management of the National Wholesale Lumber Dealers' Association of the United States, informs me that the feeling of the Association towards Canadian dealers is most friendly, and that it is desired that the Canadian representation should be increased. "The Americans realize the fact," said Mr. Grant," that they must come to Canada for both lumber and timber. They have purchased Canadian limits and must get the logs out, and I think it would be unwise of the Dominion government to impose a large export duty on logs. Should the United States government re-impose the duty on lumber, then I say we must protect ourselves by levying a duty on saw logs. But I do not think there is any cause for alarm, as it is not probable that tariff restrictions will exclude our lumber from the American market."

* * *

Mr. Dwight Cutler was some years ago one of the leading white pine manufacturers of Michigan, in which state he now resides. His firm, the Cutler & Savidge Company, now operate a large mill at Cutler, Ont., on the Spanish river. His views on the lumber tariff question, therefore, as given to a contemporary, will be interesting. In his opinion if a duty should be restored by the United States on lumber above 60 or 75 cents, the Canadian government would retaliate by placing an export duty on logs. He thinks it probable that if a mere revenue duty of 60 or 75 cents a thousand were imposed it might be endured by the Canadians without an attempt at reprisal, but anything above that would inevitably lead to conditions which would eventually stop the exportation of logs to American mills, and, perhaps, greatly limit the exportation of lumber to the United States. One great advantage of the present conditions is the benefit derived to the places where the lumber is manufactured. He estimates that from $600,000 to $1,000,000 is spent in wages in the Saginaw valley and adjacent manufacturing points in sawing Canadian logs. If the duty of $1 to $2 was imposed it would mean the shutting down of the mills or their removal to Canada. But the re-imposition of a duty would raise the price of lumber in the United States, and having at heart the interest of the lumber industry at large, Mr. Cutler is in favor of the duty. Before the lowering of the duty Canadian prices were higher than they have ever been, since the effect of the reduction was a lowering of the average price at the Canadian mills. He further stated that logging costs about twice as much in Canada as in the United States, and last year his concern purchased 5,000 pounds of dynamite for road making and improving the rivers. The cost of supplies is high, and wages are much the same as across the line. He believed that logs would cost, delivered at the mill booms, in the neighborhood of $10 a thousand feet, and consequently Canadian competition would not be as serious in the long run as is feared. The method of granting licenses would also serve as a balance wheel to Canadian production, preventing, as it does, an over-glut of low grade stock.



VIEW OF CEDAR MILL AND DOCKS, AT DESERONTO, ONT., SHOWING SHINGLE DOCKS WHERE THE RECENT FIRE ORIGINATED.

THE RATHBUN COMPANY'S CEDAR MILL.

THE accompanying illustration shows the cedar mill and docks of the Rathbun Company, Deseronto, with shingle dock where the recent fire originated which destroyed a large portion of the town. Fortunately, the mill escaped destruction, but the loss to the stock is placed at $50,000. The total loss to the Rathbun Company is in the neighborhood of $200,000, more than half of which is covered by insurance.

The cedar mill was started in 1872 to meet the demand from the United States for cedar timber cut to suitable sizes, and to furnish the necessary material for the company's car and ship work. It is a two-storey structure, built of frame, the outside walls lined with brick, with stone partition walls. The size is 60x180 feet, with an addition 50x85 ft., fitted with automatic sprinklers and steam force pumps. It is operated the year round, and is fully equipped with the best machinery for the economical manufacture of material. Its power equipment is a twin engine, 10x36 inch cylinders, making 125 revolutions a minute, and backed by five boilers of 375 horse power.

The mill cuts lumber, railway ties, fence posts, lath, shingles, box shooks, headings, pickets, stave bolts, paving blocks, and other products of wood.

SALE OF QUEBEC TIMBER LIMITS.

ON the 28th of May there were offered for sale by the Department of Crown Lands at Quebec some 278 square miles of timber limits. There was a large attendance of buyers present, and competition was very brisk, particularly for the Upper Ottawa limits. The results were entirely satisfactory, the sale proving to be one of the most successful ever conducted by the Department. In every case the upset price was realized, and sometimes trebled. Mr. P. Blouin acted as auctioneer, Hon. Mr. Nantel and Mr. Tache being also present. Below are the details of the sale, with classes of timber which predominate :

UPPER OTTAWA AGENCY.

The value of these limits consists in the quantity of white pine existing thereon, although other species are to be found, such as red pine, spruce, and hardwoods.

Islands in Lake Kaniwanaka, Ottawa river. Area, 2½ square miles. Upset price per mile, $500. Price obtained, $500. Total amount, $1,259.53. Purchasers, Poupore & Fraser.

Block A, 5th range, North, half No. 1. Area, 25 square miles. Upset price per mile, $350. Price obtained, $950. Total amount, $23,829.37. Purchaser, Eugene Malo.

Block A, 5th range, South, half No. 1. Area, 25 square miles. Upset price per mile, $350. Price obtained, $510. Total amount, $12,829.37. Purchasers, E. D. & C. A. Moore.

Block A, 5th range, South, half No. 2. Area, 25 square miles. Upset price per mile, $350. Price obtained, $380. Total amount, $9,579.37. Purchasers, E. D. & C. A. Moore.

Block A, 1st range, No. 8 A. Area, 1½ square miles. Upset price per mile, $400. Price obtained, $850. Total amount, $1,281.35. Purchaser, Eugene Malo.

LOWER OTTAWA AGENCY.

Formerly this was a white pine country, but to-day value consists in the spruce, although there is a fair amount of pine to be picked up.

Red River, South A. Area, 22 square miles. Upset price per mile, $100. Price obtained, $191. Total amount, $4,248.32. Purchaser, E. D. Moore.

Red River, South F. Area, 49¾ square miles. Upset price per mile, $50. Price obtained, $100. Total amount, $5,130.25. Purchaser, E. D. Moore.

No. 34 A. Back River. Area, 8 1/10 square miles. Upset price per mile, $100. Price obtained, $100. Total amount, $837.27. Purchaser, Joliette Lumber Co.

SAGUENAY AGENCY.

This is principally a spruce timber limit, with a few scattering pine.

Laval No. 2. Area, 1 1/10 square miles. Upset price, $14. Price obtained, $15. Total amount, $22.71. Purchaser, Chas. Belanger.

RIMOUSKI WEST AGENCY.

Value consists in spruce and cedar, with a few scattering pine here and there.

River Neigette. Area, 10 9/10 square miles. Upset price per

mile, $30. Price obtained, $30. Total amount, $3,601.15. Purchasers, Pinault et Frere.

BONAVENTURE WEST AGENCY.

This and the Gaspe agency following is valuable for the white spruce and cedar thereon, there being also a little pine.

Grand Cascapedia, No. 2 North. Area, 24 square miles. Upset price per mile, $25. Price obtained, $110. Total amount, $2,714.52. Purchaser, J. M. Fortier.

Grand Cascapedia, No. 2 South. Area, 24 square miles. Upset price per mile, $25. Price obtained, $70. Total amount, $1,754.52. Purchaser, G. A. Grier.

Grand Cascapedia, No. 3 South. Area, 16 square miles. Upset price per mile, $25. Price obtained, $99. Total amount, $1,633.68. Purchaser, J. M. Fortier.

Salmon River. Area, 36 square miles. Upset price per mile, $25. Price obtained, $125. Total amount, $4,611.78. Purchaser, J. M. Fortier.

Carleton, No. 3. Area, 4 square miles. Upset price per mile, $20. Price obtained, $56. Total amount, $236.42. Purchasers, J. & P. Nadeau.

GASPE CENTRE AGENCY.

York River, No. 2, North. Area, 3 square miles. Upset price per mile, $20. Price obtained, $21. Total amount, $72.32. Purchaser, Angus McKinnon.

The total sum realized was $70,401.93, which includes ground rent and fire tax for current season.

As regards the timber agencies in the east and north part of the province, it would not be surprising if at no distant date a fair price was realized for the white birch (Bouleau) thereon.

THE DISPOSAL OF SAWDUST.

Just at the present time the disposal of sawdust is a live question, in view of the fact that the Dominion government has prohibited the discharging of such into rivers and streams. The following particulars and illustrations in reference thereto, taken from our esteemed contemporary, The Timberman, will doubtless prove interesting to saw-mill owners :—

The advent of improved machinery and general advance in the study of uses of waste products have in recent years brought out some interesting developments in the sawdust line. The writer has knowledge of the details of some late work along this line which may interest those who have sawdust to dispose of, for, if the projects are successful, there will of course be a demand for a material which is now largely wasted. The new process of reducing sawdust to the proper form for compression into blocks involves some special machinery and apparatus, views of which are herewith presented.

Fig. 1 shows an upright boiler arrangement, which was constructed from an old boiler, being fitted with the inlet pipe connections at the top at E, through which the sawdust is run from above. The ingredients used in combination with the boiling of the sawdust are introduced through the pipe F, and consist of 12 pounds pale grade resin, 15 pounds degras, 6 pounds litharge, 13 pounds chalk, 12 pounds petroleum, and several pails of lard oil, to a 300 pound batch of sawdust. As the sawdust falls into the boiler through the pipe E, it receives a saturation of steam. the latter being admitted through the pipe H. When the boiler is nearly filled, a check valve is closed in the pipe E, thus preventing more sawdust from entering ; the valve H is opened full force and some water also permitted to enter this way, which in combination with the

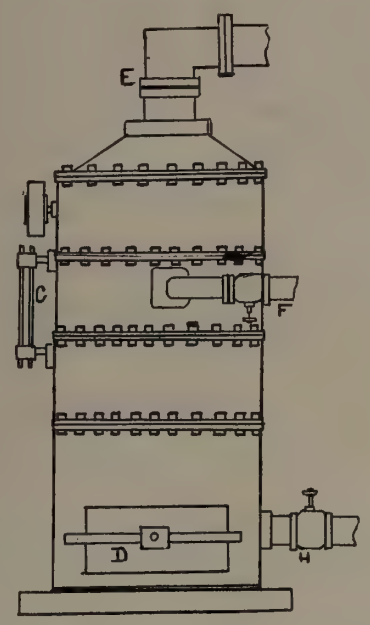


Fig. 1.—Boiling and Steaming the Sawdust.

steam boils and works the sawdust and the compounds together thoroughly. This is kept up several hours. The temperature is known by the gauges at C.

Next, the steaming and boiling process is stopped, the door D opened, and the worked sawdust shovelled out. From this point it goes to the paper pulp mill, where the sawdust is reduced to a pulpy condition in the ordinary way in which wood chips, etc., are digested for paper making. The next work calls for the return of the prepared pulpy mass to the shop, in which it is partly dried out in large square pieces, and these are compressed into compact forms in such machines as are shown in figures 2 and 3.

The principle of the specially devised machine presented in fig. 1 is shown without the frame work, the latter being very powerful. The large sawdust pulp block is seen in the centre in process of being compressed between the steel plates A, A, A. These plates are adjusted to suit the con-

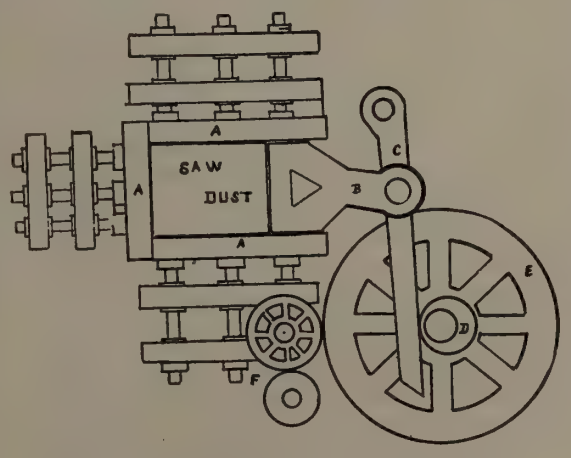


Fig. 2.—First Process of Compression.

ditions, and when the wheels F revolve and in turn revolve the large wheel E, the cam on D on the shaft of the latter forces the lever C forward slowly and firmly. The push block B is fixed to this lever as shown, so that the forward motion of the lever carries the block too. The arrangement is such that a very powerful compression is secured, and the sawdust pulp is greatly reduced in dimensions, and consequently compacted.

But further compressing is desired to attain the ends required for many purposes. This second pressing is done on a machine of finer construction, as may be observed in fig. 3, in which the same block of pulp sawdust is shown in the centre in act of being squeezed into small proportions between the upper press plates A, A and the side pushers B, B. This view is a top one and shows what may be seen when looking down upon the machine. Of course, all the bearings of the shafts are very strong, and so is the frame. These parts are not shown in the drawing.

The work is as follows : The belt drives the wheel F, and this in turn imparts motion to the series of wheels E, E, E, E by means of the bevelled gears as presented in the view. These gears marked E are keyed to heavy screw shafts, and cause these shafts to move as required.

The face of each gear is made wider than appears to be represented in the sketch, and this width permits considerable play inward and outward according to the conditions. All this machinery is, of course, experimental and crude.

As to some of the uses to which the product may be put, they may be classed as follows : Sawdust bricks, for the compressed stock is so

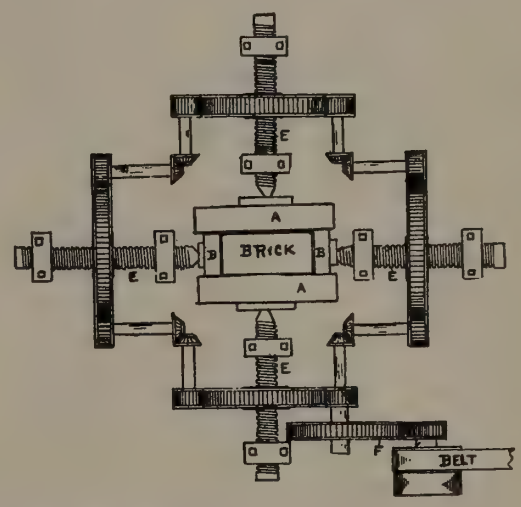


Fig. 3.—Process of Second Compacting of the Blocks.

hard and efficient that there is no doubt that it can be used as a building material, providing that some sort of a weather-proof coating is put on. Thus far, a cheap enamelling has been used, and the brick present a most attractive appearance. Then the pressed blocks are so firm that they are in condition for many uses. They may be cut and turned into handles for tools, loom shuttles, tops, buttons, and like articles, which are usually made from stock in which there is little or no grain, or in which the grain is very close. The sawdust blocks are so closely compacted that there is no possibility of splintering. Spools for thread, picture frames, mouldings, and hundreds of like goods are possible to make from this material.

Large as is the amount of Canadian lumber exported, it forms only one-quarter of the sawn lumber received in Great Britain, and only one-sixteenth of the square timber, the great proportion being the product of the north of Europe and the Southern States. Great Britain is the largest importer of timber among the nations of the earth, her own forest area being only about four per cent., and contributing but little towards the lumber requirements of the nation.

LARGEST MODERN SAW-MILL IN THE DOMINION.

[COMMUNICATED.]

MESSRS. Andre Cushing & Co., St. John, N. B., have just completed the building of their new mill to take the place of the one burned last year. The old mill was established in 1852, right at the edge of the falls, on the St. John river, on what is known as Union Point. The new mill has a capacity of one hundred and fifty thousand superficial feet per day, or forty-five million feet annually, without counting in the nights, and they are expected to be quite as important a factor as the days in the operation of this mill.

The energy and indomitable pluck of George S. Cushing, shown in undertaking and carrying to a successful issue such a mammoth enterprise at a period when everyone was crying hard times and business depression, has proved a great benefit to the city of St. John and the vicinity, where most of the fittings, etc., have been purchased, and above all, to the large number of men who have found steady employment during the erection of the buildings and the placing of the machinery, for the work was carried on right through the winter months, when work of any kind is rather scarce and a sort of luxury.

The mill is thoroughly modern in every respect, and neither expense, labor nor care have been spared to enable Mr. Cushing to saw his lumber and handle the same to the best advantage for shipment to the Sound, New York, Boston, and foreign markets. All precaution has been taken to prevent loss by fire that the insurance companies could recommend, and much that they did not recommend. The boiler house is separate from the mill proper and is composed entirely of non-inflammable material. The mill proper is two hundred and twenty-six feet by sixty feet, three stories, on a stone and brick foundation, and shows one marked improvement over most mills, in that, owing to the height of the floors, the same being, respectively, sixteen, twelve and twelve feet, the light is extra good, and the danger of fire vastly decreased.

The mill proper was erected under the superintendence of Jas. Sterling, St. John, N. B., after the plans of the owner and manager, George S. Cushing, and the blue prints of the same furnished by the Filer & Stowell Co., Milwaukee, Wis. Eight hundred thousand feet of lumber, or fifty-two cars, or four transcontinental trains, were used therein, besides some four hundred thousand bricks, of which thirty thousand are fire-brick ; or, if put on teams at one time and hauled to the mill, there would be one thousand teams, so that the line of teams would reach twenty-five thousand feet, or nearly five miles. To this add one hundred and eighty barrels of cement, three hundred barrels of lime, twenty-three hundred barrels of sand and seventeen tons of fire-clay, and you will have a small idea of the material used in the erection of this mill.

The boiler house is a model of perfection, is forty-eight feet by ninety-six feet by twenty-two feet, and contains six boilers, built by Jas. Fleming, St. John. They are a credit to the firm and to their designer. This firm, however, lacks one essential, viz., membership in The Concatenated Order of Hoo-Hoo. The same firm also built the double engines, with a five-hundred horse-power. The boiler house is removed from the mill thirteen feet, and outside of the drive-belt the connections are of metal—even the feed sluice box. A word as to this drive-belt—it is forty-eight inches wide and one hundred and ten feet six inches long, of double leather, manufactured by Grattan & Knight, Worcester, Mass., is made entirely of the best part of the hides, viz., the backs, and was furnished by T. McAvity & Sons, St. John, N. B. The same firm also furnished all the other belting, some two thousand feet, as well as the steam fittings, etc.

The saw-dust carriers, in which there are six hundred and forty feet of wrought iron, were made by a local blacksmith, and James Elliott has reason to be proud of his workmanship, for this mass of carriers moved off without a hitch or a mite of bother. This carrier is called "Cushing's Latest," and is composed of eight-inch links interwoven one with the other.

Messrs. Waring & White have supplied most of the pulleys and shafting, as well as both the edgers, and their worth will be better known later.

The band-saw machines were furnished by the Filer & Stowell Co., the order being placed through their representative, Ike Trissell, commonly known to the eastern lumbermen as "The Royal Ike." He also furnished the two steam niggers, the two Cline log rollers, and the sixty-inch inserted tooth steam jump-saw, as well as the centre-deck eccentric log jumpers.

Hoo-Hoo No. 1284, T. S. Wilkins, furnished the Giddings & Lewis Mfg. Co.'s gang, and great things are expected from this piece of machinery from Fond du Lac, Wis.

Cowan & Company, Galt, Ont., placed their planing machines in this mill, and they warrant them to be the best ever placed in the Dominion, and to be capable of any class of work required of that style of machine.

This miscellaneous mass of machinery, pulleys, shafting, belting, steam roller and bolts, &c., were placed before W. P. Jobson, Hoo-Hoo No. 3727, New Orleans, La., as waggon load after waggon load arrived and the different cars were reported on the siding, and he was asked to make a mill and to be sure to have the mill the most modern hereabouts. How well he did it was demonstrated as hour after hour, day after day, week after week and month after month, he kept placing piece after piece of pulley, circular saw, band saw, rollers, &c., &c., &c., gradually bringing order out of chaos, and so it went on until one day he announced that he was ready to start the steam and turn everything over. There was no hesitation or fear to be noticed on his face as he gave the word to start. He never seemed to think that there might be a pulley out of line, a connection loose, or a key not in its proper place ; but after everything had moved along just as if it had been running for weeks instead of minutes, and a log lay on the bed hauled up the steepest log-slip ever built, he was seen working Mr. Cushing's hand like a pump handle, as if he were trying to bail out his pockets, which the salt brine from his sparkling eyes kept filled to their utmost capacity.

Mr. Jobson met a great deal of adverse criticism on account of many of his devices for the saving of the handling of the lumber any more than was absolutely necessary, but just the same he followed out his own ideas, and later his wife came east to help him enjoy his present success. The cat came back, and to-day, as the emblem of the Hoo-Hoo floats above the premises, it excites the wonder and admiration (?) of the public.

Briefly recapitulating, the material used is as follows : Cement (Portland), 180 barrels ; lime, 300 barrels ; sand, 2,300 barrels ; fire-clay, 17 tons ; six boilers, 48 tons ; two engines, 14 tons; crank-shaft, 4½ tons ; fly-wheel, 8½ tons ; two band-saws, &c., 62½ tons ; gang, 15 tons ; brick, common, 370,000 ; brick, fire, 30,000 ; lumber, 800,000 sq. ft.

To facilitate the work during the short winter days and for night work the mill is equipped with E. Leonard & Sons' automatic engine, and the Canadian General Electric Co.'s dynamo, with 225 lights, including 10 arc lights for the wharves.

The boilers are supplied with fresh water piped for six miles from the famous Spruce lake. This latter in itself is a vast improvement over the old mill, which used the river water, to say nothing of the mud that came along at the same time, and the salt that was very injurious to the boilers.

A very interesting feature is to note how the men stay by this company. There are twenty-five or more who have been in the employ of Andre Cushing & Co. for over ten years, viz.: Terence O'Brien, 1852 (since the company started), 44 years—he has been on the Point for 60 years ; Chas. Hagarty, 1863, 33 years ; Jep. Duke, 1870, 26 years ; Wm. McKinnon, Wm. Lynton, Michael Kingston, Patrick Gleason, Robert Gaskin, Daniel Sexton, Bat. Hagarty, 1873, 23 years; Lawrence Gary, Michael Cullion, Wm. Nixon, 1874, 22 years; Thos. Coram, 1879, 17 years ; Gilbert L. Purdy, 1880, 16 years ; John Cullion, John Cronin, Henry Herricks, George McLaughlin, 1880, 16 years; Patrick McQuinn, Newton Fowler, 1882, 14 years ; Edward Goldie, 1884, 12 years ; Willard Dykeman, John Gillis, 1885, 11 years; Wm. Herricks, 1873, 23 years.

OLD TIMBER LIMITS.

KINGSTON, June 9th, 1896.

To the Editor of the CANADA LUMBERMAN:

DEAR SIR,—I understand that Messrs. Gilmour & Co., Bronson & Weston, and probably some other of the lumber kings, own, or rather hold, under Government licenses, a large amount of land in the central and north part of Hastings county. On this land there is a very large quantity of fallen pine timber, as well as considerable standing but dead pine. The live pine has been all removed, or at least cut down, years ago.

This fallen pine is perfectly good for many purposes, but the limit holders will not use it themselves nor allow anyone else to do so. If they would sell it the Government would derive considerable from the dues, but they have refused to do so.

I think the Government, in view of the fact that the timber is becoming more worthless every year, should either cancel the license and sell to some one who will remove it, or compel the present owners to do so.

Yours truly,

"LUMBERMAN."

Examine the foundation bolts on your engine occasionally to see that the nuts are not working loose. If they have nuts on both ends, adjust them so that the bolt will be flush with top of nut on the upper side.

CANADA LUMBERMAN

WEEKLY EDITION

The Lumberman Monthly Edition, 20 pages } $1.00 PER YEAR { The Lumberman Weekly Edition, every Wednesday

THIS PAPER REACHES REGULARLY THE PRINCIPAL LUMBER MANUFACTURERS AND DEALERS THROUGHOUT CANADA, AND WHOLESALE BUYERS IN THE AMERICAN AND FOREIGN MARKETS.

VOL. II. TORONTO, ONT., JUNE 24, 1896 No. 25.

CANADA LUMBERMAN

PUBLISHED BY

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MONTREAL.

Weekly Lumberman, published every Wednesday. Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

Lumberman, Monthly. A 20-page journal, discussing fully and impartially subjects pertinent to the lumber and wood-working industries. Contains interviews with prominent members of the trade, and character sketches and portraits of leading lumbermen. Its special articles on technical and mechanical subjects are especially valuable to saw mill and planing mill men and manufacturers of lumber products.

☞ Subscription price for the two editions for one year, $1.00.

Lumbermen visiting Toronto are invited to call at the office of the CANADA LUMBERMAN. We shall have pleasure in giving them any information desired.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 25 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue.

FOR SALE.

TWO ALLIGATOR STEAM WARPING TUGS, in good working order. For prices and particulars apply to GILMOUR & Co., Trenton, Ont.

FOR SALE.

A FEW CARS 3x10, 12 AND 16 FT. TAMARAC; a few cars 1x6 to 8, 16 ft. hemlock fencing.
CRAIG & AUSTIN,
Kinmount, Ont.

The Timber News, of London, Eng., says: The freight market is decidedly firmer both from Baltic and St. Lawrence ports. This is the first real indication, we contend, we have really had of better times. Better trade is now beginning to make itself felt. The following fixtures are announced: Montreal or Three Rivers to London, steamer, 1,100 stds., July, 40s. St. John (N.B.), W.C. England, July, steamer, 38s.; Manchester, 39s. St. John, Bordeaux, 52 frcs., "Jeanne Conseil." Puget Sound or Burrard Inlet, U.K., 62s. 6d. less 2s. 6d., "John A. Briggs" (sailer). Puget Sound or Burrard Inlet, Sydney, 33s. 6d., "C. F. Sargent" (sailer). Mobile, U. K., 96s. 3d., 30s. 6d. 1,000 tons. Montreal, "Forest Brook," July, 40s., U. K., deals.

Send four 3-cent Canadian postage stamps for a copy of the LUMBERMAN'S VEST-POCKET INSPECTION BOOK, containing rules for the inspection of Pine and Hardwood Lumber in the leading markets of Canada and the United States.

JUDICIAL SALE OF LICENSES

FOR

CANADIAN TIMBER BERTHS

Pursuant to the judgment in an action in the Common Pl as Division of the High Court of Justice for Ontario of Beck v Spohn, et al, there will be offered for sale at public auction (with the approbation of the Local Master of said court at Barrie), by Messrs. Dickson & Townsend, Auctioneers, at their rooms, No. 22 King Street West, in the City of Toronto, Ontario, at the hour of 12 o'clock noon, on

Thursday, the Twenty-Third Day of July, 1896;

(A) The following Ontario Government Provincial timber berth licenses:—

Parcel No. 1—License for berth No. 2 in the Township of Finlayson, in the District of Nipissing; area, including road allowances, about 10¾ square miles.

Parcel No. 2—License for berth No. 3 in the Township of McCraney, in the District of Nipissing; area, including road allowances, about 11½ square miles.

Parcel No. 3—License for b rth No. 19 in the District of Rainy River; area, about 11 44-100 square miles.

Parcel No. 4—License for berth No. 20 in the District of Rainy River; area, about 5 square miles.

Parcel No. 5—License for berth No. 21 in the District of Rainy River; area, about 4 square miles.

Parcel No. 6—License for berth No. 25 in the District of Rainy River; area, about 11 square miles.

Parcel No. 7—License for berth No. 27 in the District of Rainy River; area, about 7 square miles.

Parcel No. 8—License for berth No. 65 in the District of Rainy River; area, about 7 square miles.

Parcel No. 9—License for berth No. 67 in the District of Rainy River; area, about 1½ square miles.

Parcel No. 10—License for berth No. 68 in the District of Rainy River; area, about 4 square miles.

ALSO—(B) The following Dominion of Canada Government timber berth license:—

Parcel No. 11—License for berth No. 292, situated on the north fork of High River, in the District of Alberta; area, about 47 8-100 square miles.

TERMS OF SALE.

Each parcel will be offered separately and subject to a reserved bid fixed by the said Local Master.

The biddings will be of a price per square mile.

The license of each berth will be sold subject to the various conditions contained or to be contained therein, and to the various statutes, orders in Council, regulations, dues and conditions now affecting or which may hereafter be passed or imposed affecting the same.

The price will be computed according to the areas stated above, and no allowance will be made for shortage or for water or for road allowances. No error in any of the above descriptions or in any map exhibited by the Vendor's Solicitors shall annul the sale, nor shall any compensation be allowed in respect thereof.

Ground rent and Government dues will be apportioned to the date of sale and assumed by the purchaser from the date of sale.

No timber on any berth shall be cut until the purchase money of the license thereof has been paid in full.

The purchaser shall at the time of sale pay down a deposit in proportion of $25 for every $100 of the purchase money, and shall pay the balance into court without interest to the credit of this cause, within thirty days after the sale.

The parties to the action, including the Vendor, shall be at liberty to bid.

The other conditions of sale will be the standing conditions of the court.

Maps of the berths may be seen at the offices of the Vendor's Solicitors.

Further particulars may be had from Messrs. BLAKE, LASH & CASSELS, Canadian Bank of Commerce Building, Toronto, Vendor's Solicitors, and Messrs. M'CARTHY, PEPLER & M'CARTHY, Solicitors, of Barrie.

Dated at Barrie this third day of December, A.D. 1895.

J. R. COTTER, Master.

CURRENT TRADE CONDITIONS.

ONTARIO.

The week preceding the date of a general Dominion election is always a quiet one in business circles. The political campaign which has just ended, and which has resulted in placing the Liberal party in power, will settle matters in this respect for a few years at least, and commerce should now resume its normal condition. This, it is hoped, will assist in improving the lumber trade, which is greatly in need of a revival. The condition of white pine cannot be said to show any improvement. Only the better grades are in demand, it being difficult to effect sales of common stock even at a very low figure. No one seems to be actually in need of pine, and consequently consumers are holding off until election matters are settled and commerce has resumed its usual course before placing orders. In hardwoods the situation is a little different. There is a fair number of inquiries, and manufacturers could dispose of stock at current prices quite freely. But many of the mills are asking for an advance ranging from 50 cents to $1.50 per thousand feet, and this has prevented some sales. Several wholesale dealers state that in the case of stocks which they have handled for years they are asked to pay the advance above mentioned, while the consumer is unwilling to pay a higher price for his lumber. This may eventually result, however, in increased values. The general tone of the hardwood market is firm, there being some trade from the United States, while of the woods which are scarce the supply is not equal to requirements. Among these are white maple and dry oak.

QUEBEC AND NEW BRUNSWICK.

The spruce lumber of Quebec and New Brunswick is meeting with ready consumption in Great Britain. Prices have been well maintained, shippers realizing a marked advance over last year's figures. It is now more than probable that no decline in values will occur this season, and unless there is an over-production, induced as a result of the firm market, still better prices may be obtained. Charters for steamers for July and August are being made at a higher rate than for any previous month of the year. Shipments from Montreal last week were large, and are gradually reducing the stock in the hands of manufacturers. This will mean that the new cut will meet with a ready demand when placed upon the market.

BRITISH COLUMBIA AND MANITOBA.

There has been a falling off of late in the demand for lumber for foreign shipment from British Columbia. The local market, however, has maintained its strength, while to the eastern provinces of the Dominion there have been heavy shipments. This is encouraging in the face of the present unsettled condition of the country as a result of the recent elections. In Manitoba there is little life exhibited by the trade, building being quiet. Crop prospects, on the other hand, are considered favorable.

UNITED STATES.

The month of June thus far shows the aggregate volume of lumber sold to be about equal to the sales of the same month last year, although trade is as yet very restricted. It must be said, however, that a better feeling exists among lumbermen, and reports from leading distributing points are indicative of a better trade. In the northern states, where the output of white pine is being curtailed, there will not be the surplus of low grades which have in former years tended to keep prices down. From Duluth the shipments for the past week were above the average, and the market is thought to be steadily gaining strength. Reports also state that crops are in an excellent condition, and these would seem to be verified by the demand which is being experienced for barn stock and repair material. The eastern trade is not in as healthy condition as it was some weeks ago. More difficulty is found in disposing of lumber, notwithstanding that building operations are of an average volume. The local and the Canadian product is meeting with less favor than the Southern wood, yet the call on the supply does not satisfy manufacturers of the latter, who will make an effort to restrict production. Plain sawed red oak leads among the hardwoods, and the supply of dry stock is scarcely meeting the requirements. More business could be done in hardwoods if there were more good stocks to be obtained, but dry stock is scarce and there is little of the new cut which is in a fit condition to market. There is also some call for inch red oak. Birch has lost strength of late, and meets with little inquiry. In the west the accumulation of red cedar shingles is said to be so great that the mills will probably be closed down for a period. The Pacific coast trade as a whole partakes of dullness.

FOREIGN.

A comparison of the imports of wood goods into Great Britain is indicative of the healthy condition which has characterized the lumber trade of that country of late. During the month of May the imports were 662,000 loads, as against 470,-

000 loads in May, 1895, and 602,000 loads during the same period in 1894. This increase is made up of sawn timber, the imports of logs showing a slight decrease. Notwithstanding the large quantity of sawn lumber which has been received, there is a reduced stock in the hands of shippers, and many cargoes have been disposed of immediately upon arrival.

The general tone of the market is such as to add further strength to the hands of shippers. At Liverpool the import of spruce deals does not meet the requirements, and nearly every cargo is placed before discharged. The conviction is gaining ground that there will be no drop in prices during the summer months at least. The present tendency is towards a further advance, but whether shippers are justified in asking it is a question. Scantlings have advanced, and there is a keen demand for almost every size. At London 2½ and 2 in. battens and 1 and ⅞ flooring are the sizes chiefly in request. There is an extreme scarcity of small dimension stuff, and available stocks are eagerly sought for. Glasgow trade continues brisk in spruce deals, while at Hull the demand is active and prices rule firm. Hardwoods show an upward tendency, particularly mahogany, which has realized good figures at the recent auction sales.

STOCKS AND PRICES.

CANADA.

Playfair's mill at Midland, Ont., is cutting 150,000 feet of lumber per day.

During last week over 12,000,000 feet of deals, etc., cleared from St. John, N. B., for British ports.

The barque Chrysolite carried 944,072 ft. of deals and 32,674 ft. deal ends from Parrsboro last week, for Rumcorn.

Nine car loads of lumber were shipped east by the mills of New Westminster, B. C., during the week ending June 13th.

W. M. McKay shipped from Parrsboro, N. S., last week, for Manchester, Eng., 1,704,890 ft. deals and 70,651 ft. deal ends.

G. G. & W. C. King's new mill at Chipman, N. B., has commenced operations. It has a sawing capacity of 20,000 feet per day.

The Canada Lumber Company's mills in Carleton Place have suspended operations at night for a time, owing to delay with the log drive.

Alex. Gibson's saw mill at Marysville, N. B., which has been closed down on account of a scarcity of logs, has resumed operations, his drives having come in as the result of the recent rains.

FOREIGN.

Demand for wide stuff at Boston is much improved, and receipts scarcely equal to the requirements.

Log run sells at Saginaw, Mich., at $10 to $20. Fair Canada stocks bring $14, box lumber $9, and bill stuff $8 to $8.50.

Perley, Lowe & Co., of Chicago, have placed an order for the entire cut of the Peshtigo Lumber Co., of Peshtigo, aggregating 25,000,000 feet.

A Chicago dealer reports a general scarcity of C selects. 2-inch shop common brings $24, 1¼-inch B select, $35 to $36, and 2-inch B select, $36 to $37.

There has been shipped from Alpena, Mich., this season, 21,409,000 ft. lumber, 2,100,000 shingles, 610,000 pieces lath, 137,703 railway ties, 90,000 cedar posts, and 6,621 telegraph poles.

Shipments from Duluth for the first half of June were 15,000,000 feet of lumber, of which 10,000,000 feet went to Tonawanda. Shingle shipments were as follows: 358,000 to Sarnia, 1,375,000 to Buffalo, and 375,000 to Hamilton, Ont. No lath were shipped.

The following figures were realized at McDowall & Neilson's auction sale at Greenock, Scotland: 1st Quebec pine ends, 6/8 × 7/17 × 3, sold at 2s. 2½d.; 1st Quebec pine deals, 9 × 7/17 × 3, at 2s. 2d.; 2nd Quebec pine deals, 9 × 11 × 3, at 1s. 10d.; 2nd Quebec pine ends, 5 × 9 × 3, at 1s. 1d.; 3rd Quebec pine deals, 9 × 7/16 × 3, at 1s. 1d.; 3rd Quebec pine ends, 6/8 × 7/17 × 3, at 11d.; Quebec pine deals, 7/10 × 3, at 9d.; Quebec spruce deals, 12/13 × 9 × 3, at 9½d. and 9¾d.

THE SITUATION.

REFLECTED THROUGH CORRESPONDENCE OF THE "WEEKLY LUMBERMAN."

Frank Rounds, saw and planing mill, Welland, Ont., reports that sales have been good this spring, notwithstanding low prices and scarcity of money.

John E. Cutler, Welland, Ont., is doing a fair retail and general building timber supply trade. He reports a good spring, with prospects quite satisfactory.

Cook & Son, St. Catharines, Ont., lumber dealers and contractors, report a busy season. Trade has improved, and they have recently placed a large order with J. B. Smith & Sons, Toronto.

Jas. Harriman, Niagara Falls, Ont., reports business fairly good. Building stuff is in fair demand. Waugh & Robinson, of same place, find trade dull. Prices are low, and prospects none too bright.

W. L. Rice, Welland, Ont., retail lumber and planing mill, finds the demand increasing, but prices are low and money scarce. Fires have been frequent, and an increased amount of building is expected.

McLeary & McLean, Merritton, Ont., who retail lumber and manufacture sashes, doors, etc., find a good demand for building supplies, but the lumber business generally is dull and prospects give little encouragement.

A. Bigelow & Son, Lower Stewiacke, N. S.: Spruce and hardwood are moving freely. Most of the deals manufactured have been sold at a good advance over last season's prices. Our cut of spruce and hardwood is larger than last year. Prices are firm.

W. W. Carter, Fesserton, Ont.: First and second quality oak and soft elm and good pine in most demand. Common grades very dull. Am receiving a fair amount of orders for pine and hemlock bill timber. There is a heavy stock of pine in common grades left, but the better grades of 1½ and 2 inch are all sold. Prices have changed very little, probably a slight decline.

Sauble Falls Lumber Co., Sauble Falls, Ont.: Business in this district cannot be said to be in a flourishing condition, though numerous inquiries about stocks would seem to indicate that prospects are brightening. We have sold for immediate delivery 200,000 ft. hardwood and 700,000 ft. hemlock of this season's cut. So far there is little demand for shingles or lath. Railroad contractors are in the field for timber supplies. We have just had an inquiry for 150,000 hemlock ties.

FIRES.

Chas. Warwick's saw mill at Shedden, Ont., has been destroyed by fire. Loss, $4,500; insurance, $2,500.

On the evening of the 19th inst., about 8:15, fire was discovered in Howry & Sons' lumber yard No. 1, at Fenelon Falls, Ont. Assistance was immediately asked for from Lindsay, Peterborough, Bobcaygeon and Port Hope. The local fire company turned out, and together with the pump in the saw mill, the flames were prevented from coming back and destroying the planing mill and box factory, saving about two million feet of lumber in yard No. 1. There were burned between 12 and 13 million feet. The loss is estimated at $220,000 to $240,000, fully covered by insurance. The bucket brigade, together with the assistance of the Lindsay and Peterborough teams, prevented the fire from extending to yards No. 2 and No. 3. There was a slight easterly wind, which assisted the local company in preventing the burning of the entire plant. There were several small cars and two Grand Trunk flats burned, which were loaded with lumber. Howry's locomotive during the fire pulled out a train of loaded cars, thus saving them from destruction. The employees of the company turned out and worked manfully to save the lumber and prevent the spread of the flames to adjoining property. The origin of the fire is unknown, except that it was first discovered in a small barn which stands close to the yard and which had presumably been occupied by children during the afternoon. Howry & Sons will at once rebuild the railroad tracks, their mill having started the next day, and will continue to run night and day during the season. The stock burned was principally 1¼", 1½" and 2" selected pine put out for export, and most of it was sold to be shipped as soon as dry. There was also nearly five million shingles, three million lath and three thousand cords of wood burned. It was fortunate that there was only a slight wind prevailing at the time.

SHIPPING MATTERS.

Barktn. Trinidad will load lumber at Windsor, N.S., for Buenos Ayres at $9; if Rosario, $10.

Barktn. Eva Lynch will load lumber at St. John, N. B., for Buenos Ayres at $8.75; if Rosario, $9.75.

A charter has been made for a vessel, 510 tons, Quebec to Pembroke, at 19s. for timber and 41s. 3d. for deals.

From Miramichi, N. B., June-July tonnage to W. C. England is worth 42s. 6d. and for August, 45s. to 46s. 3d.

Steamer Terra, 1,778 tons, has been chartered to load deals at St. John, N.B., for Bristol Channel at 38s. 3d. Steamer San Domitgo will load deals at Pugwash for W. C. E. at 41s.

The following charters are reported: Miramichi to west coast of England, 394 NV, deals, 46 s, sailer; St. John, N. B., to Bordeaux, deals, 40s.; a ship, 1,118 tons, Quebec to Buenos Ayres, lumber, $9.50.

LUMBER FREIGHT RATES.

Lumber freight rates on the Canada Atlantic Railway are as follows: Ottawa to Toronto, 10 cents per 100 lbs; Ottawa to Oswego, $1.90 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Montreal, $1.00 per M ft., (3,000 lbs. and under per M ft.); Arnprior to Montreal, $1.50 per M ft., (3,000 lbs and under per M ft.); Ottawa to Buffalo, 12 cents per 100 lbs.: Ottawa to Port Huron and Detroit, 14 cents per 100 lbs. Ottawa to New York, water delivery, lots of 50 M feet and over, $2.50 per M ft.; under 50 M feet, $3.25 per M ft. (subject to extra towage) 3,000 lbs. and under 1 er M ft. Arnprior to New York, lots of 50 M feet and over, $3.00 per M ft.; under 50 M feet, $3.75 per M ft. (subject to extra towage) 3,000 lbs and under per M ft. Ottawa to Boston, Portland and common points, local 15 cents; exports 13c. per 100 lbs.; Arnprior to Boston Portland and common points, local 17 cents; export 15 cents per 100 lbs.; Ottawa to Burlington, 6 cents per 100 lbs.; Ottawa to Albany, 10 cents per 100 lbs. Arnprior to Albany, 12 cents per 100 lbs.; Ottawa to St. John, N. B. and common points, 20 cents per 100 lbs.; Ottawa to Halifax, N. S. and common points, 22½ cents per 100 lbs Minimum carload weight for shipment of lumber, lath, shingles, etc., is 30,000 lbs., and rates quoted above are in cents per 100 lbs., except when quoted per M ft. the minimum carload charged is 10 M ft., lumber not exceeding 3,000 lbs. to the M feet. Ottawa rates apply on shipments from Rockland and Hawkesbury.

Lumber freight rates for pine on the Grand Trunk Railway have been made a fixture, as below. Of any intended change due notice will be given lumbermen.

General instructions in shipping by Grand Trunk are embodied in these words in the tariff schedule: On lumber in carloads, minimum weight, 30,000 lbs. per car, unless the marked capacity of the car be less, in which case the marked capacity (but not less than 24,000 lbs.) will be charged, and must not be exceeded. Should it be impracticable to load certain descriptions of light lumber up to 30,000 lbs. to the car, then the actual weight only will be charged for, but not less than 24,000 lbs. The rates on lumber in the tariff will not be higher from an intermediate point on the straight run than from the first named point beyond, to the same destination. For instance, the rates from Tara or Hepworth to Guelph, Brampton, Weston or Toronto, would not be higher than the specific rates named from Wiarton to the same points. The rates from Cargill and Southampton to points east of Listowel and south and west of Stratford will be the same as from Kincardine, but in no case are higher rates to be charged than as per mileage table published on page 9 of tariff.

Rates from leading lumber points on pine and other softwood lumber, shingles, etc., are as follows: From Glencairn, Creemore, Aurora, Barrie and other points in group B to Toronto, 6½c.; Collingwood, Penetang, Coldwater, Waubaushene, Sturgeon Bay, Victoria Harbor, Midland, Fenelon Falls, Longford, Gravenhurst and other points in group C, to Toronto, 6½c.; Brace, bridge to Toronto 7c.; Utterson, Huntsville, Navor-Emsdale, Katrine to Toronto, 7½c.; Burk's Falls, Berriedale and Sundridge, to Toronto, 8c.; South River, Powassen and Callender to Toronto, 9c.; Nipissing Junction and North Bay, 10c. Rate from Goderich, Kincardine and Wiarton to Toronto, 6½c. These rates are per 100 lbs. Rates from Toronto east to Belleville are 7½c. per 100 lbs.; to Deseronto, 9c.; to Brockville and Prescott, 10c.; to Montreal and Ottawa, 11c. The rates on hardwoods average about from 1c. to 2c. per 100 lbs. higher than on softwoods. For rates on railway ties, mahogany, rosewood, walnut, cherry, and other valuable woods, application must be made to the district freight agent.

On the Canadian Pacific the rates on pine and soft woods may be illustrated as follows: Cache Bay, North Bay, Sturgeon Falls and Warren, to Toronto, 9c; Algoma, Cook's Mills, Massey, Spanish River and Whitefish to Toronto, 12c.; Ottawa to Toronto, 10c From Ottawa, Hull, Aylmer and Duchesne Mills to station on the Lake Erie and Detroit River, Erie and Huron, Toronto, Hamilton and Buffalo, and Michigan Central Railways, the rate is 14½c. per 100 lbs. Regulations apply as to minimum size of carload of 30,000 lbs., and an advanced rate is charged for hardwoods.

MODIFICATION OF HARDWOOD RATES.

THE Grand Trunk Railway and Canadian Pacific have made the rates on hardwoods from certain points to Toronto and Hamilton as follows. The regulations are over the signature of Mr. John Earls, W.D.F.A., of the G. T. R., and given in reply to a letter from Toronto hardwood men:

"After careful consideration we have come to the conclusion that, on and after Jan. 1st, 1895, a modification will be made in the present arrangements for hardwood lumber, to the effect that the rate will be 7½c. per 100 lbs from our Northern and Northwestern branches to Toronto and Hamilton. This rate, however, will not apply from main line points and the straight run between Toronto, Sarnia and Windsor; also that so far as rates on common lumber to points like Guelph, Galt, London, Woodstock, Ingersoll, etc., from all lumber shipping stations the rate will be the same on hardwood as on pine." On the old principle, we suppose, that half the loaf is better than none, hardwood men have something, possibly, to be thankful for, though there is no good reason why the rates generally on hardwood should not be as low as on pine. It is understood that the C. P. R. rate will be made uniform at 7½c from same points.

Telephone 5332 Established 1851

JOHN B. SMITH & SONS,

MANUFACTURERS OF

LUMBER Lath, Shingles, Doors, Sash, Blinds, Mouldings, Boxes, &c.

BILL LUMBER a Specialty

Cor. Strachan and Wellington Avenues, TORONTO.

MILLS

Having Brown Ash 12, 14 and 16 ft. firsts and seconds, inch Bass firsts and seconds 12 feet, or any other Hardwood Lumber, can sell same for cash by addressing

H. D. WIGGIN

No 89 State St., BOSTON, MASS.

Inspection at mill.

Do You Use Mahogany?

If so don't buy until you have seen or inquired about our now famous . .

TABASCO MAHOGANY

Finest figured wood on the market; is hard and takes elegant finish. Brings highest prices in Europe, but we sell here about same prices as ordinary mahogany. Specially adapted for fine cabinet and interior finish . . . . . .

LAWRENCE & WIGGIN

Importers and Manufacturers BOSTON, MASS.

Boston Lumber Co. Wholesale Dealers in

Red Oak, Basswood, Black Ash, Soft Elm, Cedar Shingles, Spruce . . . .

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HUDSON RIVER LUMBER TRANSPORTATION. Water Connection from Albany with lumber points in Canada via Canadian Pacific Railway to New York Harbor, Long Island Sound and inland waters of New Jersey. . . .

CONNECTION—Canadian Pacific Railway; Rome, Watertown & Ogdensburgh; New York Central & H. R. Rd. Ronan Line.

OFFICES—Lumber District, Albany, N. Y.; 20 South St., New York. Telephone 711 Broad.

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CANADIAN EXPORTERS AND WHOLESALERS

Thos. Meaney & Co. .

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103 Bay St. - Toronto, Ont.

LUMBER

MILLMEN—Send us list of dry hardwoods.

Huntsville Lumber Co., Ltd.

MANUFACTURERS OF LUMBER LATH AND SHINGLES

—: HUNTSVILLE, ONT. :—

WE are open to cut White Pine and Hemlock Bill Stuff. Have for Sale a Quantity of Dry Mill Stocks and Sidings, also 16 in. Pine Shingles and 4 ft. Lath 1½ in. wide.

CORRESPONDENCE SOLICITED

THE PEMBROKE LUMBER CO. LTD.

MANUFACTURERS AND WHOLESALE DEALERS IN

DIMENSION TIMBER OF ALL SIZES AND KINDS, JOISTS, CAR DECKING, CAR SILLS, SHIP DECKING, AND ALL KINDS OF ROUGH AND DRESSED LUMBER.

Write us for Quotations on all Bills — PEMBROKE, ONT

FOR SALE

Red Pine Dimension Logs, can be any length up to 50 feet to suit purchaser, and would contract for two to three million for next summer delivery at Spanish River. Special long lengths could be loaded on cars at Rayside, C. P. R. Will have five to six million feet of WHITE PINE, first cut on limit at Spanish River. And have about five million feet at mouth French River which could be delivered at opening of navigation . . . . . .

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BOOTH & GORDON - Sudbury, Ont.

WM. MASON & SONS . . .

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LUMBER and DIMENSION TIMBER LATH and SHINGLES

We have the largest and best equipped Dimension Saw Mill in Eastern Canada. All our machinery is of the latest and most improved pattern, and we are prepared to quote prices on and supply at the shortest notice any orders that may be submitted to us.

Address, P. O. Box 1020, OTTAWA, ONT.

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WHOLESALE LUMBER, LATH, SHINGLES, ETC.

Write for Stock List

JAS. G. CANE & CO.

WHOLESALE HARDWOOD • LUMBER •

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Send us full description and lowest price for any lumber you have for sale.

JAS. PLAYFAIR & CO.

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Contractors for Railway Supplies
BILL TIMBER a Specialty . . .

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WANTED :

A Small, Well-Assorted Stock of

Dry 2 in. Hemlock from 2 × 4 to 2 × 12—10 ft. and up

State Lowest Price and when cut, with sizes and quantity. | The Reid Co., Ltd., Toronto

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PACIFIC COAST LUMBER CO.

MANUFACTURERS OF . . . . . .

British Columbia Red Cedar Lumber and Shingles
Kiln-Dried Bevel Siding, V Siding, Ceiling, Wainscotting
Door Stock, Base, Casings, Mouldings, etc.

We do accurate work and make reasonably prompt shipments. NEW WESTMINSTER, B.C.

YES, Yard No. 1, including most of our Seasoned Stock was burned, but do not forget that we are still in position to fill your orders for stock of almost every description, and can do so promptly. Our mills started directly after the fire, and we will continue to make lumber for you until the end of the season, and wish it understood we are as eager for your trade as ever. We thank our patrons for past favors, and solicit their future orders.

J. W. HOWRY & SONS • LUMBER • FENELON FALLS, ONT.

KILN-DRIED BIRCH FLOORING SHEETING .. and .. CEILING **$20.00** SAMPLES BY MAIL **KNIGHT BROS.** Burk's Falls, Ont.

FOREIGN EXPORTERS AND IMPORTERS

WE want to buy FOR CASH the following kinds of Lumber : : : : :

Red Oak, Soft Elm
Basswood (all thicknesses)

Write us promptly, stating what you have to offer in each kind and quantity of each thickness, also dryness, etc., with lowest prices.

Empire Lumber Co. - Buffalo, N. Y.

DONOGH & OLIVER

Wholesale Dealers in Lumber, Lath and Shingles

TORONTO: Northern Docks. -:- NORTH TONAWANDA, N. Y.

Write us if you have any . . . .

DRY SOFT ELM for immediate shipment.

SCATCHERD & SON - 1053 Seneca Street, BUFFALO, N. Y.

WANTED

1", 1¼", 1½", 2", 3" and 4" 1sts and 2nds

Grey Elm. Also 1⅛" Rock Elm. Log Run.

Please quote prices delivered Black Rock, Buffalo, N. Y

T. SULLIVAN & CO. ◎ Buffalo, N. Y.

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Send four 3-cent Canadian postage stamps for a copy of the LUMBERMAN'S VEST-POCKET INSPECTION BOOK, containing rules for the Inspection of Pine and Hardwood Lumber in the Leading Markets of the United States and Canada.

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will pay your subscription to the weekly and monthly CANADA LUMBERMAN for

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BUFFALO HARDWOOD LUMBER COMPANY

940 Elk St., BUFFALO, N. Y.

50,000 ft. 2 in. Nos. 1 and 2 and Common Soft Elm.
100,000 ft. 1¼ in. Nos. 1 and 2 and Common Soft Elm.
} **WANTED** {
30,000 ft. 2½ in. Nos. 1 and 2 and Common Rock Elm.
100,000 ft. 1 in. Nos. 1 and 2 and Common Rock Elm.

Are also in the market as CASH BUYERS for other kinds of Hardwoods. CORRESPONDENCE SOLICITED.

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Ottawa, Arnprior & Parry Sound Ry.

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OTTAWA & NEW YORK LUMBER LINE
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Shortest and Quickest Route from
OTTAWA, ROCKLAND, HAWKESBURY, ARNPRIOR and all points on Grand Trunk Ry. TO . . .
BOSTON, PORTLAND, NEW YORK, DETROIT, TONAWANDA, ALBANY, &c., MONTREAL, TORONTO, QUEBEC, HALIFAX, ST. JOHN, &c.

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Silver Solder, P. W. Ellis & Co., Toronto.

WHOLESALE PRICES CURRENT.

TORONTO, ONT.

TORONTO, June 24, 1896.

CAR OR CARGO LOTS.

1¼, 1½ and 2 inch cut up and better	33 00	36 00
2 inch picks and uppers	35 00	37 50
1x12 dressing and better, 60% 16 ft	24 00	26 00
1x10 fine dressing and better	23 00	25 00
1x10 and 12 Canadian dressing and better	20 00	22 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 mill run	16 00	18 00
1x10 and 12 common	13 00	15 00
1x10 and 12 mill culls	9 00	10 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	11 00	12 00
1 inch siding ship culls	10 50	11 50
1 inch siding mill culls	8 50	9 00
Cull scantling	8 00	9 00
1 inch strips 4 in. to 8 in. mill run	13 00	14 00
1 inch strips, common	11 00	12 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		2 30
XX shingles 16 inch		1 35
Lath, No. 1		1 60
Lath No. 2		1 30

HARDWOODS—PER M. FEET CAR LOTS.

Quality, 1s and 2s unless otherwise specified.

Ash, white, 1 to 2 in.	$26 00	$28 00	Cherry 1 to 1½	$50 00	$60 00
" " 2½ to 4..	30 00	32 00	" 2 " 4..	60 00	65 00
Ash, black, 1sts and 2nds, 1 to 1½ in....	17 00	19 00	Elm, soft 1 " 1½	14 00	15 00
Ash, black, 1sts and 2nds, 2 to 4 in.....	19 00	21 00	" " 2 " 3..	15 00	16 00
Ash, M. R., 1 " 2..	15 00	18 00	" rock 1 " 1¾	16 00	18 00
Birch, 1 " ..	20 00	22 00	" " 1½ " 3..	20 00	22 00
" 1½ " 2..	22 00	24 00	Hickory 1½ " 2..	28 00	30 00
" sqrs. 4x4 " 8 x8	24 00	26 00	Maple 1 " 1½	16 00	17 00
Basswood 1 " 1¼	16 00	18 00	" 2 " 4..	17 00	18 00
" 1½ " 2 ..	19 00	20 00	Oak, red, p'n 1 " 1½	28 00	30 00
" m. r. 1 " 1¼	14 00	16 00	" " 2 " 4..	30 00	32 00
Butternut 1 " 1½	23 00	25 00	" white " 1 " 1½	28 00	30 00
" 2 " 3..	25 00	28 00	" " " 2 " 4..	30 00	35 00
Chestnut 1 " 2..	24 00	26 00	" quart'd 1 " 2..	46 00	50 00
			Walnut 1 " 3..	85 00	100 00
			Whitewood 1 " 2..	32 00	36 00

OTTAWA, ONT.

OTTAWA, June 24, 1896.

Pine, good sidings, per M feet, b.m.	$30 00 35 00
" " " " "	26 00 30 00
Pine, good shorts, " " "	18 00 25 00
Pine, No. 1 dressing sidings, per M feet, b.m.	17 00 20 00
Pine, " " strips, " " "	15 00 18 00
Pine, " " shorts, " " "	13 00 14 00
Pine, 10 s.c. and better stock, " " "	13 00 16 00
Pine, 8 s.c. " " " "	11 50 13 00
Pine, " sidings " " "	13 00 15 00
Pine, " strips " " "	9 00 12 00
Pine, " shorts " " "	7 00 9 00
Pine, box culls " " "	9 00 11 00
Pine mill culls " " "	7 00 10 00
Lath per M No. 1	1 00 1 35
Lath per M No.	80 1 15
1x10 No. 1 barn	18 20
1x10 No. 2 "	16 18
1x8 & 9 No. 1 "	16 18
1x8 & 9 No. 2 "	15 17

QUEBEC, QUE.

QUEBEC, June 24, 1896.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For interior and ordinary according to average, quality etc., measured off	16 @	22
For fair average quality, according to average, etc., measured off.	20	26
For good and good fair average " " " " "	25	30
For superior " " " " "	32	40
In shipping order " " " " "	36	42
Waney board, 18 to 19 inch " " " " "	36	42
Waney board, 19 to 21 inch " " " " "	38	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	40	49

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average and quality	22	30

BIRCH.

16 inch average, according to average and quality	21	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

DEALS.

Bright spruce, according to mill specification, $43 to $44 for 1st, $28 to $30 for 2nd, $25 to $27 for 3rd, and $21 to $23 for 4th quality. F.O.B. batteau

SAGINAW, MICH.

SAGINAW, Mich., June 24, 1896.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$45 00	Selects, 1 in., 8 in. and up wide	$40 00
1¼, 1½ and 2 in.	45 00	1¼, 1½ and 2 in.	41 00
2½ and 3 in.	53 00	2½ and 3 in.	47 00
4 in.	56 00	4 in.	50 00

FINE COMMON.

1 in., 8 in. and up wide	33 50	2½ and 3 in., 8 in. and up wide	42 00
1¼, 1½ and 2 in.	36 00	4 in.	45 00

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	23 50	2½ and 3 in., 7 in. and up wide	37 00
1¼, 1½ and 2 in.	30 00	4 in.	40 00

STRIPS. A AND B (CLEAR AND SELECTS).

1¼ in., 4, 5 and 7 in. wide	34 00	1 in., 4, 5 and 7 in. wide	32 00
6 in. wide	36 00	6 in. wide	36 00

FINE COMMON OR C.

1¼ in., 4, 5, 6 in. wide	30 00	1 in., 6 in. wide	30 00
1 in., 4, 5 in. wide	25 00		

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24 00	1 in., 4, 5, 6 in. wide	22 00

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in	16 00	1 in., 4, 5 and 7 in.	15 00
1 in., 6 in.	17 00	1 in., 6 in.	17 00

SHELVING.

No. 1, 1 in., 10 in. stocks	25 00	No. 2, 1 in., 7 and 8 in. stocks	19 00
1 in., 10 in. and up wide	26 00	1 in., 10 in. stocks	21 00
1 in., 12 in. stocks	29 00	1 in., 12 in. stocks	24 00
1 in., 12 in. and up wide	30 00	1 in., 10 in. and up wide	23 00
1¼ in. 1½ and 2 in., 8 in. and up wide	29 00	1 in., 13 in. and up wide	25 00

BARN BOARDS OR STOCKS.

No. 1, 12 in.	20 00	No. 2, 9 in.	13 50
10 in.	16 50	8 and 7 in.	13 50
9 in.	16 00	No. 3, 12 in.	12 50
8 and 7 in.	16 00	10 in.	11 00
No. 2, 12 in.	16 00	9 in.	11 00
10 in.	14 00	8 in.	11 00

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$ 9 00	1 in., 13 in. and up wide	$11 50
1 in., 6 in. wide	10 00	1¼, 1½ and 2 in., 7 in. and up wide	11 50
1 in., 7 in. wide and up	10 50		

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9 in. wide	17 00	1 in., 10 in. and up wide	18 00
1 in., 6 in. wide	18 00	1¼, 1½ and 2 in., 8 in. and up wide	20 00

COFFIN BOARDS.

No. 1, 1 in., 13 in. and up	20 00	No. 1, mill culls	8 00
No. 2	17 00	No. 2, or red horse	6 50

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23 00	No. 2	18 00
No. 1 (nearly clear)	21 50	No. 3	14 00

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16ft.	$ 8 50	Hemlock, 2x4 to 10, 12 to 16 feet	8 00
18 ft.	10 50	2x12	8 50
20 ft.	11 50	Add $1 to each additional 2ft. in length.	
22 and 24 ft.	12 50		

SHINGLES, 18-IN.

Fancy brands, XXXX	3 00	Standard brands, river made, XXXX	2 75
Clear Butts	1 90	Clear Butts	1 75

WHITE PINE LATH.

No. 1	1 60	No. 2	1 20
		Hemlock	1 25

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N. Y., June 24, 1896.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in.	$45 00	47 00	No. 3, 1¼ to 2 in.	17 00	13 00
2½ and 3 in.	50 00	55 00	Shelving, No. 1, 13 in and up, 1 in.	30 00@31 00
4 in.	54 00	57 00	Dressing 1¼ in.	24 00	25 00
Selects, 1 in.	39 00	40 00	1¼x10 and 12	26 00
1¼ to 2 in.	40 00	42 00	1½ in.	24 00	25 00
2½ and 3 in.	47 00	50 00	2 in	25 00	28 00
4 in.		52 00	Mold st'ps, 1 to 2 in.	31 00	33 00
Fine common, 1 in.	35 00	37 00	Barn, No. 1, 10 and 12 in.	18 00	20 00
1¼ and 1½ in.	34 00	36 00	6 and 8 in.	17 00	19 00
2 in	34 00	36 00	No. 2, 10 and 12 in.	15 00	16 00
3 in.		45 00	No. 3, 10 and 12 in.	13 00	14 00
4 in		45 00	6 and 8 in.	12 50	13 50
Cut'g up, No. 1, 1 in.	28 00	30 00	Common, 1 in.	16 00	18 00
1¼ to 2 in.	32 00	34 00	1¼ and 1½ in.	17 00	19 00
No. 2, 1 in.	15 00	17 00	2 in	18 00	20 00
No. 2, 1¼ to 2 in.	22 00	24 00			

WHITE ASH.

1st & 2nd, 1 inch,	32 00	33 00	2½ to 4 in.	38 00	40 00
1¼ to 2 in.	33 00	34 00	Strips	17 00	18 00
			Culls	9 00	10 00

BLACK AND BROWN ASH.

1st & 2nd, 8 inch up,	20 00	22 00	Com. & good culls	10 00	12 00

BIRCH.

1st & 2nd, 6 inch & up, red	28 00	30 00	1st & 2nd, white, 6 in. & up,	18 00
			Com & good culls	10 00	12 00

ELM.

1st & 2d, rock, 8in. & up,	18 00	22 00	1st & 2d, soft, 8 in. & up,	16 00	18 00

MAPLE.

1st & 2d, hard, 6in. & up	18 00	20 00	1st & 2d, soft, 6in. & up,	17 00	19 00

WHITE OAK.

1st & 2nd, plain, 8 in. & up	26 00	28 00	Clear squares, 5x5 to 8x8	35 00
Good common	15 00	17 00	1st & 2nd quartered, 6 in. up	45 00	50 00
Good culls	10 00	12 00	Common quartered	25 00	30 00

RED OAK.

1st & 2nd	25 00	27 00	Quartered 1st & 2nd	42 00	44 00
Common	14 00	16 00	Common	22 00	26 00
Cull	9 00	10 00			

NEW YORK CITY.

NEW YORK, N. Y., June 24, 1896.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply, rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$28 00 @ 40 00	Building orders	$27 00 @ 37 00
Decking	44 00 50 00		

SPRUCE.

6 to 9 in.	14 00	14 50	10 to 12 in.	16 25	17 00
6 to 12 in.	14 50	15 75	Lath	1 85	1 95
9 to 12 in.	15 75	16 25			

HARDWOOD.

4/4 and thicker, No. 1 and 2			Black Ash, 10 to 16		23 00
" " "			Soft Elm, "		17 00
" " "			Hard Maple, "		21 00
" " "			Basswood, "		20 00
" " "			Birch, "		23 00
" "	Black Ash, Com. and Shipping Cull, M.C.O.				14 00
" "	Soft Elm, " " "				12 00
" "	Hard Maple, " " "				14 00
" "	Basswood, " " "				12 00
" "	Birch, " " "				14 00

ALBANY, N.Y.

ALBANY, N. Y., June 24, 1896.

PINE.

Uppers, 3 in. up	$50	$52	Dressing boards, narrow	$19	$21
2½ in.	50	52	West India shipping boards.	16	17
1 to 2 in.	45	48	Box boards..	12	14
4 inch uppers	50	52	10-in. dressing and better...	26	30
Selects, 2½ in. up	42	44	10-in. common	14	15
1 to 2 in.	38	42	12-in. dressing and better...	26	32
Fine common, 2½ in. and up	40	42	Common, 1x12	14	16
1 to 2 in.	36	40	No. 1 barn, 1x12		20
No. 1 cut, 1 to 2 inch	25	35	1x10	18	21
No. 2	18	25	1x8	16	18
No. 3	17	20	No. 2 barn, 1x12	17	19
No. 1 moulding, 1 to 2 in.	33	36	1x10	17	19
No. 2 moulding, 1 to 2 in.	25	28	1x8	17	19
Stained saps		20	Shaky or star clear, 1 to 2 in.	19	21
Bracket plank	30	35	Dressing	16	18
Shelving boards, 12-in. up	30	32	Common	11	15

LATH.

Pine	$2 25	Spruce	$2 00

SHINGLES.

Sawed Pine, ex. XXXX	$4 25	$4 30	Bound butts, 6 x 18	$6 00	$6 15
Clear butts	3 25	3 35	Hemlock	2 15	2 30
Smooth, 6 x 18	5 40	5 50	Spruce	2 20	2 30

OSWEGO, N.Y.

OSWEGO, N. Y., June 24, 1896.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$45 00	@46 00
Pickings, " "	36 00	38 00
No. 1, cutting up, " "	31 00	35 00
No. 2, cutting up, " "	24 00	23 00
In strips, 4 to 8 wide, selected for moulding trips, 14 to 16 ft.	30 00	32 00

SIDING

1in siding, cutting up ricks and uppers	32 00	@39 00	1¼ in selected	38 00	@43 00
1in dressing	19 00	21 00	1¼ in dressing	20 00	22 00
1in No. 1 culls	13 00	14 00	1¼ in No. 1 culls	15 00	16 00
1in No. 2 culls	11 00	12 00	1¼ in No. 2 culls	13 00	14 00
			1 in. No 3 culls	11 00	12 00

1X12 INCH.

12 and 16 feet, mill run	21 00	24 00
12 and 16 feet, No. 1 and 2, barn boards	19 00	20 00
12 and 16 feet, dressing and better	27 00	31 00
12 and 16 feet, No. 2 culls	13 00	14 00

1¼X10 INCHES.

Mill run, mill culls out	$24 00	@24 00	No. 1 culls	17 00	18 00
Dressing and better	27 00	35 00	No. 2 culls	14 00	15 00

1X4 INCHES.

Mill run, mill culls out	17 00	21 00	No. 1 culls	14 00	15 00
Dressing and better	24 00	30 00	No. 2 culls	12 00	13 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	18 00	25 00	6, 7 or 8, No. 1 culls	15 00	16 00
			6, 7 or 8, No. 2 culls	13 00	14 00
6, 7 or 8, drsg and better	23 00	30 00			

BOSTON, MASS.

BOSTON, June 24, 1896.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$11 50	12 00	¾ inch	$ 9 25	9 50
Coarse No. 5	15 00	15 50	11-16 inch	8 50	8 75
Refuse	13 00	13 25	5/8 inch	8 00	8 25
Outs	9 00		Clapboards, sap ext.	45 00	46 00
Boxboards, 1 inch	10 75	11 00	Sap clear	41 00	42 00
7/8 inch	9 75	10 00	Sap, and clear	34 00	36 00
			No. 1	23 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in.	$50	00@52 00	Fine com., 3 and 4 in	46 00	52 00
1¼, 1½ and 2 in.	52 00	53 00	No. 2, 1 in. Fine com.	29 00	31 00
3 and 4 in.	58 00	62 00	1¼, 1½ and 2 in.	30 00	32 00
Selects, 1 in.	44 00	45 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in.	45 00	47 00	No. 2	36 00	39 00
3 and 4 in.	52 00	55 00	No. 3	26 00	30 00
Moulding boards, 8 to 11 in. clear	37 00	39 00	Cut ups, 1 in	20 00	32 00
60 per cent. clear	32 00	34 00	Cut ups, 1¼ to 2 in.	24 00	38 00
Fine common, 1 in.	40 00	41 00	Coffin boards	20 00	22 00
1¼, 1½ and 2 in.	40 00	41 00	Common all widths	22 00	26 00
			Shipping culls, 1 in.	14 50	15 50
			do 1¼ in.	15 50	16 50

SHINGLES.

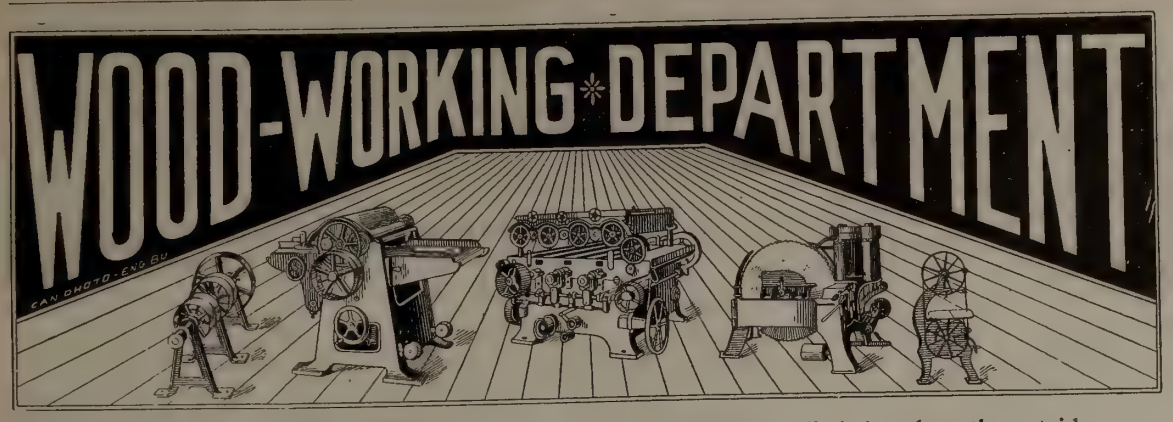
Spruce	1 30	1 50	Second Clear	1 75	1 0
Cedar, extra	2 65	2 90	Extra No. 1	1 25	1 50
Clear	2 25	2 50			

HEMLOCK.

Boards, rough	11 00@11 50	No. 2	8 00@ 10 50
Planed	11 75 12 00		

LATH.

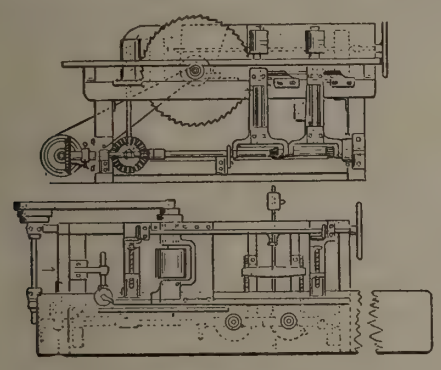
Spruce		By cargo	1 80@ 1 90
By car	1 80@ 2 00		



SLAB-SAWING MACHINE.

A PATENT has been granted in the United States to Austin W. Goodell, of Philadelphia, Pa., for a slab-sawing machine as shown herewith, for which the following points are claimed :

A slab-sawing machine, a saw attached thereto, a movable fence thereon, means to move the fence simultaneously at each end from a single operative point, upright feed-rolls therefor seated upon a rectangular shaft, the rolls being in longitudinal and removable sections, and carried in a yoke upon a shaft normally upright but having means for side adjustment. A slab-sawing machine with a fence therefor, having attached thereto a delivering mechanism suited to shifting positions of the fence, feed-rolls therefor mounted upon shafts normally perpendicular, but pivotally supported from a feed-shaft arranged for outward and inward moving, means for raising or lowering the end of the feed-shaft nearest the feed end of the machine, and means for connecting the feed shaft to the cross feed-shaft for such adjustment and the maintenance ot their driving-contact under such adjustment.



SLAB-SAWING MACHINE.

CARE OF WOOD-WORKING SAWS.

THERE is a great variety of opinions in regard to the care of the small saws generally used in the different departments of wood-working. Some of these opinions are right, and some must just as certainly be wrong. I will admit at the start that there are more than one of several ways which may be right, owing to differing conditions, but there are several ways which I have seen that are wrong under all conditions.

These saws when new were well shaped so far as the teeth were concerned, and cut easily and smoothly, but before six months they were in a shape to surprise one used to well-fitted saws. The hook was almost entirely gone, so that they did a good job of scraping, but were a failure as far as cutting was concerned. They had meanwhile never been trued up or ground, only hand filed, as the foreman did not believe in anything else and thought he knew because of his age and experience. He believed in filing the rip or splitting saws with a little bevel, so the outside corner was about like a cut-off saw, the points generally about a thirty-second longer one side than the other. This is the saw to cut, according to his rule, but I noticed the saws cut hard, and were inclined to dodge the hard places and burn somewhat. Here was a case of the won't-see kind. I don't think that foreman will live long enough to see that his way is wrong.

My idea is, have the saw well trued up so that every tooth does its share. Give hook enough to insure an easy cutting angle, different woods demanding slight variations, then make the edge of the tooth square as possible, with good corners both sides. Given plenty of power and fair speed and you have something you can get the work from. To keep such a tooth after you get it, grind it instead of filing by hand. The grinders of to-day are so simple and have such variety of adjustments, that they are far superior to hand filing.

If some men would watch carefully the action of a saw while at work, with a view to finding out its defects, they would learn something to their advantage. Band saws for shop work are often ill-used and condemned before they have given half service. A great many men can run, file and braze band saws, but the number thins down considerably when it comes to doing a nice job. The saw should be free from kinks before brazing. Great care should be taken to make the splice an even taper, to have the saw the same thickness at the braze without filing much afterwards. Be snre it is clamped perfectly straight before solder is applied. After brazing, smooth up and file as squarely as possible, and if necessary, smooth up by running an oil stone alongside of teeth for smooth work.

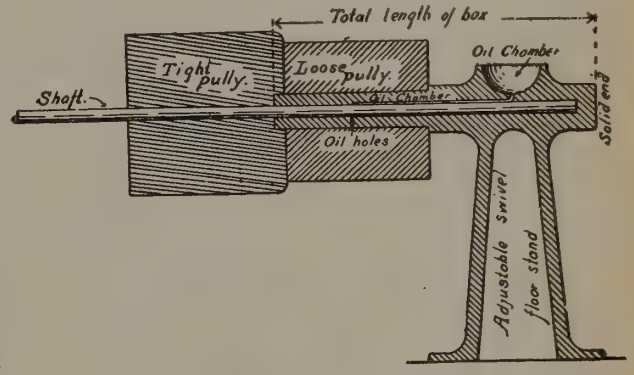
Good judgment is necessary in straining the saw. Many break from too much strain ; some from too little. Some people think anything will do for a saw guide. I would condemn all old chunks of wood shoved in back of the saw or at the side. Get a good roller guide of modern make, of which there are several good ones. If your saw is not well fitted the guide will not control it altogether, although it will to a certain extent. The best way is to go slow and watch the work, and when you get it in good shape, keep to that until you find something better.

There is nothing I like better than to go into shops where there are machines of old style and notice their inconvenience and sometimes their convenience. Once in a while I see features that could be adopted with beneficial results, and am surprised that others are tolerated. I recall one feature about a buzz planer (an old-style machine) which struck me as rather a good thing, but possibly too expensive. It consisted of a lever to set the gage for any bevel or square, so you could hold the gauge in position with one hand, tighten one hand screw with the other, and set accurately. I have often wondered why there is no improvement in this line. With most machines we have to loosen two hand screws, jar the gauge down about where we want it, and hang on tightly with one hand while we tighten one screw with the other. Then it is apt to slip before you get them both tight, and you must try again. To set up square you are apt to get it back too far, and have to get a square at last to set it. This old machine would set right up square every time, and stay there. The adjustments were also good for keeping the boxes in line with bed—better than many of the machines of the present day.—Uncle Dean, in Wood-Worker.

AN IMPROVED LOOSE PULLEY.

Mr. E. B. Knight, of Chilliwack, B. C., writes as follows to the Wood-Worker on the question of a good loose pulley :

"We run an ordinary planer and matcher and a fast-feed flooring machine in connection with our saw mill. The loose pulley on the planer has been in use for fifteen years, and on flooring machine since 1890, so that their durability is unquestioned. The tight and loose (jump) pulleys on both machines are 14 inches diameter, using 8-inch double leather belts. The loose pulleys were built to order in this way : The outer bearing or floor stand of countershaft is made a solid box, 16 inches in length, and extends right up to tight pulley. Nine inches of this solid box next tight pulley is turned on outside, and loose pulley runs on outside of this box, instead of on shaft as usual. In centre of where loose pulley runs, four holes are drilled through box and a small channel cut in babbit from oil chamber to these holes. By this means, when you oil end bearing of a countershaft (which you can do any time) you oil loose pulley at the same time. You will notice that the loose pulley is oiled from the inside, as it should be, in place of through a hole in the loose pulley. I enclose rough hand sketch to show the idea more clearly. If any of your readers want a certain cure for the ordinary loose pulley nuisance, this is the only thing with which I am acquainted, and I speak from fifteen years' experience."



AN IMPROVED LOOSE PULLEY.

Grate-bars should be allowed room to expand when they are put into a furnace. If they are wedged tightly into place when cold they will expand when heated and the furnace be damaged or the bars will be warped out of shape. Do not allow them too much room endwise, or they may fall off from the bearer at the front end. This may seem to be an unnecessary warning, but fires have gone into the ashpits more than once on this account, hence it is well to be on the safe side.

OTTAWA LETTER.

[Regular Correspondence of the CANADA LUMBERMAN.]

Apart from the operations of the mills lumber matters in the Ottawa valley are decidedly quiet, the election campaign being the absorbing topic. None of the mills are running at night, and until the country becomes settled after election disturbances it is not probable that the manufacturers will find it necessary to do so. The lumber drives have been quite successful, nearly all being now in safe waters. I hear that Mr. Alex. Fraser has some square timber hung up, and a raft belonging to Mr. Alex. Barnet has also been blocked owing to the breaking of a dam.

The first ten mile section of new line built this season on the O. A. & P. S. Ry. will be handed over by the contractors early in August. This will complete the line to a distance of 175 miles west of Ottawa, and the entire road is expected to be completed by the 15th of October.

Mr. E. C. Whitney, of the St. Anthony Lumber Company, came to the city about the middle of June from his home in Minneapolis. He states that the lumber trade in the United States is dull just now owing to the unsettled state of the money market, but expects an improvement after the election.

The men engaged during the winter in the woods have all returned, the last batch arriving a week ago from the Les Quinze section. The journey required eight days, a great part of the way being traversed by boat and on foot. They will remain until about the first of August, when they return to the woods.

OTTAWA, Ont., June 20, 1896.

NEW BRUNSWICK LETTER.

[Regular Correspondence of the CANADA LUMBERMAN.]

S. T. KING & SON'S MILL.

Improvements have been made to S. T. King & Sons' mill at Kingsville, and they now have a mill which, fitted as it is with a gang and a Lane's patent rotary, is capable of cutting upwards of 100,000 feet of lumber every day. A new patent haul-up has been put in. When the logs reach the main floor of the mill they are put upon live rolls, by means of which they are carried up to a steam jump saw, which cuts them off. In this there is considerable of a saving, as a cross-cut saw was formerly used for that purpose. Steam kickers also have been introduced. The refuse stuff from the mill is carried out to the dump by an endless wire rope fitted with buckets. There it is burned. This rope is 600 feet long, the dump being 300 feet away from the mill. The greatest saving effected by the improvements, however, is in the boiler house. Ten boilers were used in former years, but after the explosion they were taken out and three new ones put in. These boilers are run by one man, who has an eye to the water and looks after the drafts. Thus the services of four men are dispensed with. The fuel, sawdust, is carried to the furnaces by endless chains, and there are extra furnaces to burn up the surplus sawdust.

The new rotary was built by the Lane Manufacturing Company, of Montpelier, Vermont, and is a two and a half back lever set works rotary mill. The feed carriage is driven by Prescott shot gun feed. The lever rig is so arranged as to get immense leverage and enable the operator to handle the long heavy carriage about as easy as an ordinary light one. The rotary is fitted with two saws, one directly under the other. The lower saw is the larger of the two, and does the greater part of the work, but when a big log goes on the carriage the upper saw is brought into use. The millwright was Mr. Charles T. Winslow.

BITS OF LUMBER.

Upham's mill, opposite Andover, is nearing completion.

Miller & Woodman's saw and shingle mill at Pokiok has started sawing.

James Porter, whose mill was destroyed by fire last winter, is pressing on the work of rebuilding.

Capitalists with whom Messrs. Stetson, Cutler & Co., of St. John, are said to be interested, are said to have selected a site near Ashland, Me., for the erection of a saw mill, with a capacity of 30,000,000 feet annually.

Alfred West's new saw mill at Cove's Island will shortly commence operations. The boiler for the new mill was shipped a couple of weeks ago, and the engine, machinery attachments, etc., which were constructed by Messrs. Leonard, will be put into place as soon as possible.

ST. JOHN, N.B., June 20, 1896.

BRITISH COLUMBIA LETTER.

[Regular Correspondence of the CANADA LUMBERMAN.]

The certificate of registration has been published of the Turkish Harbor Timber Co., Ltd. The objects of the company are: To carry on business as timber merchants, saw mill proprietors and timber growers, and to buy, sell grow, prepare for market, manipulate, import, export and deal in timber and wood of all kinds, and to manufacture and deal in articles of all kinds in the manufacture of which timber or wood is used, and to buy, clear, plant and work timber estates, etc.

The Victoria Lumber Co. are running their saw mill night and day.

Dr. Edgar, provincial timber inspector, will hereafter have his headquarters at Nelson.

Nine car loads of bridge timber were recently shipped in one week to Ontario points over the C. P. R.

The Lumby saw mill at Vernon has been running steadily all spring, and a large number of logs have been converted into lumber. Mr. McIlvanie, the proprietor, reports having received orders for clear pine and tamarac lumber from as far east as Manitoba.

What is considered the largest turn of logs ever hauled in British Columbia was brought down to the water from Mr. H. M. Cade's camp at Sechelt by Tom Fay, one of the teamsters. A "turn" of logs is the amount pulled over the skid-road from the camp to the water in one load. This famous load, which was pulled by a six-horse team, contained 10,670 feet.

NEW WESTMINSTER, B. C., June 19, 1896.

MICHIGAN LETTER.

[Regular correspondence CANADA LUMBERMAN.]

The cargo market on the Saginaw river shows little activity, and judging from the April and May shipments, which were the smallest for many years, the bottom of inactivity seems to have been struck. Mr. Hopkins, of the Saginaw Board of Trade, entertains gratifying anticipations, nevertheless, as to the general outlook for the season of 1896. The increase in the two Saginaw river cities has been remarkable in the past year, and especially in Saginaw, where there are at present thirty-six lumber yards.

The past few years has witnessed a great change in the lumber business of the Saginaw valley. Until recently nearly all the lumber was shipped by water, but rail freight rates are now reduced until it is profitable to ship by rail. In 1885 there were shipped by water 659,505,000 feet and 149,672,000 by rail. In 1890 the shipments by rail and water were about equal. Last year only 136,120,000 feet was shipped by water and 393,527,000 feet by rail.

The total shipments of lumber from the Saginaw river up to June 1st are the smallest in thirty years.

On the Spanish river in Canada there are 25,000,000 feet of logs hung up on the main river and tributaries, which belong to Michigan mill owners, and which will not come down unless there are heavy rains.

Cody & Addis, of Menominee, Mich., have contracted to cut 30,000,000 feet of pine timber along the line of the Munising Railway, for Comstock Bros., of Alpena, Mich., in two years. The logs are to be cut at the Burtis mills, Munising.

The plant of the Thompsonville Lumber Company at Thompsonville has been purchased by a Buffalo concern, who will locate a hoop and stave mill at that point. The demand for cooperage stock is fairly good, with favorable prospects.

Albert Pack has 30,000,000 feet of logs in the streams in Georgian Bay, Ont., which will be rafted as fast as possible to Alpena to be converted into lumber. With these logs Mr. Pack has sufficient timber on the same streams to stock the Alpena mill for five years.

The amount of timber to be rafted out of the Spanish river this season for Michigan parties is given as follows: Edmund Hall, Detroit, 10,000,000 feet; S. G. M. Gates, Bay City, 4,000,000 feet; Pitts & Co., Bay City, 12,000,000 feet; C. K. Eddy & Sons, Saginaw, 7,000,000 feet; Saginaw Lumber Company, Crow Island, 12,000,000 feet; Albert Pack, Alpena, 8,000,000 feet; Alger, Smith & Co., Detroit, 12,000,000 feet. In addition to this a large quantity will come from other Georgian Bay points.

SAGINAW, Mich., June 21, 1896.

PROPER TIME FOR CUTTING TIMBER.

"THE Economic Society of Westphalia," says Cosmos, "has been attempting to determine experimentally the most fitting time to cut down trees. To this end four beams were shaped from four red ash trees of the same age, which had grown in the same soil and had equally sound wood, but had been cut each in a different month, from December to March. These were loaded with equal weights, and it was found that the resistance to the load was greatest in the case of the wood cut in December, being less by 12 per cent. for the January wood, by 20 per cent. for that cut in February, and by 30 per cent. for the March wood. Two ash trees of the same size having been buried in moist soil, it was shown that the one that had been cut in February rotted in eight years, while in that which had been cut in December the wood preserved its hardness after sixteen years in the earth. Two wheels whose spokes had been cut respectively in December and February presented a great difference in durability. The first lasted six years, while the second was unfit for service at the end of two years. It follows from this that the appropriate time for cutting timber to be used for construction is the month of December, and it seems that the period of cutting should by no means be prolonged into January."

LEGAL DECISIONS.

G. T. PALMER VS. THE PENOBSCOT LUMBERING ASSOCIATION.—The plaintiff's logs were driven by the defendant corporation, and were lost, it was alleged, by the negligence of the Association. Suit was entered in the Supreme Court at Bangor, Maine, for $100,000. In his charge the judge said that the defendant corporation did not in any case agree to insure logs handled by them from loss, but only agreed to exercise reasonable care in rafting and due diligence in preserving plaintiff's rights. The court instructed the jury to ascertain whether or not the boomage was paid on the logs that broke away, as upon that depended the condition of the logs and the claims of the plantiff. The verdict of the jury was for $2,899.92 in favor of the plaintiff.

At the Sundridge, Ont., division court recently Rob sued Parkin, a Lindsay lumberman, to recover the value of a number of pine logs cut by the locatee, with the view of having them manufactured into lumber for building purposes. Shortly after Rob cut the logs, lumberman Parkin stamped and removed them. After hearing evidence as to the quantity and quality of the pine cut, judgment was given in favour of the plaintiff at the rate of $4 per M. This judgment is an important one, as affecting the rights of the settler under the Free Grant Act.

The Supreme Court of Louisiana held, in the recent case of Ball vs. Levin et al., that where joint owners of a saw mill plant tortuously and wrongfully entered upon the partnership premises on a Sunday, when the other proprietor was absent, and removed therefrom certain important parts of the machinery essential to the operation of the mill, and kept them away for more than a month, during which time it was idle, the co-proprietor who thus had his rights invaded and was prevented from operating the plant was entitled to actual and punitive damages commensurate with his loss and injury.

PUBLICATIONS.

The first annual report of the Chief Fire Warden of Minnesota is to hand. It contains interesting statistics of the extent of forest fires, and closes with some strong arguments for the preservation of our forests.

Cassier's Magazine for July contains interesting articles on engineering subjects, among which are: "Steam Boilers, their Equipment and Management," by Albert A. Cary; "Vertical vs. Horizontal Turbines," by Samuel Webber, and "Early American Saw Mills," by Joel Sharp.

A young man named Ouellette was drowned off the drive at Wahnapitae recently.

THE NEWS.

—R. Bickell is erecting a veneer factory at Millbrook, Ont.

—Vigars & Co. are building a lath mill at Port Arthur, Ont.

—Mr. Geo. Godda, Eganville, Ont., is building a saw and shingle mill.

—Mr. Johnson, of Bracebridge, Ont., will build a sash and door factory at North Bay.

—It is rumored that a company intends erecting a saw mill at Fesserton, Ont., on Bush's Point.

—Parson & Davis have commenced sawing at their new mill at Greer's Bay, Ont., head of Lake Dore.

—F. Hurlburt & Co., of Seguin Falls, Ont., intends putting in a drag saw and splitter for his shingle mill.

—The saw and shingle mill of Mr. Peter Donnelly, of Tait, Ont., has closed down until fall, for lack of water.

—For the first season in thirty-five years the Parry Sound Lumber Co.'s mill at Parry Sound, Ont., is not operated.

—The Governor-General and Lady Aberdeen recently visited the Laurentide Pulp Co.'s mills at Grand Mere, Que.

—J. E. Maunder, of Lindsay, Ont., has purchased the sash and door factory and lumber business of Mr. Caleb Mark, of Little Britain.

—The Quebec Government has doubled the number of fire rangers in District No. 1, in compliance with the requests of the lumbermen.

—The large saw mill at Lunenburg, Ont., owned by Mr. John Bush, is now under the management of Mr. Gerald Gardner, and is in full operation.

—The lumber office in Toronto of the Grand Trunk Railway Company has been abolished, and hereafter all lumber will be ordered direct from Montreal.

—Allen Bros., Grimsby, Ont., have found business good enough to compel them to build a new planing mill, which will be situated three miles out of town.

—At McLeod, N. W. T., a bonus by-law has been passed to assist in the building of a new mill by the McLaren Company, whose mill was burned some time ago.

—The Morgan Falls Pulp Co., Limited, of New Germany, N. S., has shipped ten vessel loads of pulp to the American market, aggregating 1,457 tons, during the past ten months.

—An exchange says: Saw mills are badly needed in the settlements of Muskoka and Nipissing, where there is an inexhaustable supply of birch, hemlock, spruce, cedar, elm, cherry and other valuable woods.

—The principle business of Angus, Que. is the Royal Paper Mill Co.'s works, comprising a large paper mill, pulp mill and saw mill, all of which are in full operation day and night, and give employment to about 250 hands.

—It is estimated that 75,000 cords of spruce pulp wood, or about 1,000 canal boat loads, will be brought out of Canada this season through the Chambly and Champlain canals, and delivered at Ticonderoga and mills on the Hudson river.

—The Sturgeon Falls Pulp Co. will erect a new mill at Sturgeon Falls, Ont. The company expect to get out about 10,000 cords of pulp wood this season. The amount to be expended by the company is estimated at about $75,000.

—Some quick work was recently performed at the Maclaren mills at Buckingham, Que. At six o'clock a car load of lumber, which 2 1-2 hours before was in log shape, at the mills, 3 1-2 miles distant, was billed and ready for its destination.

—The Coleman Planing Mills and Lumber Co., Ltd., of Burlington and Hamilton, are very busy. They do a large retail lumber business and erect buildings. They have 26 houses under construction in Hamilton alone. Their box crate business is good and builders' supplies are moving, but the outlook is not very encouraging.

—During April the importation of lumber into the United States from Canada was 57,073,000 feet, as against 50,433,000 feet for the same month last year. Imports for the ten months ending April 30 were 609,292,000 feet in 1896 and 426,720,000 feet in 1895.

—The Sault Ste. Marie Pulp and Paper Co. is removing its power house and offices and the high pressure water works pumps, and also the dynamos which are used both for the mills and towns, to make room for the new mill which it is proposed this summer to erect.

—The Byng Inlet Lumber Company, of Byng Inlet, Ont., have overhauled their plant considerably during the past winter, put in a battery of four new steel tubular boilers, in place of eight old-fashioned ones taken out, and have also improved the interior part of the mill.

—The Soo Express says the pulp making and water power scheme continues to engage the attention of the people of Port Arthur, Ont. The town has the natural requirements for pulp grinding and paper making, a grand supply of raw material within easy reach, and magnificent water power.

—The Hawkesbury Lumber Co., of Hawkesbury, Ont., have purchased a 25 K. W. dynamo of the Edison type for lighting the interior of their six mills, which were previously lighted by rc and series incandescent, from a 60 light wood arc dynamo and 35 light Ball dynamo, and which are now used to light their yards. The change is a decided improvement on the old system.

—The Manufacturers Gazette says: The North American Paper and Lumber Co., with headquarters at Halifax, N. S., is seeking of the Dominion Government incorporation with a capital stock of $2,500,000. It proposes to manufacture lumber, pulp, paper, wooden goods, etc. The water powers of Nova Scotia, though numerous, are not of great volume. This company propose to build pulp and paper mills at Halifax, claiming that the cost of coal is so low as to make favorable competition with American pulp and paper mills run with water power. It claims spruce wood to be cheaper in Nova Scotia than at any other accessible point. It would seem that this new pulp and paper enterprise would have exceptional facilities for supplying Europe with their requirements. It is understood that the prime movers in this enterprise are Americans, though several large timber land owners and Halifax capitalists will join in the venture.

CASUALTIES.

—James Davidson was killed at the Aberdeen mills, Fredericton, N. B., by a lath bolt piercing his side.

—Louis Defoe was killed in Gilmour & Co.'s mill at Trenton by being struck by a slab thrown from a large circular saw.

—Henry Carr, employed in Howry & Sons' mill yard at Fenelon Falls, Ont., had both bones of his leg broken above the ankle.

—Albert Stewart, working on the river for W. Caldwell, Lanark, had his leg severely injured while breaking up a jam of logs at Herron's Mills.

—Messrs. Wm. Mason & Son, Ottawa, have received word of the drowning on the Desmoine river, while breaking a jam of logs, of J. Lansing, of Lachute, and J. B. Mohuse, of Pembroke.

—C. A. Sandbury, while regulating some machinery in the St. Anthony Lumber Company's mill at Whitney, Ont., slipped and fell against the saw. One of his legs was severed at the knee.

—James Watters was crushed to death beneath the log carriages in Gillies' mill at Braeside, Ont. He was working on the carriages, conveying the logs into the mill, when he slipped and fell.

—As the result of a quarrel between two men named Ritchie and Prevost, employed at Doherty's mill at Campbellton, N. B., the former was struck on the head by a whiffletree. The blow resulted in his death.

—Joseph Paiement, employed at Nault & Frere's mills at St. Adele, Que., was caught by a band, which tore his arm out and threw him upon the saw, which cut open his side. Death has resulted from his injuries.

—Michael Dunne, 22 years of age, was drowned in a stream known as the Pee-Jaw, on the Dumoine river, where he was employed by the Hawkesbury Lumber Company. He was a brother of the Rev. Father Dunne, of South Gloucester.

—A storm struck the Ottawa river on the 8th inst. Fifty men were at work on the boom in the river. Two were killed by the lightning, and five seriously injured. The dead are Frank Ferrier, of Ottawa, and Nat. McNeil, of Bristol, Ont.

—While operating an edger in Patterson's saw mill at Temple, N. B., Lee Lint, of Fredericton, missed his footing and fell to the floor. His left foot came in contact with the lower part of the huge saw and was completely severed at the instep, and the detached piece of flesh hurled a distance of 50 feet, His condition is critical.

—A terrible accident recently occurred at Taylor's mill at Chatsworth, Ont. An edging, which was caught by one of the saws of the edger, was driven backwards with the force of a bullet, striking James McNabb on the right side of the neck, and passing clear through, protruded about two feet on the other side. Death was instantaneous.

PERSONAL.

Mr. Charles Beck, lumber merchant, of Penetanguishene, Ont., who was mentioned as the probable Liberal candidate for Algoma, decided not to offer himself for public honors.

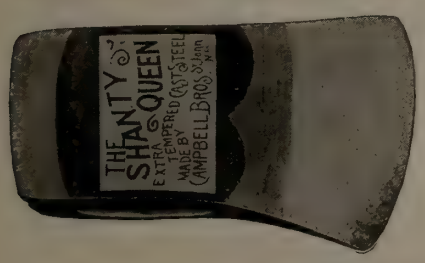
Mr. Llewellyn Powers has been nominated by the Republicans for governor of Maine. Mr. Powers is a wealthy lawyer and owner of 175,000 acres of timber land, most of which is situated in Aroostock county, and he has been called the "Timber Land King."

Capt. R. Tivey, of Peterboro', has received the appointment of timber inspector for the Lakefield-Peterboro section of the Trent Valley canal. Mr. Tivey is an experienced man, having been in former years bridge inspector on the Midland division of the Grand Trunk system.

Mr. Thomas Butler, foreman at the Rathbun Company's lumber shanties at Deseronto, Ont., dropped dead on the 10th ultimo, after having been ailing for some time. He was one of the oldest employees of the company, having been connected with them for about forty years. His brother, Matthew J., is a civil engineer in the employ of the same company.

James Sharp, of Thamesville, Ont., the Canadian representative of the firm of Sharp & Tyle, Liverpool, Eng., died on the 18th of June. He was at one time the principal purchaser of products for the Columbia Handle Company, and recently formed a partnership with Mr. Wm. Buchanon, lumber dealer, of Thamesville. At the time of his death he was only 33 years of age.

His interest in the timber business in Oregon has compelled Mr. T. H. DeCew, of Essex, Ont., to remove to that state. For the past twelve years Mr. DeCew has carried on a large saw mill business in Essex, giving employment to about one hundred men the year round. He has also been a leading light in conducting the affairs of the town. A farewell banquet was tendered him by the townspeople, at which about three hundred persons were present.



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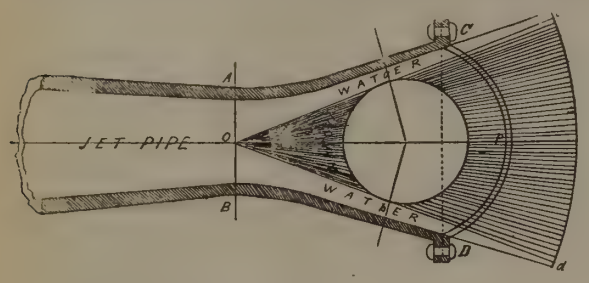
THE BALL NOZZLE.

ON the 16th of May there assembled at the C.P.R. elevator, Dalhousie square, Montreal, the Board of Underwriters, Chief Benoit, of the Montreal Fire Brigade, and a number of leading insurance men of the city. The gathering was by invitation of Mr. Thomas Howard, the Canadian representative of the American Ball Nozzle Co., of New York, to witness a demonstration of the working of the Ball nozzle shown by the accompanying illustration, with which the C.P.R. elevators are equipped, using the company's own hose. The exhibition unexpectedly



developed into a competition between the Ball nozzle and the Descarrie controlling nozzle, the inventor of the latter being present.

The first test was with a stream from the hydrant at about 55 lbs. pressure. Chief Benoit did not consider that the possibilities of either nozzle could be shown from so low a pressure, and suggested bringing down an engine. This was done, and the two nozzles were each given 100 feet of hose connected with the Silsby engine. The result showed the Ball nozzle's superiority both in volume and range of spray and stream, the latter reaching a height of over 150 feet, against an extremely high wind. Chief Benoit and members of the Board of Underwriters were unanimous in their expressions of admiration of the valuable fire-fighting qualities of this nozzle, which, as against the ordinary straight-stream nozzle, an English authority has likened to the Gatling gun compared with the ordinary rifle. The victory was all the more creditable from the fact that Mr. Howard had had no intimation that his nozzle would be called into contest with one worked by its inventor, while the Ball nozzle was put in charge of a member of the fire brigade, who had not had it in his hands before, all of which goes to prove the contention of the manufacturers that simplicity is one of its strongest points. It does not call for any special training to use, the only direction being, "Turn on the water, the Ball does the rest."

The problem of this mysterious nozzle has engaged the attention of many of the leading scientists of the world. Catalogues and information may be obtained from Mr. Thos. Howard, Board of Trade Building, Montreal.

OF the various woods classified, white pine ranks first from the standpoint of commercial use, and the other pines next, these being used chiefly for house finishing and other kindred purposes. The general use of oak in the better grade of house finishing and in manufacture of furniture gives that wood next place. Then come the less important hardwoods, including ash, birch, maple, etc. Hickory, which is used chiefly for wagon stock, is one of the woods least used, the annual cut reaching not more than 250,000,000 feet, as against 3,000,000,000 feet of oak. Black walnut has now become so scarce that it has practically ceased to be quoted in the lumber market. A small quantity still exists in Kentucky, Tennessee and Missouri, but it is sold by the single tree.

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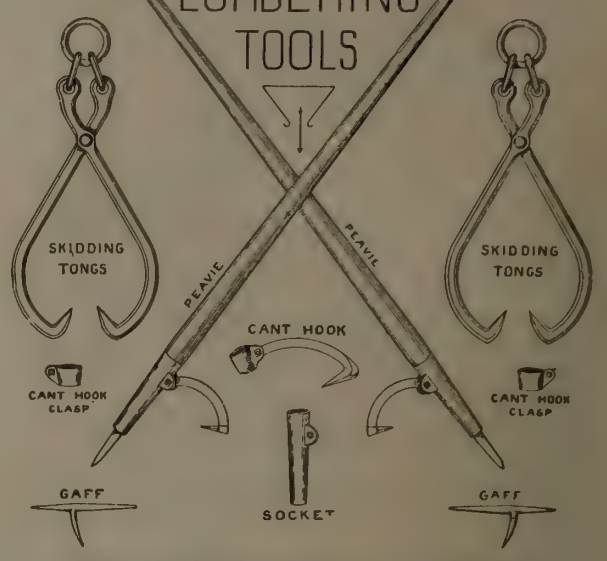

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THE TREE A COMPOSITE BEING.

A TREE is a composite being; a kind of community by itself. The leaves and limbs are all the time striving with each other to see which shall have the most room and the most sunshine. Each strives for all it can get. While some perish in the attempt, or meet with only very indifferent success, the strongest of the buds survive.

Each leaf helps to sustain the limb which carries it, and each limb furnishes some nourishment to the common trunk for the common welfare. The tax is always adjusted according to the ability of each to contribute. As the limbs of a tree are constantly striving for the mastery, so each bush and tree in grove or forest is striving witn others for the mastery. The weakest succumb to the strongest; some perish early, some lead a feeble existence for many years, while even the strongest are more or less injured. With plenty of room, the trunk will be short, the branches many and wide-spread; where crowded, the lower limbs will perish for want of light. Dead limbs fall to the ground to protect and enrich it for nourishing the surviving limbs and the trunk. The scars heal over, more limbs perish as new ones creep upward, and thus we find tall, clean trunks in a dense forest.—Exchange.

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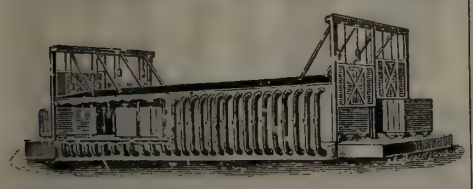

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ELEPHANTS IN A LUMBER PILE.

WILLIAM B. Tourgee has just returned from a trip round the world, says the Buffalo Courier. One of the places which offered some of the most interesting scenes was found in the large lumber yards of Burmah. The teak wood industry is the great industry of that country. The wood grows for the greater part in the northern part of Burmah, where it is cut and floated down the Irrawaddy to Rangoon, where the more important and larger yards are located.

It is in these lumber yards that they employ the elephants in moving and handling the logs. The elephant has practically the entire handling of the logs from the moment they are ready to be taken from the back water, where they have been stored until the logs have been converted into the thin planks used in shipbuilding and other industries, where it answers the purpose better than any other known wood.

A dozen or more elephants may be employed in the same yard. They are nearly all males, which are, generally speaking, larger and stronger than the females. These intelligent creatures will balance a log on their tusks, and, holding it firmly with their trunks, will proceed to walk off with it to the saw. They will then hold the log up to the saw while it is at work, and will see that it is cut properly, either crosswise or lengthwise, as may be desired. They pull the slabs away with the ends of their trunks, and pile them in piles that are as neatly arranged as the most exacting yardmaster could desire. The principal work of the elephants consists of taking the logs from the water and piling them up in the yards. They will pile logs in the neatest manner imaginable, and will adjust them at either end until they are perfectly satisfied that they are rightly arranged. Mr. Tourgee says that the yard owners look upon a good elephant as almost priceless, and seldom part with them. What makes their work so very valuable is that they can do this heavy work in that hot climate without being affected by the heat, as other animals would be.

There are 200,000,000 acres of forest lands in the Republic of Quenzula. Rosewood, satinwood, mahogany, and white and black ebony are found.

The manufacture of artificial silk from wood pulp has been fully established as an industry in France, and there is a prospect that it will be undertaken on a large scale in England. Textile fabrics, made wholly or in part of the new material, are now sold readily in Paris and London. It will not be long before they find their way to America. The silk worm cannot compete with chemical and mechanical ingenuity. Great is wood pulp!

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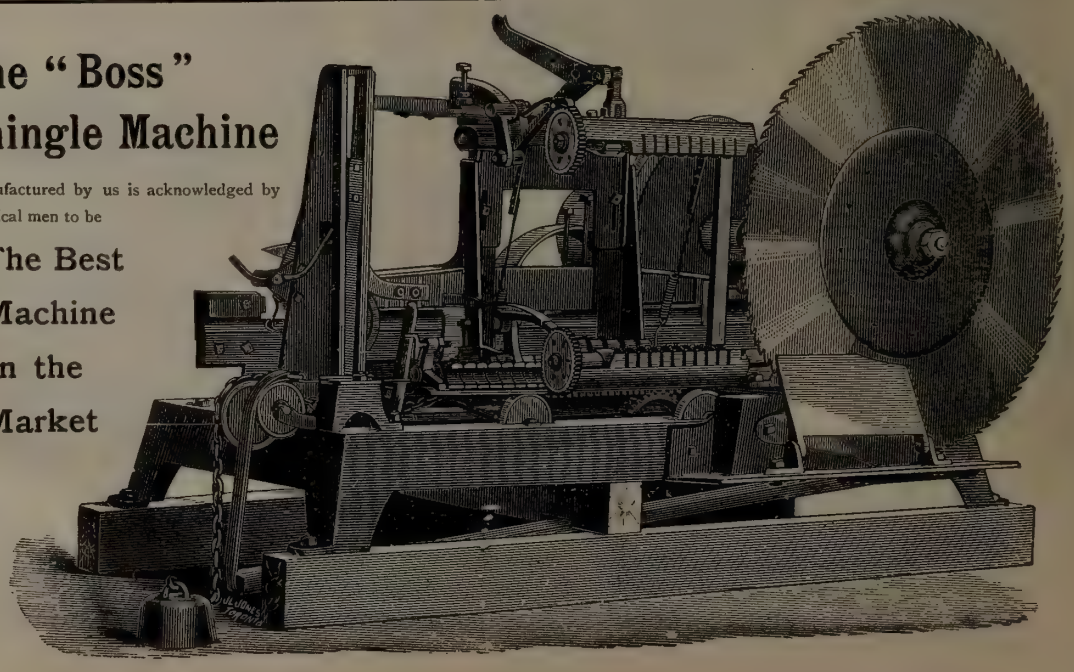

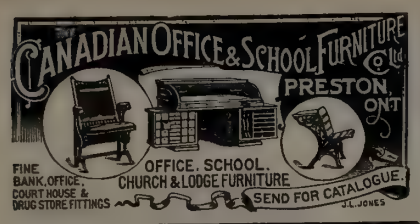

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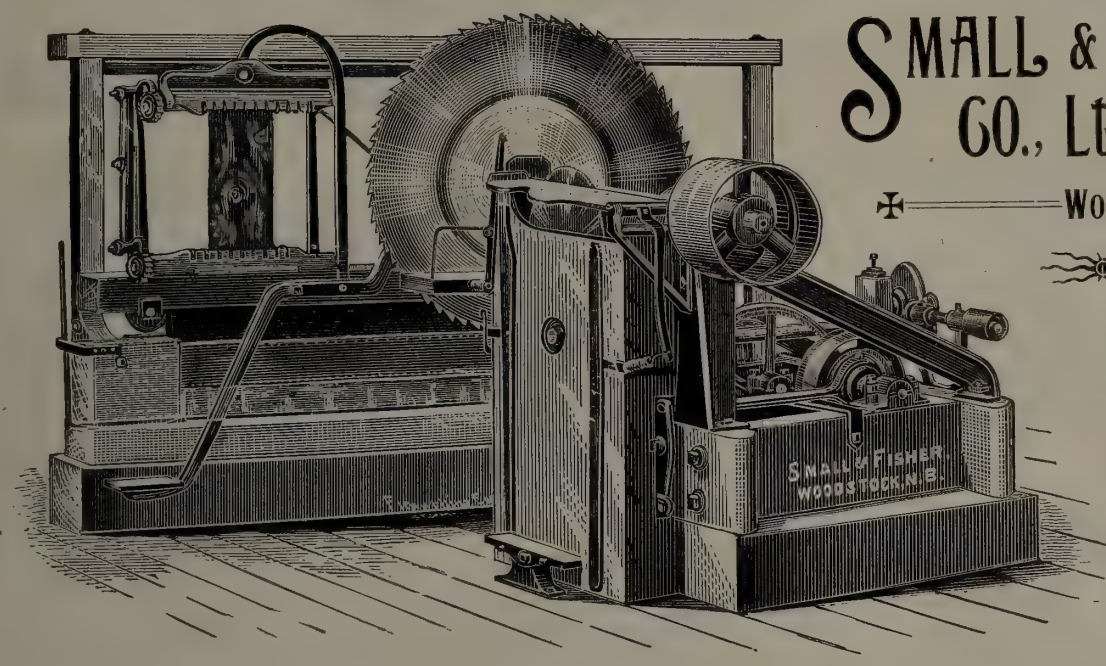

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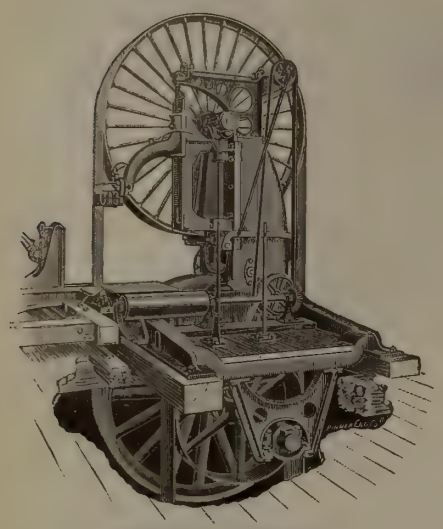

Right Hand—Front View.
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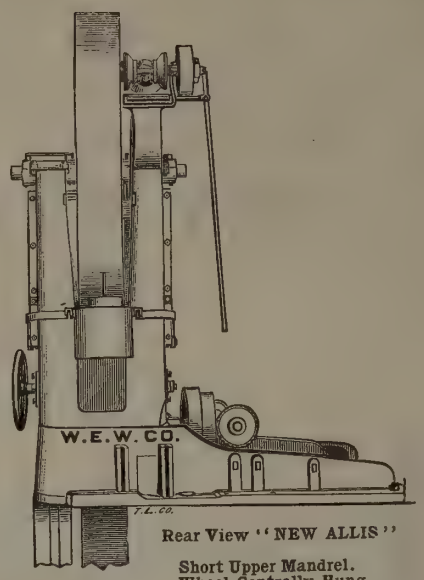
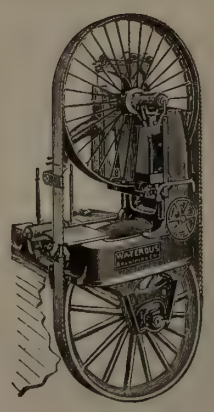
It surpasses all others in many points.



Rear View "NEW ALLIS"

NOTE .... Short Upper Mandrel.
Wheel Centrally Hung.
Lower Wheel Inside Frame.



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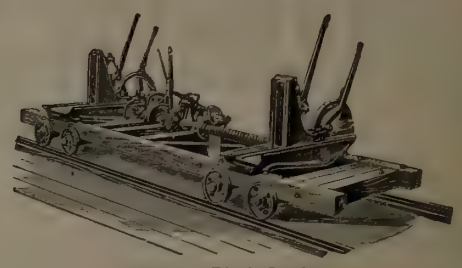
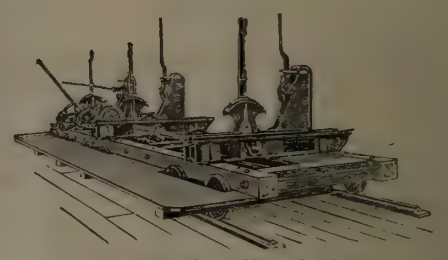


Reliance 2-Block Carriage.



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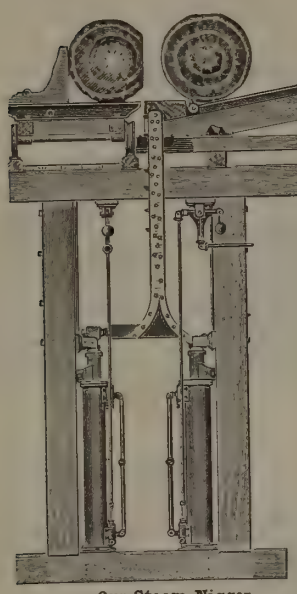
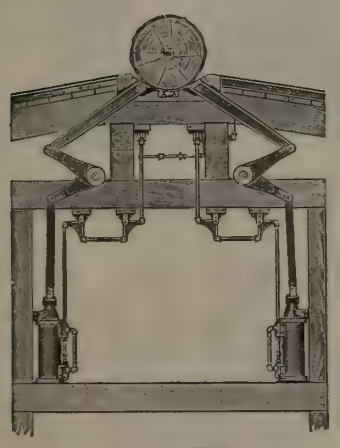
Where It Is Manufactured



Our Steam Nigger.



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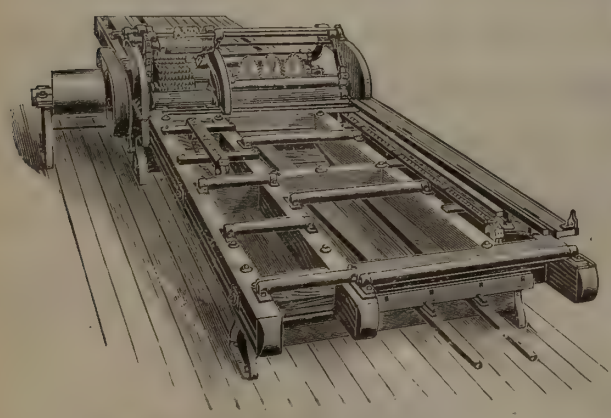

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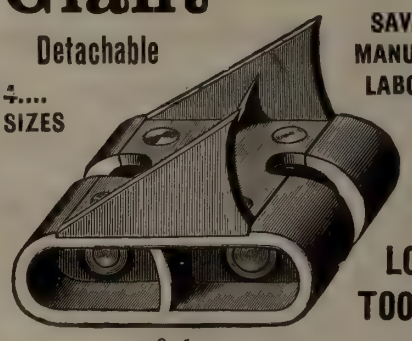

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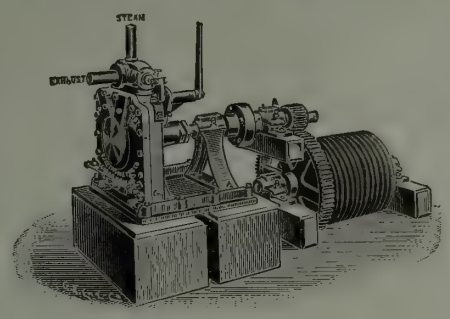

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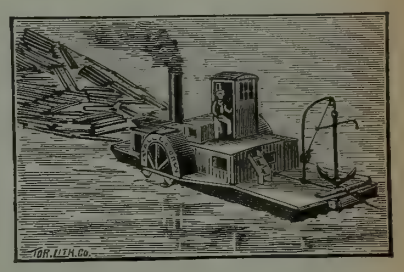

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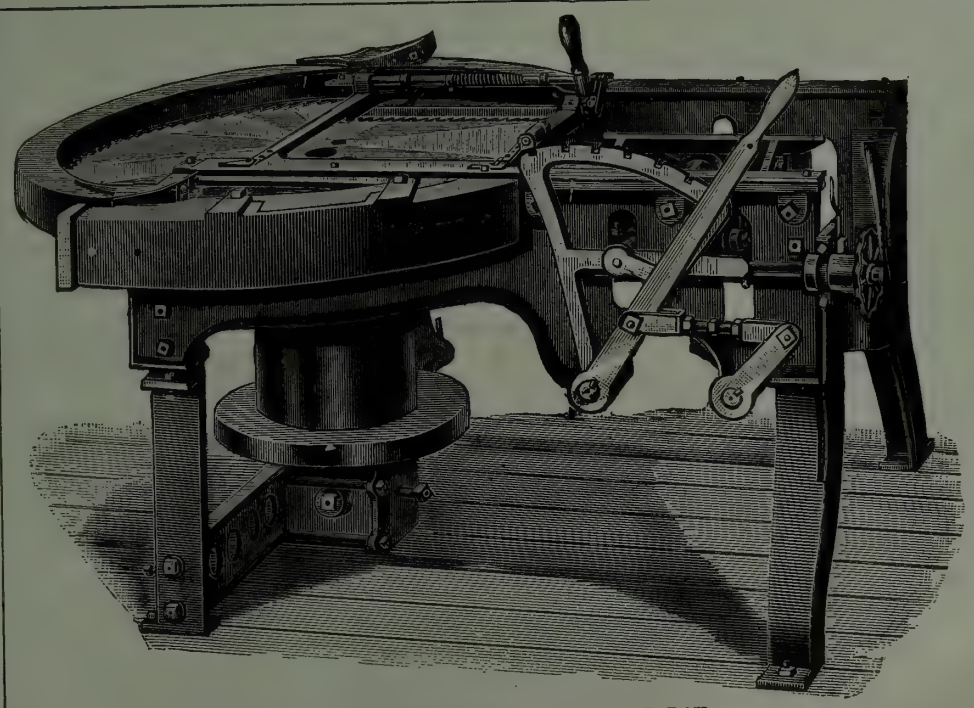

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Yours truly,
(Sgd.) W. J. & H. W. FOWLDS.

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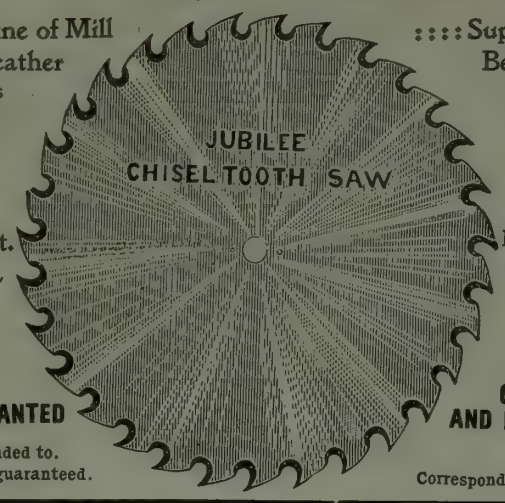

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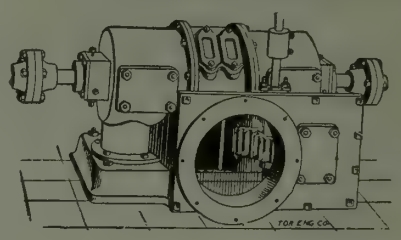

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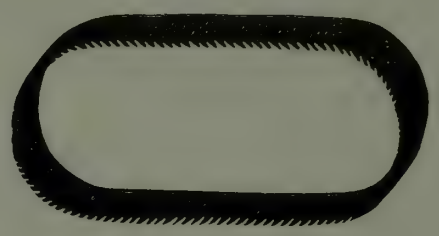
SIXTEEN REASONS, AND HOW TO AVOID THEM



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A book filled with valuable information on the care of band saws. Giving the reasons for breaking; analyzing each reason; giving instructions to dispense with the causes as laid down in each reason; and full details on filing and brazing. The proper styles of hammers to use are illustrated and described, and views of blades showing the blows of the different styles of hammers form an important part of the illustrations. Improper and unequal tension are then treated, and the manner o' properly setting irregular teeth is described. In connection with the treatise is a history of the invention, manufacture and use of the saw from its origin to the present time. The work in whole makes an accumulation of information such as has never before been published.

The book is printed on fine paper, good clear type, and is handsomely and substantially bound in cloth. It will be sent to any address on receipt of the price, **ONE DOLLAR.**

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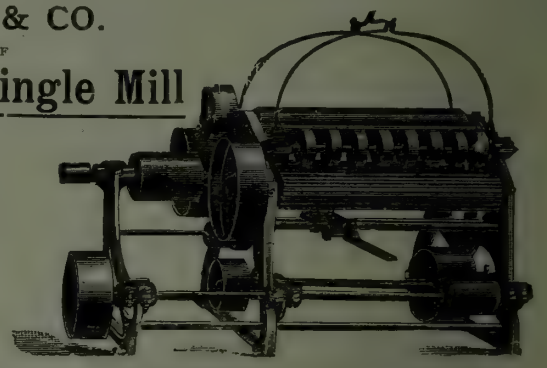

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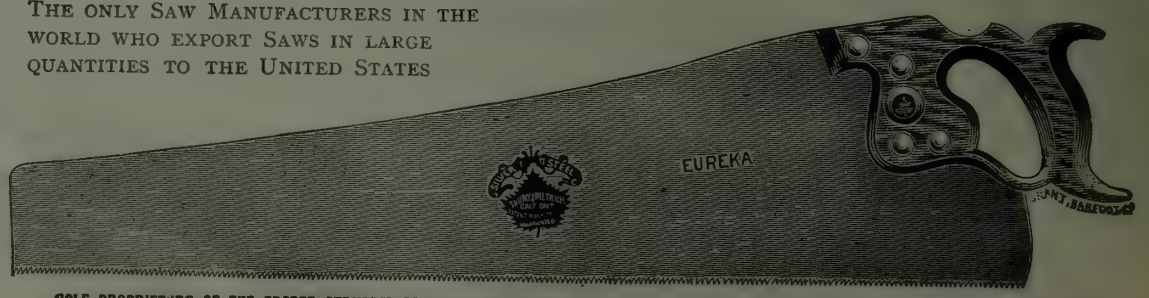

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VOLUME XVII. NUMBER 8. | TORONTO, ONT., AUGUST, 1896 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

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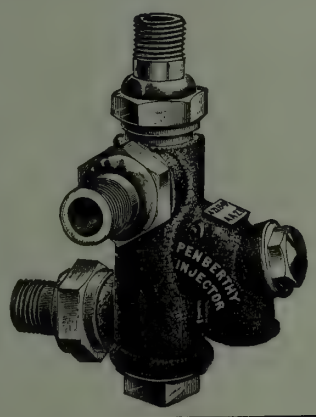

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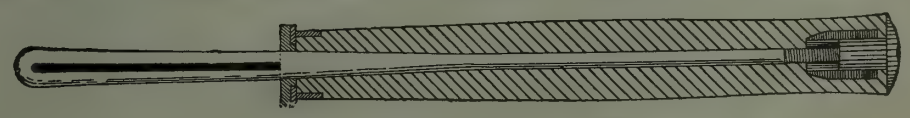

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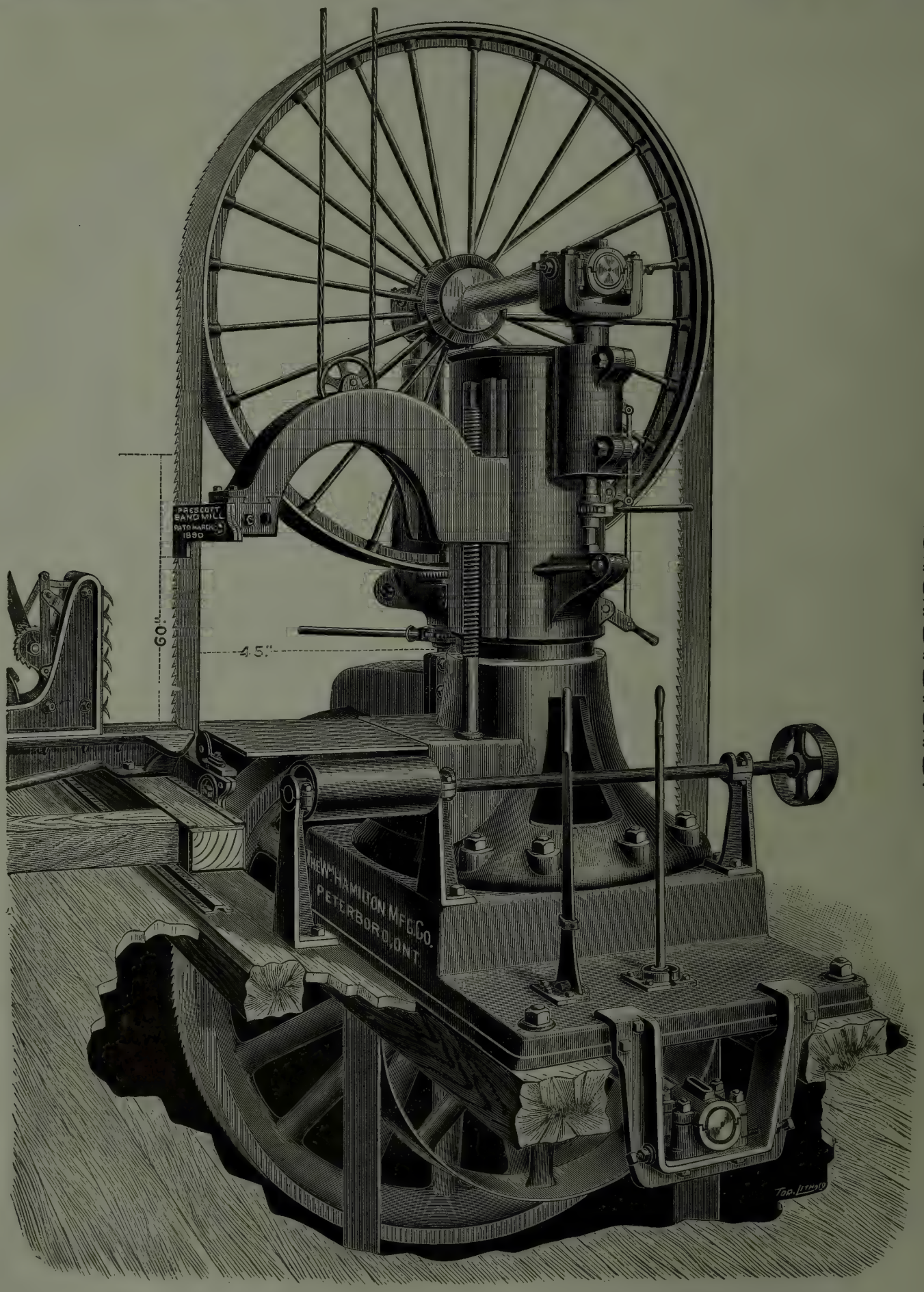

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THE CANADA LUMBERMAN

VOLUME XVII. NUMBER 8. } TORONTO, ONT., AUGUST, 1896 { TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

MANUFACTURING CYPRESS LUMBER IN BRITISH COLUMBIA.

(Special Correspondence of the CANADA LUMBERMAN.)

AMONG the new milling industries in British Columbia is that of the manufacture of cypress lumber, for which a new mill is being built at Takush Harbor, on the south shore of Smith's Sound, on the mainland coast, some miles north of Vancouver Island. For expert purposes this is the most extreme limit of the lumber industry.

Last year several local capitalists of Vancouver, who had secured a concession of cypress limits on the north-west coast, were successful in disposing of it to a British syndicate at a large figure, and now it is in contemplation to operate on an extensive scale.

Cypress, or yellow cedar (Thuya Excelsa), commercially is of great value, though limited in area on the coast. It is expected that it will rank in the markets of the world with mahogany. It is found in quantities on Queen Charlotte Islands and in the interior of Vancouver Island, but is not so generally or easily accessible. Up to the present it has not entered into commercial operations to any material extent, and the present enterprise being a new departure, its success is looked forward to with some degree of interest.

The Thuya Excelsa does not grow so large as the Gigantea, but it is a harder, heavier and choicer wood. It has a specific gravity about equal to the Douglas fir, will bear an equal strain, and is as durable as oak. In addition, however, to these qualities it takes the finish of mahogany, and is not unlike it in general appearance. There is nothing richer looking among our woods in exterior, unless it be the red cedar, which, however, is much more susceptible to injury and "dinges," and scratches easily.

The limits in question are situated in the vicinity of Takush Harbor, and are owned by the Takush Harbor Timber Trading Co., Ltd., the head office of which is at 15 and 16 George street, Mansion House, London, E. C. It is proposed to manufacture spruce and red cedar as well.

The mill, externally and interiorly, will be one of the most complete and modern on the coast, and is being fitted up entirely by the Wm. Hamilton Manufacturing Co., of Peterborough, Ont., and Vancouver, of which Mr. Robert Hamilton is manager for British Columbia. The building is 200 × 50 ft., 14 ft. high, with engine and boiler house 56 × 56 × 20 feet, the latter being rendered fire-proof by a covering of corrugated iron. The engine is a heavy Corliss frame, high speed, with automatic governors, and when running 600 ft. piston speed will develop 380 h. p. There are four 60″ diameter boilers, 14 ft. long, return tubular and a w. pressure of 125 lbs. to the sq. inch; tubular heater of latest design suitable for heating feed water; fired automatically, the fuel being fed by an endless chain running over the boiler.

With regard to the fixed and moveable machinery and the operation of the same: The logs are hauled from the water in the usual way by endless chains with cast steel bunks, having spuds inserted therein. The log carriage has the latest cast steel bunks opening 60″ from the saw rig, capable of cutting logs 64″ in diameter, 50 ft. long, by using a double circular saw-rig, having two vertical saws standing one above the other, the diameters of which are 58″ each, inserted hoe teeth being used in both saws. From the saw-rig to the extreme end of the mill there is a line of cast-iron rolls called "line rolls" for moving the lumber to the outer end of the mill. The carriage on the log side of the mill is driven to and fro with a Cunningham twin engine steam feed. On the opposite side of the mill there is a resaw machine capable of cutting up a cant 40″ wide and 36 ft. long, the carriage being operated by a Prescott steam or "shot-gun" feed. There is also on the resaw side a line of cast iron line rolls for moving lumber. When the lumber passes from the double circular, any portion of it to be resawed is carried across the mill by an endless chain transfer. The mill is equipped with a Pacific coast gang-edger, two trimmer saws, conveyors for slabs and debris, etc., etc. The capacity of the mill will be 75,000 ft. in ten hours.

BLOCKED AGAIN.

UNCLE SAM:—"Judge Wheeler's decision smashed the first gate, but by the time you get through that obstruction my friend here will have a gate that you can't smash."

A LEGAL DECISION.

THE Supreme Court of Minnesota held, in the recent case of Breault vs. Archambault et al., that under the provisions of the log lien law, General Statutes 1894, sections 2451 to 2464 inclusive, a cook and his assistant employed at a logging camp for the purpose of cooking for the men actually and directly engaged in cutting, hauling and banking logs, are entitled to liens upon such logs for the amount due for such services; that a blacksmith employed at such camp in shoeing the horses, in repairing the sleds, and in mending and keeping in order tools used by the men actually and directly engaged in the common enterprise, is also entitled to a lien upon the logs, and that the manual labor for which a lien is given under section 2451 is not merely the personal labor of a lien claimant, but includes labor performed by his teams and servant under a contract for a gross price per month for both.

With some kinds of piston-rod packing, when the engine stands still over night, there is a deposit of packing and rust on the rod where the packing comes in contact with it. This evil may be greatly lessened by locating a sight feed oiler so that it will drop cylinder oil on the rod continually while running.

HON J. M. GIBSON,

COMMISSIONER OF CROWN LANDS FOR ONTARIO.

The formation of the new Liberal government at Ottawa, and the appointment therein of Sir Oliver Mowat as Minister of Justice, has necessitated the reconstruction of the Ontario cabinet. Hon. A. S. Hardy, Commissioner of Crown Lands for Ontario, becomes Attorney-General, while Hon. J. M. Gibson takes charge of the Crown Lands Department, and is succeeded as Provincial Secretary by Hon. W. D. Balfour, the late speaker of the House.

The appointment of Mr. Gibson to the position of Commissioner of Crown Lands is a matter of great interest to readers of this journal,

Hon. J. M. Gibson.

and we therefore take pleasure in presenting herewith a capital likeness of the new head of the department. Having had charge of the public finances of the province for a number of years, he is well qualified to manage the department of which he has been given control, and from which is derived a large share of the provincial revenues.

Lieut.-Col. Hon. John Morrison Gibson was born in the Township of Toronto, County of York, Province of Ontario, on the 1st of January, 1842. He is a son of the late Wm. Gibson, farmer, who came to Canada in 1827 from Glamis, Forfarshire, Scotland, and a cousin of the late David Smith, who formerly represented North York in the old Parliament of Canada, and who was prominently associated with the late W. Lyon Mackenzie in the troubles of 1837.

Educated at the Central School, Hamilton, and University College, Toronto, he took the degree of B. A. in 1863, carrying off the Prince's prize of that year, together with the silver medal in classics and modern languages and the prize in Oriental languages. In 1867 he was called to the bar, and entered the law course at Toronto University, receiving the degree of L. L. B. and a gold medal in 1869, and was afterwards made examiner in that faculty for the years 1871-72. For many years he was a member of the Board of Education in Hamilton and for two years chairman of the board. He was elected a member of the Senate of Toronto University in 1873, and re-elected in 1878 and 1883.

Mr. Gibson, as lieutenant of the 13th Battalion of Hamilton, was with his regiment at Ridgeway in 1866, and now commands that corps. He has attained a high reputation as a marksman, and has won many valuable prizes, one of which was the Prince of Wales' prize of £100 and a badge in 1879.

Mr. Gibson is a prominent member of the Masonic order, having been Grand Master of the Grand Lodge of Ontario during the years 1893 and 1894.

The political career of the newly appointed Commissioner commenced in 1879, when he was elected to the Legislative Assembly at the general election. In 1883 and in 1886 he was re-elected, and sworn a member of the Executive Council and appointed Provincial Secretary on the 18th January, 1889, when he was again re-elected by acclamation. Since that time the finances of the province have been in his keeping.

Mr. Gibson is endowed with a wise business head and a large capacity for hard work. By his friends he is said to be a charming companion; to his political opponents he is ever courteous and considerate, and to strangers one of the kindest and most obliging of men.

Under his direction the affairs of the Crown Lands Department will no doubt be successfully administered.

TIMBER CULLERS.

The following have passed the examination for timber cullers in the province of Quebec :

F. W. Mahon, Hintonburg ; J. W. Fraser, Ottawa ; J. F. Presley, Ashton ; Robt. Laing, Ottawa ; John Graham, Arnprior ; H. J. Long, Mattawa ; S. B. Wallace, Rockland ; D. R. Macfarlane, Ottawa ; J. Flechette, Buckingham ; W. Burns, Mattawa ; E. Quackenbush, Ottawa ; G. Griffith, Pembroke ; Thomas Bramley, Pembroke ; J. C. Bartram, Ottawa ; Thos. Coburn, Pembroke ; Michael Villeneuve, Ottawa ; W. H. Gonegan, Point Alexander ; C. Hennessey, Ottawa ; J. F. French, Deux Riviere ; John Ryan, Quio ; J. A. Campbell, Galetta ; Nelson Hartman, Bason du Lievre ; J. Brown, Buckingham ; J. E. Varin, Hull ; A. McGillivray, Thurso ; A. McQuins, Thurso ; W. J. Kennedy, J. Campbell, H. Martin, J. J. Goulet, A. Murphy, Buckingham ; F. H. Wallace, Ottawa ; Oscar Brooks, Lowe ; P. McCabe, Buckingham.

CORRESPONDENCE

Letters are invited from our readers on matters of practical and timely interest to the lumber trades. To secure insertion all communications must be accompanied with name and address of writer, not necessarily for publication. The publisher will not hold himself responsible for opinions of correspondents.

CENTRETOWN, Kentucky, U. S., June 23rd, 1896.

Editor CANADA LUMBERMAN :

DEAR SIR,—Will you please give me the following information: Is not black oak (Quercus tinctoria) an inferior kind of timber, and not in demand in the general trade? If it sells at all, does it not sell as and under the name of red oak (Quercus rubra)? If not, what is the difference in price and demand for red oak and black oak in the general trade?

Yours truly,
WM. M. WARDEN.

[Black oak is not by any means an inferior kind of timber. In fact, it is considered superior to red oak for finishing purposes, and commands about $3 more per thousand feet. So far as Canada is concerned, the supply of black oak is extremely limited, which necessarily limits the demand therefor. A small quantity of it is to be found in Ontario, in the vicinity of the Georgian Bay district.—ED. CANADA LUMBERMAN.]

The Sneezewood tree (so-called) is a native of South Africa. The dust from the wood has the same effect as strong snuff and is very bitter to the taste. The wood is valuable because so lasting.

SIR HENRY GUSTAVE JOLY,

CONTROLLER OF INLAND REVENUE FOR THE DOMINION.

THE LUMBERMAN takes pardonable pride in again presenting to its readers the portrait of one whose name has been connected with the conservation of the forests of Canada for many years, in the person of Sir Henry Gustave Joly, who has recently been appointed Controller of Inland Revenue in the Dominion Government.

Mr. Joly was born in France on the 5th of December, 1829, and educated in Paris and Geneva, Switzerland. He was called to the bar of Lower Canada, March, 1855, and appointed a Q.C. in 1878.

His political career commenced in 1863, when he was returned for Lotbiniere, and after Confederation continued to represent the county in the local legislature. He sat in both houses until the general election of 1874, when he retired from the Commons and retained his seat in the assembly. He was re-elected at the general elections of 1875, '78, '82 and '86, but retired from public life in that year, when the Riel troubles arose in Quebec. He declined a portfolio in the Dominion cabinet and elevation to the senate in 1877.

In May, 1878, he was called upon to form an administration upon the dismissal of the De Boucherville cabinet by the late Lieut.-Governor Letellier de St. Just. He occupied office until October 29, 1879, when he voluntarily resigned in favor of Mr. Mercier.

After a retirement of ten years, he again offered himself for public honors on June 23rd last, and was elected to represent the constituency of Portneuf, Que., defeating the conservative candidate, Mr. H. Stafford Lawrence.

Mr. Joly has always taken a deep interest in

Sir Henry Gustave Joly.

forestry, and is the father of Arbor Day in the province of Quebec. He is a firm believer in the preservation of our forests, and devotes considerable time to the study of natural history. His lectures before scientific societies have been of much benefit to the cause to which he devotes himself, notable among which was one delivered last year in the Somerville course, in the Natural History Society's building, Montreal, on "The Value of Forest Trees, Individually and Collectively."

The subject of our sketch was knighted on the Queen's birthday, 1895. He married Miss de Lotbiniere, and some years ago was authorized to add that name to his own.

CHARACTERISTICS AND PROPERTIES OF WOOD.

Although wood has been universally in use for a great number of years, there is still said to exist a lack of knowledge by architects, lumbermen and woodworkers regarding its characteristics and properties. We print herewith some abstracts from Bulletin No. 10 of the Department of Agriculture of the United States, which contains some useful and valuable information regarding the nature of the various woods. The work is compiled by Mr. Filbert Roth, Special Agent in Timber Physics, under the direction of Mr. B. E. Fernow, Chief of the Division of Forestry.

METHOD OF SAWING TIMBER.

The manner in which the stick is sawed from the tree has a remarkable influence upon its qualities and behavior, and it should, therefore, either be specially sawed or selected with a view to its character and to the purpose for which it is used. This is a matter fully appreciated among only a few wood users, like the wheelwrights, piano makers, etc., but it needs to be observed much more than it is, even in building. Quarter or rift sawing, i. e., cutting sticks or boards out of the log in such a manner that the annual rings are cut through as nearly as possible radially, has lately been practised largely for the sake of the beauty of the even grain thus obtained, and also for flooring on account of the better wear which the even exposure of the grain (hard bands of summer wood on edge) secures; but it should be much more widely applied to secure greater strength and more uniform seasoning and thus to reduce to some extent the one drawback to wood as a material of construction, that is, its liability to "working" (shrinking and swelling). The reason for the superiority of quarter sawed pieces, as well as the general fact that the manner of sawing out a stick affects the general character and behavior of the same, will appear from the following considerations:

A square column or beam cut so as to contain the heart or pith of the tree in its centre—which, by the way, is the weakest part on account of

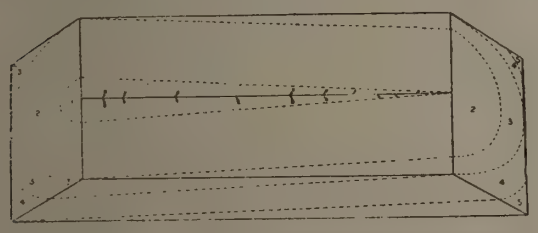

Fig 1.—A piece of sawn timber cut through along the pith, illustrating its structural aggregates

the many knots which it invariably and necessarily contains—consists in the main of five structural aggregates (see fig. 1), namely: (1) In the centre a cone of wood fibers with the base in the butt end and the apex in the top end, the base representing the rings of as many years as it took the tree to attain the height of the column; none of the fibers belonging to these rings appear in the top section excepting those of the last ring which forms the apex of the cone; (2) a hollow cylinder of material surrounding the cone, all fibers of which are found in both sections and continuously through the whole length of the column; all the entire rings at the bottom belong in this cylinder, and undoubtedly form the strongest part of the column; (3) surrounding this cylinder a partial cylindrical envelope of wood fibers, all of which are represented in the top section, but only a part appear at the corners of the bottom; most of them, therefore, do not run through the whole length, but are cut through at varying lengths, thereby presenting the "bastard faces" on the sides of the column; (4) a partial envelope whose radial extent is limited by the corners of the basal section, imperfect at both ends; (5) the corners at the top, three-sided pyramids with the base in the top section, the fibers running out at varying lengths.

Now, it will be readily admitted that each of these "structural aggregates" has a different value in the combined strength of the whole. If the stick be cut with the center or pith in one side (see fig. 2) all these aggregates will be halved; if the stick be cut out differently, for instance, with the heart entirely out, or if it be made longer or shorter, or rectangular instead of

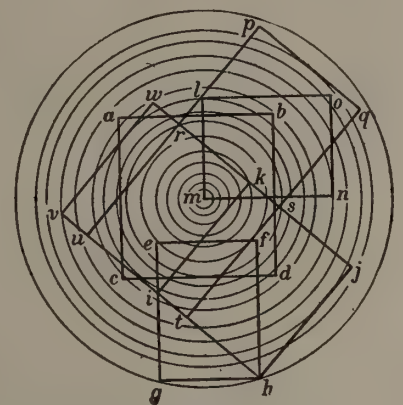

Fig. 2.—Possibilities of cutting timber from a log with reference to position of grain.

square, in each case the proportion of each of the aggregates changes, and hence it stands to reason that the strength of the column, or beam, or stick, changes according to the manner in which it is cut from the tree. This most evident and important fact has, it seems, escaped our best engineers and experimenters, who have tested beams without taking account of this disturbing element, and it is certainly overlooked most generally by builders and carpenters in their selection of material.

While it may perhaps not be expected that the sawing at the mill will be done with more care so as to secure the best results in application, or that the special advantage of quarter sawing will soon be sufficiently appreciated so as to extend its use in such a manner that the greater efficiency of the quarter-sawed material will compensate for the greater expense of the operation, wood users may at least be expected to make their selections from the sawed material in the yard, and shape it for their particular use with greater care.

WEIGHT OF WOOD.

A small cross section of wood, as in fig. 3, dropped into water, sinks, showing that the substance of which wood fiber or wood is built up is heavier than water. By immersing the wood successively in heavier liquids, until we find a liquid in which it does not sink, and comparing the weight of the same with water, we find that wood substance is about 1.6 times as heavy as water, and that this is as true of poplar as of oak or pine.

Separating a single cell, as shown in fig. 4, a, drying and then dropping it into the water, it floats. The air-filled cell cavity or interior reduces its weight, and, like a corked empty bottle, it weighs less than the water. Soon, however, water soaks into the cell, when it fills up and sinks.

Fig. 3.—Cross section of a group of wood fibers.

Many such cells grown together, as in a block of wood, sink when all or most of them are filled with water, but will float as long as the majority are empty or only partly filled. This is why a green, sappy pine pole soon sinks in "driving" (floating). Its cells are largely filled before it is thrown in, and but little additional water suffices to make its weight greater than that of the water.

In a good-sized white pine log, composed chiefly of empty cells (heartwood), the water requires a very long time to fill up the cells (five years would not suffice to fill them all), and therefore the log may float for many months. When the wall of the wood fiber is very thick (five-eighths or more of the volume), as in fig. 4, b, the fiber sinks whether empty or filled. This applies to most of the fibers of the dark summerwood bands in pines, and to the compact fibers of oak or hickory, and many, especially tropical woods, have such thick-walled cells and so little empty or air space that they never float.

Fig. 4.—Isolated fibers

Here, then, are the two main factors of weight in wood: The amount of cell wall, or wood substance, constant for any given piece, and the amount of water contained in the wood, variable even in the standing tree, and only in part eliminated in drying.

In general, it may be said that none of the native woods in common use in this country are, when dry, as heavy as water, i. e., 62 pounds to the cubic foot. Few exceed 50 pounds, while most of them fall below 40 pounds, and much of the pine and other coniferous wood weighs less than 30 pounds per cubic foot.

Weight of Kiln-dried Wood of Different Species.

	Approximate.		
	Specific weight.	Weight of 1 cubic foot.	Weight of 1,000 feet of lumber.
		Pounds.	Pounds.
(a) Very heavy woods: Hickory, oak, persimmon, osage orange, black locust, hackberry, blue beech best of elm, and ash	0.70-0.80	42-48	3,700
(b) Heavy woods: Ash, elm, cherry, birch, maple, beech, walnut, sour gum, coffee tree, honey locust, best of Southern pine, and tamarack	.60-.70	36-42	3,200
(c) Woods of medium weight: Southern pine, pitch pine, tamarack, Douglas spruce, western hemlock, sweet gum, soft maple, sycamore, sassafras, mulberry, light grades of birch and cherry	.50-.60	30-36	2,700
(d) Light woods: Norway and bull pine, red cedar, cypress, hemlock, the heavier spruce and fir, redwood, basswood, chestnut, butternut, tulip, catalpa, buckeye, heavier grades of poplar	.40-.50	24-30	2,200
(e) Very light woods: White pine, spruce, fir, white cedar, poplar	.30-.40	18-24	1,800

The weight of the wood is, in itself, an important quality. Weight assists in distinguishing maple from poplar. Lightness, coupled with great strength and stiffness, recommends wood for a thousand different uses. To a large extent weight predicates the strength of the wood, at

least in the same species, so that a heavy piece of oak will exceed in strength a light piece of the same species, and in pine it appears probable that, weight for weight, the strength of the wood of various pines is nearly equal.

Since ordinary lumber contains knots and also more water than is here assumed, and also since its dimensions either exceed or fall short of perfect measurement, the figures in the table are only approximate.

Thus, 1,000 feet, B. M., of longleaf pine weighs :

	Pounds.
Rough and green	4,500
Boards, rough but seasoned	3,500
Boards, dressed and seasoned	3,000
Flooring, matched, dressed and seasoned	2,500
Weatherboarding beveled and dressed	1,500

MOISTURE IN WOOD.

The wood next to the bark contains the most water. In the species which do not form heartwood the decrease towards the pith is gradual, but where this is formed, the change from a more moist to a drier condition is usually quite abrupt at the sapwood limit. In longleaf pine, the wood of the outer 1 inch of a disk may contain 50 per cent. of water, that of the next, or second inch, only 35 per cent., and that of the heartwood only 20 per cent. In such a tree the amount of water in any one section varies with the amount of sapwood, and is therefore greater for the upper than the lower cuts, greater for limbs than stems, and greatest of all in the roots.

Different trees, even of the same kind and from the same place, differ as to the amount of water they contain. A thrifty tree contains more water than a stunted one, and a young tree more than an old one, while the wood of all trees varies in its moisture relations with the season of the year.

Contrary to the general belief a tree contains about as much water in winter as in summer. The fact that the bark peels easily in the spring depends on the presence of incomplete, soft tissue found between wood and bark during this season and has little to do with the total amount of water contained in the wood of the stem.

Even in the living tree a flow of sap occurs only in certain kinds of trees and under special circumstances ; from boards, timber, etc., the water does not flow out, as is sometimes believed, but must be evaporated.[1]

The rapidity with which water is evaporated, that is, the rate of drying, depends on the size and shape of the piece and on the structure of the wood. An inch board dries more than four times as fast as a 4-inch plank and more than twenty times as fast as a 10-inch timber. White pine dries faster than oak. A very moist piece of pine or oak will, during one hour, lose more than four times as much water per square inch from the cross section, but only one-half as much from the tangential, as from the radial section.

In a long timber, where the end or cross sections form but a small part of the drying surface, this difference is not so evident. Nevertheless, the ends dry and shrink first, and being opposed in this shrinking by the more moist adjoining parts, they check, the cracks largely disappearing as seasoning progresses.

High temperatures are very effective in evaporating the water from wood, no matter how humid the air. A fresh piece of sapwood may lose weight in boiling water, and can be dried to quite an extent in hot steam.

Kept on a shelf in an ordinary dwelling wood still retains 8 to 10 per cent. of its weight of water, and always contains more water per pound than the surrounding air. Nor is this amount of water constant ; the weight of a pan full of shavings varies with the time of day, being on a summer day greatest in the morning and least in the afternoon.

Dissicating the air with chemicals will cause the wood to dry, but wood thus dried at 80° F. will still lose water in the kiln. Wood dried at 120° F. loses water still if dried at 200° F., and this again will lose more water if the temperature is raised. So that absolutely dry wood can not be obtained, and chemical destruction sets in before all the water is driven off.

On removal from the kiln the wood at once takes up water from the air, even in the driest weather. At first the absorption is quite rapid ; at the end of a week a short piece of pine, 1½ inches thick, has regained two-thirds of, and, in a few months, all the moisture which it had when air dry, 8 to 10 per cent., and also its former dimensions.

In thin boards all parts soon attain the same degree of dryness ; in heavy timbers the interior remains moister for many months, and even years, than the exterior parts. Finally an equilibrium is reached, and then only the outer parts change with the weather.

With kiln-dried wood all parts are equally dry, and when exposed the moisture coming from the air must pass in through the outer parts, and thus the order is reversed. Ordinary timber requires months before it is at its best ; kiln-dried timber, if properly handled, is prime at once.

Dry wood, when soaked in water, soon regains its original volume, and in the heartwood portion it may even surpass it ; that is to say, swell to a larger dimension than it had when green. With the soaking it continues to increase in weight, the cell cavities filling with water, and if left many months all pieces sink. Yet even after a year's immersion a piece of oak 2 by 2 inches and only 6 inches long still contains air, i. e., it has not taken up all the water it can. By rafting, or prolonged immersion, wood loses some of its weight, soluble materials being leached out, but it is not impaired either as fuel or as building material. Immersion and, still more, boiling and steaming reduce the hygroscopicity of wood and, therefore, also the troublesome "working" or shrinking and swelling.

Exposure in dry air to a temperature of 300°F. for a short time reduces, but does not destroy, the hygroscopicity and with it the tendency to shrink and swell. A piece of red oak, which has been subjected to a temperature of over 300° F., still swells in hot water and shrinks in the kiln.

In artificial drying, temperatures of from 158° F. to 180° F. are usually employed. Pine, spruce, cypress, cedar, etc., are dried fresh from the saw, allowing four days for 1-inch boards ; hard woods, especially oak, ash, maple, birch, sycamore, etc., are air-seasoned for three to six months, to allow the first shrinkage to take place more gradually, and are then exposed to the above temperatures in the kiln for about six to ten days for 1-inch lumber. Freshly cut poplar and cottonwood are often dried directly in kilns.

By employing lower temperatures, 100° to 120° F., green oak, ash, etc., can be seasoned in dry kilns without danger to the material. Steaming the lumber is commonly resorted to in order to prevent checking and "case-hardening," but not, as has frequently been asserted, to enable the board to dry. Yard-dried lumber is not dry, and its moisture is too unevenly distributed to insure good behavior after manufacture. Careful piling of the lumber, both in the yard and kiln, is essential to good drying. Piling boards on edge or standing them on end is believed to hasten drying. This is true only because in either case the air can circulate more freely around them than when they are piled in the ordinary way. Boards on end dry unequally ; the upper half dries much faster than the lower half, and horizontal piling is, therefore, preferable.

Since the proportion of sap and heart wood varies with size, age, species, and individual, the following figures must be regarded as mere approximations :

Pounds of Water Lost in Drying 100 Pounds of Green Wood in the Kiln.

	Sapwood or outer part	Heartwood or interior
(1) Pines, cedars, spruces, and firs	45-65	16-25
(2) Cypress extremely variable	50-65	18-60
(3) Poplar, cottonwood, basswood	60-65	40-60
(4) Oak, beech, ash, elm, maple, birch, hickory, chestnut, walnut, and sycamore	40-50	30-40

The lighter kinds have the most water in the sapwood, thus sycamore has more than hickory.

SHRINKAGE OF WOOD.

Shrinkage of wood is due to the fact that the cell walls grow thinner on drying. The thicker cell walls and therefore the heavier wood shrinks most, while the water in the cell cavities does not influence the volume of the wood. Owing to the great difference of cells in shape, size, and thickness of walls and still more in their arrangement, shrinkage is not uniform in any kind of wood. This irregularity produces strains, which grow with the difference between adjoining cells and are greatest at the pith rays. These strains cause warping and checking, but exist even where no outward signs are visible ; they are greater if the wood is dried rapidly than if dried slowly, but can never be entirely avoided.

Temporary checks are caused by the more rapid drying of the outer parts of any stick ; permanent checks are due to the greater shrinkage, tangentially, along the rings than that along the radius. This, too, is the cause of most of the ordinary phenomena of shrinkage, such as the difference in behavior of entire and quartered logs, "bastard" (tangent) and "rift" (radial) boards, etc., and explains many of the phenomena erroneously attributed to the influence of bark, or of the greater shrinkage of outer and inner parts of any log.

Once dry, wood may be swelled again to its original size by soaking in water, boiling, or steaming. Soaked pieces, on drying, shrink again as before ; boiled and steemed pieces do the same, but to a slightly less degree. Neither hygroscopicity, i. e., the capacity of taking up water, nor shrinkage of wood can be overcome by drying at temperatures below 200° F. Higher temperatures, however, reduce these qualities, but nothing short of a coaling heat robs wood of the capacity to shrink and swell. Rapidly dried in the kiln, the wood of oak and other hard woods "case-harden," that is, the outer part

[1] The seeming exceptions to this rule are mostly referable to two causes, namely : (a) Clefts or "shakes" will allow water contained in them to flow out. (b) From sound wood, if very sappy, water is forced out whenever the wood is warmed, just as water flows from green wood in the stove.

dries and shrinks before the interior has a chance to do the same, and thus forms a firm shell or case of shrunken, commonly checked wood around the interior. This shell does not prevent the interior from drying, but when this drying occurs, the interior is commonly checked along the medullary rays, as shown in fig. 5. In practice this occurrence can be prevented by steaming the lumber in the kiln, and still better by drying the wood in the open air or in a shed before placing in the kiln. Since only the first shrinking is apt to check the wood, any kind of lumber which has once been air dried (three to six months for 1-inch stuff) may be subjected to kiln heat without any danger. Kept in a bent or warped condition during the first shrinking, the wood retains the shape to which it was bent and firmly opposes any attempt at subsequent straightening.

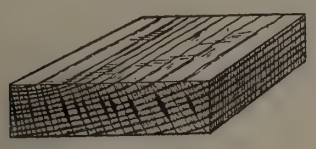

Fig. 5.—"Honeycombed" board. The checks or cracks form along the pith rays.

Sapwood, as a rule, shrinks more than heartwood of the same weight, but very heavy heartwood may shrink more than lighter sapwood. The amount of water in wood is no criterion of its shrinkage, since in wet wood most of the water is held in the cavities, where it has no effect on the volume.

The wood of pine, spruce, cypress, etc., with its very regular structure, dries and shrinks evenly, and suffers much less in seasoning than the wood of broad-leafed trees. Among the latter, oak is the most difficult to dry without injury. Small-sized split ware and "rift" boards season better than ordinary boards and planks.

To avoid "working," or warping and checking, all high-grade stock is carefully seasoned, preferably in a kiln, before manufacture. Thicker pieces may be made of several parts glued together; larger surfaces are made in panels or of smaller pieces covered with veneer. Boring is sometimes resorted to to prevent the checking of wooden columns.

Since repeated swelling increases the injuries due to seasoning, wood should be protected against moisture when once it is dry.

Since the shrinkage of our woods has never been carefully studied, and since wood, even from the same tree, varies within considerable limits, the figures given in the following table are to be regarded as mere approximations. The shrinkage along the radius and that along the tangent (parallel to the rings) are not stated separately in the following table, and the figures represent an average of the shrinkage in the two directions. Thus, if the shrinkage of soft pine is given at 3 inches per hundred, it means that the sum of radial and tangential shrinkage is about 6 inches, of which about 4 inches fall to the tangent and 2 inches to the radius, the ratio between these varying from 3 to 2, a ratio which practically prevails in most of our woods.

Since only an insignificant logitudinal shrinkage takes place (being commonly less than 0.1 inch per hundred), the change in volume during drying is about equal to the sum of the radial and tangential shrinkage, or twice the amount of linear shrinkage indicated in the table.

Thus, if the linear average shrinkage of soft pine is 3 inches per hundred, the shrinkage in volume is about 6 cubic inches for each 100 cubic inches of fresh wood.

Approximate Shrinkage of a Board, or Set of Boards, 100 inches wide, Drying in the Open Air.

	Shrinkage.
	Inches.
(1) All light conifers (soft pine, spruce, cedar, cypress	3
(2) Heavy conifers (hard pine, tamarack, yew), honey locust, box elder, wood of old oaks	4
(3) Ash, elm, wainut, poplar, maple, beech, sycamore, cherry, black locust	5
(4) Basswood, birch, chestnut, horse chestnut, blue beech, young locust	6
5) Hickory, young oak, especially red oak	Up to 10

Influence of Weight and Moisture on Strength.

It has been stated that heavy wood is stronger than lighter wood of the same kind, and that seasoning increases all forms of resistance. Let us examine why this is so.

Since the weight of dry wood depends on the number of fibers and the thickness of their walls, there must be more fibers per square inch of cross section in the heavy than in the light piece of the same kind,* and it is but natural that the greater number of fibers should also offer greater resistance, i. e., have the greater strength.

The beneficial influence of drying and consequent shrinking is two-fold: (1) In dry wood a greater number of fibers occur per square inch, and (2) the wood substance itself, i. e., the cell walls, become firmer. A piece of green longleaf pine, 1 by 1 inch and 2 inches long, is only about 0.94 by 0.96 inch and 2 inches long when dry; its cross section is 10 per cent. smaller than before, but it still contains the same number of fibers. A dry piece 1 by 1 inch, therefore, contains 10 per cent. more fibers than a green piece of the same size, and it is but fair to suppose that its resistance or strength is also about 10 per cent. greater.

The influence of the second factor, though unquestionably the more important one, is less readily measured. In 100 cubic inches of wood substance the material of the cell walls takes up about 50 cubic inches of water and thereby swells up, becoming about 150 cubic inches in volume. In keeping with this swelling the substance becomes softer and less resistant. In pine wood this dimunition of resistance, according to experiments, seems to be about 50 per cent., and the strength of the substance, therefore, is inversely as the degree of saturation or solution.

Some Practical Conclusions.

In framing, where light and stiff timber is wanted, the conifers excel; where heavy but steady loads are to be supported, the heavier conifers, hard pine, spruce, Douglas spruce, etc., answer as well as hardwoods, which are costlier and heavier for the same amount of stiffness. On the other hand, if small dimensions must be used, and especially if moving loads are to be sustained, hardwoods are safest, and in all cases where the load is applied in form of "shocks" or jars, only the tougher hardwoods should be employed. The heavier wood surpasses the lighter of the same species in all kinds of strength, so that the weight of dry wood and the structural features indicative of weight may be used as safe signs in selecting timber for strength.

In shaping wood it is better, though more wasteful, to split than to saw, because it insures straight grain and enables a more perfect seasoning.

For sawed stock the method of "rift" or "quarter" sawing, which has so rapidly gained favor during the last decade, deserves every encouragement. It permits of better selection and of more advantageous disposition of the wood; rift-sawed lumber is stronger, wears better, seasons well, and is less subject to "working" or warping.

All hardwood material which checks or warps badly during seasoning should be reduced to the smallest practicable size before drying, to avoid the injuries involved in this process; and wood once seasoned should never again be exposed to the weather, since all injuries due to seasoning are thereby aggravated. Seasoning increases the strength of wood in every respect, and it is therefore of great importance to protect wooden structures, bearing heavy weights, against moisture.

Knots, like crossgrain and other defects, reduce the strength of timber. Where choice exists, the knotty side of the joist should be placed uppermost, i. e., should be used in compression.

Season checks in timber are always a source of weakness; they are more injurious on the vertical than on the horizontal faces of a stringer or joist, and their effect continues even when they have closed up, as many do, and are no longer visible.

* This imperfect assumptton is used only for comparison.

Rafted timber, kiln-dried or steamed lumber are, so far as our present knowledge extends, as strong as other kinds, and wherever any of these processes aids in a more uniform or perfect seasoning, it increases the strength of the material.

Pine "bled" for turpentine is as strong as "un-bled."

Time of felling, whether season of the year or phase of the moon, does not influence strength, except that summer-felled hardwood rarely seasons as perfectly as that felled in the fall, and to this extent an indirect influence may be observed, as well as by the fact that fungi and insects have a better opportunity for developing.

Durability and Decay.

All wood is equally durable under certain conditions. Kept dry or submerged, it lasts indefinately. Pieces of pine have been unearthed in Illinois which have lain buried 60 or more feet deep for many centuries. Deposits of sound logs of oak, buried for unknown ages, have been unearthed in Bavaria; parts of the piles of the lake dwellers, driven more than two thousand years ago, are still intact.

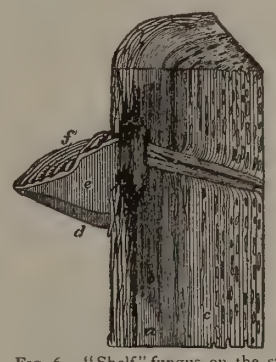

Fig. 6.—"Shelf" fungus on the stem of a pine. (Hartig.) a, sound wood; b, resinous "light" wood; c, partly decayed wood or punk; d, layer of living spore tubes; e, old filled up spore tubes; f, fluted upper surface of the fruiting body of the fungus, which gets its food through a great number of fine threads (the mycelium), its vegetative tissue penetrating the wood and causing its decay.

On the radial section of a piece of pine timber, with one of the shelf-like, fungus growths, as shown in fig. 6, both bark and wood are seen to be affected. A small particle of the half-decayed wood presents pictures like that of fig. 7. Slender, branching threads are seen to attach themselves closely to the walls of the cells, and to pierce these in all directions. Thus these little threads of fungus mycelium soon form a perfect network in the wood, and as they increase in number they dissolve the walls, and convert the wood substance and cell contents into sugar-like food for their own consumption. In some cases it is the woody cell wall alone that is attacked. In other cases they confine themselves to eating up the starch found in the cells, and merely leave a stain (bluing of lumber). In all cases of decay we find the vegetative bodies, these slender threads of fungi, responsible for the mischief. These fine threads are the vegetative body of the fungus, the little shelf is its fruiting body, on which it produces myriads of little spores (the seeds of fungi). Some fungi attack only conifers, others hardwoods; many are confined to one species of tree, and perhaps no one attacks all kinds of wood. One kind produces "red rot," others "bluing." In one case the decayed tracts are tubular, and in the direction of the fibers the wood is "peggy." In other cases no particular shapes are discernible.

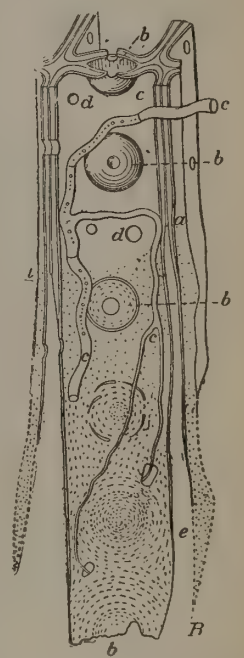

Fig. 7.—Fungus threads in pine wood. (Hartig.) a, cell wall of the wood fibers; b, bordered pits of these fibers; c, thread of mycelium of the fungus; d, holes in the cell walls made by the fungus threads, which gradually dissolve the walls as shown at e, and thus break down the wood structure.

It appears that warmth, preferably between 60° and 100° F., combined with abundance of moisture (but not immersion), is the most important condition favoring decay, and that the defense lies in the proper regulation or avoidance of these conditions, or else in the use of poisonous salts, which prevent the propagation of fungi.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

MONTHLY AND WEEKLY EDITIONS

C. H. MORTIMER
PUBLISHER

CONFEDERATION LIFE BUILDING, TORONTO

BRANCH OFFICE:
NEW YORK LIFE INSURANCE BUILDING, MONTREAL

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ADVERTISING RATES FURNISHED ON APPLICATION

THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

TO VISITING LUMBERMEN.

Lumbermen visiting Toronto are invited to use the office of the CANADA LUMBERMAN as their own. We shall take pleasure in supplying them with every convenience for receiving and answering their correspondence, and hold ourselves at their service in any other way they may desire.

AN ENCOURAGING OUTLOOK.

THERE are many indications to be seen pointing to a more prosperous condition of affairs in Canada in the near future. The collapse of the South Africa boom, the unsatisfactory conditions prevailing in Australia, together with the unsettled state of affairs in the United States, as the result of which a large amount of British capital has recently been withdrawn from that country, and the possibility of the adoption of a silver coinage, which would lead to a still further withdrawal of British investments, all point to Canada as one of the most desirable fields for the investment of foreign capital in the future.

The recent gold mining developments in British Columbia are certain also to prove a most important factor in our future prosperity. We have the assurance of experts of the highest authority that the gold mines of British Columbia are the richest in the world. At the present time millions of foreign capital is being invested in these mines, and the prophecy is being made that a large influx of population will result within the next few years. Owing to the disappointing experience of British capitalists who invested largely in Grand Trunk securities, Canada has hitherto been shunned by the British investor, and other fields which were less promising have benefitted at our expense. It now seems probable that our turn will come in the immediate future. We have one of the richest countries, in point of natural resources, upon the face of the globe. We have also a favorable climate and unrivalled transportation facilities. We only lack capital and population, and it seems probable that these necessities are now about to come to us. If so, we may expect to witness improvement in every line, in which event the lumber industry will be among those which will be most benefitted.

POLITICS AND BUSINESS.

IT is subject for regret that a general election should take place in both the United States and Canada this year. There were indications at the commencement of the year of an improvement in business conditions, but these indications appear to have been dispelled, for the present at least, as the result of the elections which have just taken place in Canada and are now pending in the United States. These elections promise to cause a continuance of the business depression for some time to come.

The change of Government in Canada, and the probable change in the United States are further disturbing elements in the business situation. There is in the United States not only the probable change of Government to be considered, but the possibility, though no doubt a remote one, of the adoption of a silver coinage. In Canada there is the uncertainty consequent upon the belief that alterations of a more or less important character will be made in the existing tariff. We do not think that there is much cause for alarm on this score. There may be, and probably will be, some re-adjustment of the tariff, but we feel assured that Mr. Laurier and his colleagues have become fully aware that injury would be likely to result to the business interests of the country, and to themselves as a party from any radical changes. It must be borne in mind that a very large revenue is needed to meet the running expenses of Government, and unless some important savings can be effected, it will be impossible for the Government to revert to anything like a revenue tariff.

We trust, therefore, that the business community will not be deterred from pushing forward any enterprises which they may have already entered upon, or which they may have had in contemplation, from the fear that there will be any important disturbance of existing conditions. We have already experienced too long a period of business depression and inactivity, and it should now be the aim of everyone to assist in bringing about a more satisfactory condition of affairs at the earliest possible date.

With the incoming of a new Government it may not be out of place to point out that in the past the efforts of both political parties seem to have been too largely directed to securing or maintaining power, while the development of the country's resources has not received that measure of attention which its importance demands. The most important question which any Government can turn its attention to, is that of bringing into the country population of the proper class. The lack of population is at the foundation of many of our business difficulties. We have spent money liberally in the construction of public works to facilitate the transportation of passengers and merchandise, and in this respect are well equipped and have ample facilities to meet the requirements of a population many times as great as that which we possess. The interest charges arising out of the expenditure for these public works rests heavily upon our present small population, but would be lightly borne if we were able to add a few millions to our population. There is also a great disadvantage in doing business in so large a country so sparsely populated. It becomes necessary to travel long distances between centres of population. Had we a population of say from fifteen to twenty millions, business possibilities would be vastly increased, while the expense of getting this increased business would be little more than at present. We are pleased to see the success which is attending the effort to establish a fast steamship service between Canada and Europe. It is now all but certain that such a service will be established in the near future. This service should prove a most important factor in adding to our population and in the development of our resources.

CANADIAN TRADE WITH GREAT BRITAIN.

THE many inquiries which we receive from time to time from dealers in Great Britain for the address of Canadian dealers in various kinds of lumber strongly emphasizes the necessity of steps being taken to introduce our lumber more thoroughly in the British market. It is pleasing to know that the agitation in this journal some months ago along this line has not been without result, several manufacturers having intimated their intention of investigating the prospects for a remunerative export trade.

It should not be that prospective customers are obliged to make unusual efforts to be placed in communication with those from whom they desire to purchase goods. On the contrary, such arrangements should be made, by the establishment of a Canadian lumber bureau or otherwise, as would enable the purchaser to obtain without delay the names of manufacturers in Canada who are in a position to supply the desired stock.

The question of sending a representative to Great Britain, in the interest of the hardwood manufacturers, has not as yet borne fruit. The view is held by some dealers that it would be some time before there would result sufficient trade to cover the expense of such a move, partly owing to the conservatism which characterizes business men in the old country. But this argument is weakened by the fact that they are constantly enquiring for Canadian goods, with the view of opening up trade. And if Canadians are slow to appreciate the fact, it is quite probable that others will pre-empt the field.

The healthy condition of the British market at the present time with respect to Canadian goods should encourage manufacturers to take immediate action, especially as it is now almost certain that present values will be maintained throughout the season. Notwithstanding that the lumber receipts from Canada have thus far this year been greatly in excess of the same period last year, the consumption has been correspondingly large, with the result that available stocks are very light. Another encouraging feature is to be found in the increase in shipments of thin lumber to the British market during the present

season as compared with former years. Heretofore deals have been about the only manufacture of pine in demand across the Atlantic, but the experience of this year augurs well for the placing upon the British market in future of considerable lumber from one to two inches in thickness.

EDITORIAL NOTES.

A TRIAL shipment of Canadian red pine sleepers was recently made to Great Britain, a portion of which were used by the Great Western Railway. They are said to have been of excellent quality, thoroughly well creosoted and carefully manufactured. Heretofore Baltic fir has been largely used for railway sleepers, but a competitor has been found in Canadian pine. This trial order may prove to be the opening of quite an extensive trade for the Dominion.

THE Toronto Board of Trade is credited with having a branch called the "Lumber Section." For some time past it has not been active, and the removal from Toronto of Messrs. John Donogh and Joseph Oliver, two of its strongest members, the last-named being President, has caused it to become well nigh extinct. We trust the remaining members will make an effort to infuse new life into the organization, especially in view of the recognized necessity of an association of lumbermen for Ontario. Just at the present time, when the lumber trade is enjoying a period of quietude, the members should make a united effort to enlarge the scope and usefulness of this section.

WITH regret THE LUMBERMAN learned of the temporary financial embarrassment of Messrs. J. W. Howry & Sons, of Fenelon Falls, Ont. For a number of years the firm operated in Michigan, but a few years ago transferred operations to Canada, purchasing timber limits in the vicinity of Fenelon Falls to the extent of 300,000,000 feet. The enterprise shown in investing such a large sum of money in timber limits and plant is commendable. Manufacturing operations have been conducted on an extensive scale, much of the product finding a market in foreign countries. The members of the firm are recognized as conservative business men, who, no doubt, will prove themselves to be perfectly solvent and be able to so re-adjust their affairs as to continue in business.

IN an effort to extend their trade with Great Britain, Canadian lumber manufacturers should give greater attention to questions of manufacture and shipment. Messrs. J. & P. Coates, of Paisley, Scotland, who are large users of spool wood, write to the High Commissioner of Canada on the subject as follows: "In our opinion, the only means of increasing the demand for Canadian spool wood in this country is for the producers thereof to be more careful about quality. Those producers on the southern shore of the River St. Lawrence should be especially careful in this respect, because in the absence of a sheltered loading-place and consequent liability for demurrage on vessels employed exceeding their lay-days, the hold they have upon the business is a very slender one." In order to insure an increased demand the chief points to receive attention are said to be that the wood be thoroughly well-seasoned, white and solid, free from redheart and knots, and accurately sawed both in diameter and length. Defects in the above particulars are said to have resulted in the refusal of some consumers to place orders with Canadian dealers.

THE Huntsville Lumber Co. state that their advertisement in the WEEKLY LUMBERMAN has brought them more satisfactory returns than any advertisement they ever had. The WEEKLY LUMBERMAN not only circulates in every part of Canada, but reaches buyers in the leading foreign markets, hence its value as an advertising medium. We have no hesitation in saying that many Canadian lumber manufacturing firms might, with much advantage to themselves, announce in the advertisement columns of the WEEKLY LUMBERMAN particulars of the stocks they wish to sell. We are continually being asked by foreign buyers if we can put them in communication with the holder of a particular kind of stock. The WEEKLY LUMBERMAN reaches both buyers and sellers and is the best means of announcing stocks required or for sale.

THE final decision in the now famous dressed lumber case between the United States and Canada promises to be further prolonged, the attorney-general of the United States having ordered that an appeal be taken to the higher court from the recent decision of Judge Wheeler, by which dressed lumber was permitted to enter the United States free of duty. Pending the result of the appeal the customs authorities will collect the duty of 25 per cent. on the class of lumber in dispute, and should the final decision be in accordance with the view held by Judge Wheeler, the duty will be refunded to the exporters. In all probability the final decision will not be given without considerable delay, and the appeal will at least partially impede the importation of Canadian dressed lumber during the interval. On what grounds the appeal is based it is difficult to understand, as the propriety of the decision recently given is acknowledged by the majority of lumbermen on both sides of the line. The proceeding bears, to some extent, the appearance of a scheme to close the United States market to the Canadian dressed product until after the Presidential election.

Warm countries and sunny exposures generally produce heavier and stronger timber, and conditions favorable to the growth of the species also improve its quality. But exceptions occur; neither fast nor slow growth is an infallible sign of strong wood, and it is the character of the annual ring, rather than its width, and particularly the proportion of summer wood, which determines the quality of the material.

A very rough and probably very liberal estimate of the amount of timber standing in the various regions of the United States ready for the axe would give the following figures:

	Feet, Board Measure.
Southern states	700,000,000,000
Northern states	500,000,000,000
Pacific coast	1,000,000,000,000
Rocky mountains	100,000,000,000
Total	2,300,000,000,000

The total annual cut, including all material requiring bolt or log size, is estimated at 40,000,000,000 feet, board measure. The lumber industries employ capital to the extent of over $1,000,000,000.—Maritime Register.

SALE OF GOVERNMENT TIMBER LICENSES.

THE auction sale of timber limits in the districts of Nipissing, Rainy river and Alberta took place, as advertised, at Messrs. Dickson & Townsend's rooms, 22 King street west, Toronto, on the 23rd ultimo. The limits were offered with the object of closing up the partnership existing between Messrs. Beck, Spohn and McSherry, and consisted of upwards of 110 square miles.

At the hour appointed for the sale there had gathered upwards of fifty interested persons, among whom were noticed the following: Wm. Irwin, Peterboro; C. Beck, Penetanguishene; A. H. Campbell and Mayne Campbell, of the Muskoka Mill & Lumber Co., Toronto; Dr. Spohn, Penetanguishene; P. McSherry, Stayner; H. H. Cook, of the Ontario Lumber Co., J. Welch, of Cook Bros., Peter Ryan, John Gray, Toronto; H. S. Brennan, Hamilton; T. Sheppard, Orillia; Maurice Quinn and D. L. White, Saginaw, Mich.; Mr. Fyfe, Port Arthur, and Mr. Wiley.

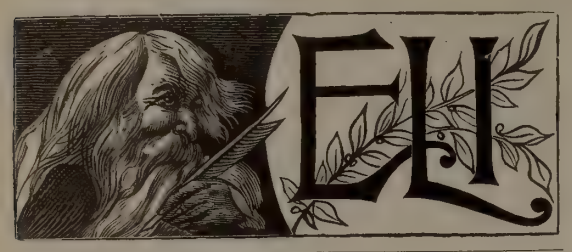
Mr. Townsend, who wielded the auctioneer's hammer, explained that a reserve bid had been fixed for each parcel, which was enclosed in a sealed envelope and opened at the termination of the bidding. The competition for the first two parcels was somewhat keen, but as the sale advanced it became evident that there were few eager purchasers present, and the result was that only one limit was disposed of.

The first ten lots offered consisted of licenses granted by the Ontario government. For parcel No. 1, comprising 10¾ square miles in the Township of Finlayson, District of Nipissing, the bidding reached $6,000 per square mile, but this was claimed to be below the reserve bid and the berth was withdrawn.

The following parcels were withdrawn in the same manner: No. 2, comprising 11½ square miles, District of Nipissing, $1,700 per mile; No. 4, five square miles on Rainy River, including islands in Crow Lake, bid $800 per mile; No. 5, four square miles of islands in Rowan Lake, bid $800 per mile; No. 6, eleven square miles on Split Rock River, bid $720 per mile (the reserve bid was $727); No. 7, seven square miles, east side Manitou River, no offer; No. 8, seven square miles on Little Turtle River, bid $1,850 per mile; No. 9, one and one-half square miles, same locality, no offer; No. 10, ten square miles, near Trout Lake, $1,740 per mile; No. 11, a Dominion Government limit, 47 8-100 square miles in Alberta District, 100 miles southwest of Calgary, no offer.

Parcel No. 3 was sold to C. Beck, of Penetanguishene, at $500 per mile. It consisted of 11 44-100 square miles in the district of Rainy River, on the north side of Sturgeon Lake and east of Indian Reserve.

While the offers received for the parcels withdrawn were below the reserve bids, it will be observed that for three of the parcels a considerable advance was offered on the prices paid therefor at the government sale in 1892. The Finlayson berth, for which $6,000 per mile was offered, was sold in 1892 at $4,400 per mile, the McCraney berth, bid up to $1,700, at $900, and No. 68, in the Rainy River district, bid up to $475, at $1,740. This fact indicates a substantial increase in the values placed upon Canadian timber limits within the past few years.



AFTER the sale of timber limits in Toronto on the 23rd ultimo, I talked with several lumbermen on the outcome of the sale, and the consensus of opinion was that, while timber limits were recognized as valuable assets, the monied men were averse to increasing their holdings until there was an improvement in trade and the financial aspect across the line had brightened up a little. One who is prominent in lumber circles said: "There were a number present who might be considered prospective buyers, but they were evidently there from the cause as myself—curiosity. But, notwithstanding the quiet times, fair prices were offered for many of the berths, and I think the reserve bid in some cases was fixed a little too high. The presence of a couple of Michigan capitalists indicated that their eyes are still on Canadian limits."

* * *

So much is heard of late about the re-imposition of the duty on Canadian lumber by the United States government, that I have felt quite refreshed by the expressed views of an enterprising Nova Scotia mill man. He stated that he believed it would be better for the mills in the Lower Provinces to have the duty on lumber restored, and gave two reasons for his belief. One was that greater prosperity would follow a higher tariff on all manufactures of the United States, and this of itself would make a better market for lumber. Again, a second reason was that Canadian lumber entering the American market free of duty was obliged to discount to the American dealer all the benefits and advantages from free lumber. In other words, the purchaser would say to the manufacturer, "Oh, you don't have to pay any duty now, so you must sell your lumber $2.00 per thousand feet cheaper than you used to, and you can afford to sell it $2.00 less than the American manufacturer, who pays higher wages and stumpage."

* * *

THE other day when in the office of Thomas Meaney & Co., in Toronto, the question of lumber freight rates came up for discussion. On this score the complaints from lumbermen are not numerous, as, generally speaking, rates are not considered too high. But a point of some dissatisfaction is that a higher rate is charged on hardwoods than on pine. "I cannot understand," remarked Mr. Meaney, "why the railway companies charge 7½ cents per hundred pounds on hardwoods from northwestern points to Toronto, and only 6½ cents on pine. Of course, the companies are adopting the American rule, but it should not be done. In the United States, where they have considerable mahogany, quarter-sawed oak, walnut, and other expensive hardwoods, it is all right, but here our pine is more valuable than our hardwoods. Our supply of oak is a mere drop in the bucket." At first glance the difference in freight would not seem to cut much of a figure, but as a matter of fact it means about 40 cents on a thousand feet, which is a good slice out of the profits of handling the lumber. I also observe that special rates are charged in Canada on all expensive hardwoods, such as cherry, rosewood, walnut and mahogany. It would therefore seem that only on the less expensive hardwoods could even the 7½ cent rate be obtained.

* * *

"I HAVE noticed that when a year starts out with everone anticipating a good trade, the opposite result is often experienced, and vice versa." This was the significant remark made to me by an Ottawa lumberman, who believes that the lumber trade is not yet quite on the verge of "blue ruin," and that the present year will close its books showing a satisfactory balance sheet. In this conviction lumbermen sincerely hope there will prove to be more truth than poetry. I believe that the first six months of the year have not done much towards making our lumbermen millionaires, yet visit any of them at their offices or mills and you will at once conclude that the turmoil of business life is resting lightly upon them. Many of our greatest lumbermen have reached the enviable position which they hold to-day by pursuing a policy of honesty and industry. Starting as a woodsman in their early days, they have gradually climbed the ladder of success until now they are recognized as a "power in the land." They are self-made men, and have learned to accept both the "ups" and "downs" of this world in the same cheerful spirit. An instance of the success which many lumbermen have attained is well illustrated in the case of the recent Dominion elections, when there were elected as representatives of the people a large number of men prominently connected with the lumber industry. "Eli" sincerely hopes that the representation may succeed in keeping the Government's head level on all matters pertaining to the welfare of our country and especially to the lumber trade.

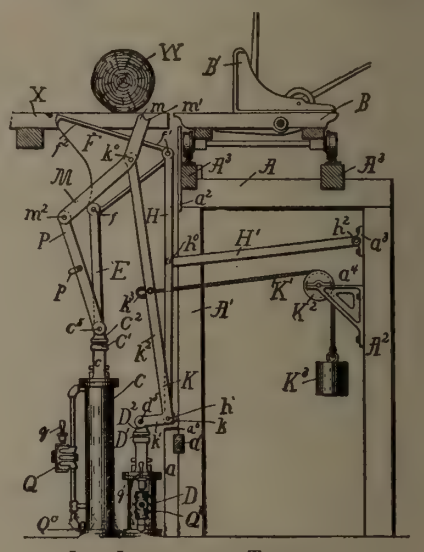
FOREST PRESERVATION IN MINNESOTA.

THE State of Minnesota, U. S., previous to the year 1895, had suffered greatly from forest fires, and in the Hinckley fire on September 1, 1894, there perished four hundred and eighteen persons. In April, 1895, an act was passed by the Legislature of the State for the prevention of forest and prairie fires. The first annual report of the Chief Fire Warden is to hand, and contains upwards of two hundred pages, in which is given much valuable information in regard to the system of protection and causes of the fires. The number of forest fires reported in 1895 was twenty-seven, burning over 8,265 acres and doing damage to the extent of $3,125. The causes were: Clearing land, 5; railroad locomotives, 4; hunters and fishers, 4; other causes, 5; unknown, 9. Of prairie fires there were 105, burning over 73,000 acres and causing damage to the amount of $34,277. The causes of prairie and field fires were: Railroad locomotives, 28; burning straw, 10; burning stubble, 10; threshing engines, 8; other causes, 8; unknown, 13.

Letters are printed from the Baldwin Locomotive Works, Philadelphia, and the London & North Western and London & South Western Railway companies showing the devices in use for preventing the escape of sparks from locomotives. It is stated that the system of spark arrester which is found most efficient in locomotives is for coal-burning locomotives, the device known as the extended smoke box with straight smoke stack, netting, deflecting plate and spark arrester. No spark-arresting device is absolutely efficient. The degree of efficiency of any device depends upon the care with which it is maintained in good condition. Fine sparks will escape from either of the above devices when in the best condition, and coarse sparks will escape when in an improper condition. The fine sparks are not dangerous, the coarse sparks are. The chief adds: "If the most efficient spark-arresting device practicable is used and kept in the best condition there will be very few fires caused by locomotives. The question arises, Are locomotive engineers sufficiently conscientious in keeping their netting in good condition? Do they not too often allow holes to exist in the netting? Are inspections sufficiently frequent and rigorous? Do railroad managers hold their locomotive engineers to as strict accountability in this matter as they ought? It appears to me that the public have reason to expect some decrease in the number of fires set by railroad locomotives."

LOG LOADER AND TURNER.

PETER MCNERNEY, of Marinette, Wis., has been granted a patent for Canada for a log loader and turner, as shown by the accompanying illus tration. In the claim therefor is embodied the following points: An apparatus for turning logs



LOG LOADER AND TURNER.

on saw-mill carriages, comprising a canting arm pivoted mediate of its length with a vertically and laterally movable pivot, a piston rod D, and connections for raising and lowering the pivot of said canting arm and for swinging said pivot laterally, and a piston rod C^1 and bar P for swinging the canting arm about said pivot, with movable support consisting of the bent bar K, having the short arm k^1, the piston rod D^1 pivotally connected to said arm k^1 and the piston rod C^1 and bar F connecting piston rod with canting arm, etc. In a log loading and turning apparatus, the combination with a pivoted loading arm F and a plurality of pivoted canting arms, M, of two stationary cylinders C and D with piston rods C^1 and D^1, and connecting rods from one of of the said cylinders, for raising or lowering the pivots of all said arms, and connecting rods from the other of said cylinders, as C, for swinging all of said arms about their pivots, etc., substantially as described.

CANADA LUMBERMAN

WEEKLY EDITION

The Lumberman Monthly Edition, 20 pages } $1.00 PER YEAR { The Lumberman Weekly Edition, every Wednesday

THIS PAPER REACHES REGULARLY THE PRINCIPAL LUMBER MANUFACTURERS AND DEALERS THROUGHOUT CANADA, AND WHOLESALE BUYERS IN THE AMERICAN AND FOREIGN MARKETS.

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CANADA LUMBERMAN

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Branch Office:
NEW YORK LIFE INSURANCE BUILDING,
MONTREAL.

Weekly Lumberman, published every Wednesday. Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

Lumberman, Monthly. A 20-page journal, discussing fully and impartially subjects pertinent to the lumber and wood-working industries. Contains interviews with prominent members of the trade, and character sketches and portraits of leading lumbermen. Its special articles on technical and mechanical subjects are especially valuable to saw mill and planing mill men and manufacturers of lumber products.

☞ Subscription price for the two editions for one year, $1.00.

LUMBERMAN'S

VEST-POCKET

INSPECTION BOOK

Containing Rules for the Inspection and Measuring of Pine and Hardwood Lumber in the leading markets of Canada and the United States. Embracing also many useful tables and calculations of everyday service to lumbermen.

Prepared by the Editor of the "Canada Lumberman."

Toronto, Canada
C H. MORTIMER, Publisher
1895

THE above is a fac simile of the title page of the latest and most complete Lumber and Inspection Book published.

We shall be pleased to send you a copy on receipt of four 3 cent Canadian postage stamps

THE CANADA LUMBERMAN,
Toronto, Canada

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue.

FOR SALE.

TWO ALLIGATOR STEAM WARPING TUGS, in good working order. For prices and particulars apply to GILMOUR & Co., Trenton, Ont.

WANTED.

ONE OR MORE CARS OF 1¼" COMMON AND No. 1 and 2 Red Oak, in fair shipping condition. Quote price on cars, with rate of freight or delivered price at Buffalo. BUFFALO HARDWOOD LUMBER CO., 940 Elk St., Buffalo, N. Y.

CURRENT TRADE CONDITIONS.

ONTARIO.

Taking the lumber trade of Ontario as a whole, it cannot be said to be in a satisfactory condition. There is some movement of lumber, but it is not of large volume, and the prices realized in most cases leave a very small margin of profit. The stocks of pine which have been accumulating for the past two years continue to increase. Manufacturers have been holding off for higher prices, but these have not materialized, and the result is that dealers are this year willing to accept even a lower figure than was offered last year, in the hope of reducing the quantity of stock in their hands. This has resulted in a general depreciation in values of the lower grades, but for the best lumber prices have been well maintained. There are some points at which there is considerable activity, but it is mostly in the case of mills manufacturing deals and lumber for the British market. Shipments from the Ottawa valley are quite brisk, and the exports from Montreal show that large quantities are going forward each week. Of the United States market nothing encouraging can be said. The only requests for lumber are for such stocks as are in very limited supply. For hemlock there is a fair demand. Hardwoods have shown a downward tendency within the past week. Prices remain firm, but demand weak. The encouraging features of the fall trade are the good crop prospects and abundant yield of fruit. The latter should create a demand for cooperage stock.

QUEBEC AND NEW BRUNSWICK.

So far as the foreign lumber trade of the province of Quebec is concerned, it can justly be said to be in a healthy condition. Many mills are yet busy filling contracts for stock made at good figures early in the season, although some trouble has been encountered in getting the logs out on account of low water. From the vicinity of the Ottawa valley shipments are brisk, and available space in the steamers is readily taken up. Of local trade nothing encouraging is reported. There is little building in progress or in contemplation. In New Brunswick the situation has not changed. Last week two lumber cargoes cleared from St. John for South America, one for France, and three for British ports, besides a fleet of small cargoes for the United States. Seven steamers are now loading deals at that port for transatlantic points. The United States market shows signs of further weakening. The supply of spruce is largely in excess of the demand, and prices are being cut to effect sales.

BRITISH COLUMBIA AND MANITOBA.

The demand for British Columbia lumber for China has given strength to the market, there being several vessels loading at the different mills destined for that country. The Victoria Lumber and Manufacturing Co.'s mill is running day and night, and a large portion of its product will be shipped to China. Several vessels are also loading for Australia. Local consumption is fair, although a large amount of capital has been withdrawn from circulation for the purpose of being invested in mining properties. Collections are therefore difficult to make, but nevertheless the lumber trade will be one of the industries benefitted by the mining boom now on. In Manitoba crop prospects are good, and lumber is considered in a favorable condition, although sales are not heavy.

UNITED STATES.

Public attention is being turned to political conventions, to the detriment of business. So far as lumber is concerned there is little business which requires attention, and dealers realize that in the consideration of the many important questions affecting the commerce of the country there is about as much to be gained as in trying to effect lumber sales. During the month of July, which is usually a quiet one, there has been pronounced quietude, which is attributed in some degree to the political situation, and which it is thought will pass away before the month of August has closed. While orders for lumber have been withheld of late, it is not possible that this condition can prevail for any length of time, as the approach of the fall season and the harvesting of the crops must result in a fair demand. A favorable feature is the abundant corn crop, which will necessitate the erection of a large number of corn cribs. The resumption of manufacturing industries at an early date will also cause a steady consumption of lumber. The main sources of complaint with respect to white pine are an oversupply of stock and low prices. Buyers are pursuing a conservative policy. Good common and better is in fair request, and prices have been maintained. In the lower grades there is a marked depression, and docks are overcrowded. In the hardwood market oak is the leader, but even in that wood buying is restricted. In the Eastern States the overproduction of spruce continues to increase, and cutting of prices is being indulged in. A movement has been commenced to curtail the output. At Buffalo there is some demand for black ash, elm and chestnut.

FOREIGN.

The quietude of the summer season is being felt by the lumber trade of Great Britain, the result being a slight falling off in the demand for lumber. The firm tone of the market, however, has been maintained, as dealers recognize that the inactivity is only temporary and cannot be taken as a general weakening of the demand. The f. o. b. business has been practically concluded for the year, and agents anticipate little new business. For dimension stuff there is a fair demand, while in connection with spruce it is stated that stocks are as yet light, late arrivals having gone into consumption immediately, and cargoes now on the way will be eagerly sought for. Pitch pine is improving in price, and shippers are closing sales for next season at an advance of two pence per cubic foot. The market is practically in the hands of manufacturers and shippers. Although the quantity of pitch pine in stock at Liverpool is large, it is said to be of small average and poor quality, and not such as would command a ready sale even at the time of a brisk market. At Glasgow trade is not brisk, although pine and spruce deals are moving well and some sales of pitch pine have been made at good figures. In hardwoods there is very little doing. The stock of mahogany in first hands is small, and transactions by wholesale dealers are necessarily very few in number. Steamship chartering is not as brisk as it was a few weeks ago, and the call now is principally for small tonnage.

The Timber Trades Journal, of London, Eng., urges precaution on the part of Canadian shippers lest the British market should be overstocked. While values are certain to be maintained for the present season, a large influx of stock this fall

would burden the market during the winter months, with the result that spring trade would open with a reduction in values.

STOCKS AND PRICES.

CANADA.

Upwards of 15,000,000 feet of rafted lumber have been scaled at Springhill, N. B., so far this season.

Piggott & Sons, contractors, of Windsor and Chatham, last week purchased 1,500,000 feet of lumber in Duluth.

C. Beaman, of Burritt's Rapids, Ont., has purchased a large raft of logs from S. Harnet, of North Gower. The lumber will be cut for the United States market.

Shipments from the Consular district of Vancouver, B. C., to the United States for six months ending June 30th last, were as follows: Lumber, $59,871; shingles, $48,428; timber, $13,580.

Geo. J. Vaughan, formerly of Point Wolfe, N. B., has purchased from the New Brunswick Trading Company the property at Black Brook, Northumberland county. The purchase includes the mill, houses, lumbering privileges, etc. The price paid is understood to have been $50,000.

The following shipments are reported from the Moodyville mill, Vancouver, B. C., for China: American bark Quickstep, for Tientsin, with 465,359 ft. rough lumber, valued at $4,559; Amer. ship Benjamin Sewell, for Shanghai, with 61,158 ft. dressed and 984,218 ft. rough lumber, valued at $8,886.

Shipments of lumber from Parrsboro, N. S., are reported as follows: For Dublin, per barque Anna Camp, 863,680 ft. deals and 107,103 ft. ends, by Geo. McKean. For Manchester, per barque Neptune, 989,143 ft. deals and 34,307 ft. ends, by W. M. McKay. For Buenos Ayres, per Barqt. Persia, 504,214 ft. spruce lumber, by J. H. and J. W. Seaman. For Garston, per ship Sally, 766,905 ft. deals, 174,127 ft. ends, scantling and car bottoms, by W. M. McKay.

Since our last issue the following shipments of lumber have been made from Montreal to Europe: Per steamship Siberian, for Glasgow—W. & J. Sharples, 19,858 pcs. deals, boards and ends, 657 do. timber and squares; Imperial Lumber Co., 3029 do. deals and boards; Robt. Thompson & Co., 1339 do. deals. Per steamship Montevidean, for London—Dobell, Beckett & Co., 423 birch logs, 77 walnut logs. Per steamship Caldry, for London—Dobell, Beckett & Co., 61,052 pcs. deals and ends. Per steamship Tritonia, for Glasgow—J. Burstall & Co., 5706 pcs. deals, 8548 pcs. ends; McArthur Bros., 9195 pcs. ends, 245 pcs. birch; W. & J. Sharples, 9981 pcs. deals, 2160 pcs. boards, 1236 pcs. ends; Watson & Todd, 3781 pcs. ends, 6999 pcs. deals. Per steamship Greylands, for London—Dobell, Beckett & Co., 79,906 pcs. deals, 11,759 pcs. boards, 7059 pcs. ends. Per steamship Merrimac, for Bristol—J. Burstall & Co., 6822 pcs. deals; McArthur Bros., 2181 pcs. deals; Dobell, Beckett & Co., 12,853 pcs. deals, 91 pcs. timber; Watson & Todd, 10,470 pcs. deals. Per steamship Sardinian, for Liverpool—W. & J. Sharples, 12,870 pcs. deals and boards. Per steamship Tuskar, for London—Estate James McLaren, 39,284 pcs. deals, 13,845 pcs. ends, 1856 pcs. boards; W. & J. Sharples, 18,761 pcs. deals, 59 pcs. ends; E. H. Lemay, 20,536 pcs. deals, boards and ends. Per steamship Loango, for London—W. & J. Sharples, 535 pcs. deal ends, 8664 pcs. deals. Per steamship Ottoman, for Liverpool—Watson & Todd, 2422 pcs. deal ends, 6089 do. deals, 4854 do. boards; W. & J. Sharples, 3113 do. deal ends; R. Cox & Co., 2090 do.

FOREIGN.

The Eastman Lumber Co., of Saginaw, Mich., has closed down for the season, after cutting 4,000,000 feet.

The Sterns Lumber Co., of Bangor, Maine, has chartered a steamer to take 800,000 feet of small dimension spruce to Buenos Ayres.

The Holland & Emery Lumber Co. have closed down both of their mills at East Tawas. They have 25,000,000 feet of lumber on hand.

The custom house receipts at Boston, Mass., show that 25,259,000 feet of boards, deals, plank and other sawed lumber were imported from Canada for the six months ending June 30th last.

Log run at Saginaw, Mich., ranges from $10 upwards, the majority of sales being made at $15, although 3,000,000 ft. of selected pine brought $23. Box lumber is quoted at $8.25 to $9 and bill stuff at $7.50 to $8.25.

At Foy, Morgan & Co.'s sale at London on the 15th inst., Canadian goods sold as follows: 4th spruce, from Quebec, 12 and 14 ft. 3x9, £6 15s. to £6 17s. 6d.; 3rd spruce, 12x3x9, £7 10s.; 3rd dry pine, £8 to £8 15s. for 12/13x3x9, and £7 15s. to £8 for ⅞ in. of the same length.

BUSINESS NOTES.

Deslormiers & Co., sash and door factory, Valois, Que, have dissolved.

Cross & Ewing, lumber merchants, Dudswell, Que., have formed a new co-partnership.

S. G. M. Gates, sawmiller, Bay City, Mich., is said to have called a meeting of his creditors.

Thos. Sutherland, of the firm of Thos. Sutherland & Co., Liverpool, Eng., has commenced business as timber broker on his own account at 15a Canada Dock.

Alex. Scott, saw mill owner, Buckingham, Que., is announced to have assigned. Mr. Scott was formerly manager for the Buckingham Manufacturing Company.

The extensive mill and timber limit interests of the Sayward Mill and Lumber Co., Victoria, B. C., have recently again become the property of Mr. J. A. Sayward, who at the time of the company's formation retained a mortgage on the property, which he has now foreclosed.

James T. Hurst, lumberman, of Wyandotte, Mich., is financially embarrassed, and has transferred a portion of his property to his creditors. A number of Canadian interests will be effected thereby, the Traders' Bank of Canada being a creditor to the extent of $12,000. Mr. Hurst owns timber limits on the Georgian Bay. The assets are about $1,000,000, and liabilities about half that amount.

FIRES.

The Hastings shingle mill at Vancouver, B. C., owned by E. H. Heaps and leased by J. & D. McNair, was destroyed by fire on the 27th inst. Loss, $10,000; insurance $2,500.

Fire at Cheboygan, Mich., on the 25th inst., destroyed five million feet of lumber owned by Monroe, Bryce & Co. and Ward Bros., of Grand Haven; Theodore Hine, of Bay City, and Swift Bros., of Cheboygan. Loss, $100,000; insurance, $65,000.

THE OTTAWA VALLEY.

In and around the Ottawa valley the lumber trade is in a fairly healthy condition. Shipments to the British market are active, but wholesalers report very little demand from South America.

McLachlin Bros., Arnprior, cut something like 600,000 feet per day with their four big mills. They have disposed of this year's cut at a good price to an Ottawa firm.

J. R. & J. Gillies, Arnprior, are filling stock orders and shipping all the time. Trade shows a little improvement.

Jos. Coswell, Renfrew, is getting out 20,000 logs this spring, and has 33,000 logs from last season, which he is having cut. The drive is not all in yet.

P. Young, Almonte, complains of a falling off in demand for building timber, and dressed lumber is not in good demand.

Mr. Acton, Almonte, reports business only fair, although prices are well maintained.

A. Nichols & Son, Carleton Place, have added to their planing mill and have been doing a good business. They are filling numerous orders for cheese boxes.

The Canada Lumber Co., Carleton Place, are running night and day, and will finish up their limits this season. It is rumored that the mills will then close down for good.

The Ottawa Transportation Company report shipments as good as in corresponding months last year. The cargoes have consisted principally of deals for the British market.

The St. Anthony Lumber Co.'s mill at Whitney is doing good work, having cut 2,000,000 ft. in one week, and as high as 400,000 ft. in 24 hours.

Gilmour's mill at Algonquin Park is running night and day, and cuts with one band saw about 125,000 feet per day. The upper storey of the mill is finished. The main body of the mill is 266 feet long by 55 feet wide. The sorting shed is 100 ft. long by 200 ft. wide, and additions will be made for a shingle mill, etc. About 100 men are employed at present.

The Ross McLaren Lumber Co. are not operating their mill this season.

T. R. Davies, of Ottawa, is selling a large quantity of X shingles at $1.25, and lath culls at $1.00; No. 1 at $1.50.

SHIPPING MATTERS.

Steamship Emma goes up to West Bay to take in deals for W. C. England at 38s.

Steamship Santanderino has been fixed to load deals at St. John, N. B., for Liverpool at 38s.

Ship Levuka, now at Boston, has been chartered to load lumber for Buenos Ayres at $7.75, option St. John loading, $8.75.

The following lumber charters are reported: Ship Loanda, Montreal to Buenos Ayres, lumber, $9.50; Caldera, Batiscan to do., lumber, $9.50; a steamer, 1,655 tons, Quebec to U. K., deals, private terms; Mantinea, Miramichi to w. c. England, deals, 42s. 6d.; a ship, 1,575 tons, Bastican to Buenos Ayres, lumber, $9.50; ship, 1,525 tons, Montreal to do., $9.50; steamer, 1,508 tons, St. John, N. B., to w. c. E., deals, 38s.; steamer, 1,361 tons, Sheet Harbour to do. do., 38s. 9d.; ship, 1,497 tons, St. John, N. B., to Swansea, deals, 41s. 3d.; steamer, 1,976 tons, Quebec to Greenock, deals, £2,300, option of Manchester, 39s.; steamer, 1,916 tons, Quebec to Liverpool or Greenock, timber, 62s. 6d.; bark, 1,234 tons, St. John, N. B., to Buenos Ayres, lumber, $8.50.

LUMBER FREIGHT RATES.

Lumber freight rates on the Canada Atlantic Railway are as follows: Ottawa to Toronto, 10 cents per 100 lbs; Ottawa to Oswego, $1.90 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Montreal, $1.00 per M ft., (3,000 lbs. and under per M ft.); Arnprior to Montreal, $1.50 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Buffalo, 12 cents per 100 lbs.: Ottawa to Port Huron and Detroit, 14 cents per 100 lbs. Ottawa to New York, water delivery, lots of 50 M feet and over, $2.50 per M ft.; under 50 M feet, $3.25 per M ft. (subject to extra towage) 3,000 lbs. and under per M ft. Arnprior to New York, lots of 50 M feet and over, $3.00 per M ft.; under 50 M feet, $3.75 per M ft. (subject to extra towage) 3,000 lbs and under per M ft. Ottawa to Boston, Portland and common points, local 15 cents; exports 13c. per 100 lbs.; Arnprior to Boston; Portland and common points, local 17 cents; export 15 cents per 100 lbs.; Ottawa to Burlington, 6 cents per 100 lbs.; Ottawa to Albany, 10 cents per 100 lbs. Arnprior to Albany, 12 cents per 100 lbs.; Ottawa to St. John, N. B. and common points, 20 cents per 100 lbs.; Ottawa to Halifax, N. S. and common points, 22½ cents per 100 lbs. Minimum carload weight for shipment of lumber, lath, shingles, etc., is 30,000 lbs., and rates quoted above are in cents per 100 lbs., except when quoted per M ft. the minimum carload charged is 10 M ft., lumber not exceeding 3,000 lbs. to the M feet. Ottawa rates apply on shipments from Rockland and Hawkesbury.

Lumber freight rates for pine on the Grand Trunk Railway have been made a fixture, as below. Of any intended change due notice will be given lumbermen.

General instructions in shipping by Grand Trunk are embodied in these words in the tariff schedule: On lumber in carloads, minimum weight, 30,000 lbs. per car, unless the marked capacity of the car be less, in which case the marked capacity (but not less than 24,000 lbs.) will be charged, and must not be exceeded. Should it be impracticable to load certain descriptions of light lumber up to 30,000 lbs. to the car, then the actual weight only will be charged for, but not less than 24,000 lbs. The rates on lumber in the tariff will not be higher from an intermediate point on the straight run than from the first named point beyond, to the same destination. For instance, the rates from Tara or Hepworth to Guelph, Brampton, Weston or Toronto, would not be higher than the specific rates named from Wiarton to the same points. The rates from Cargill and Southampton to points east of Listowel and south and west of Stratford will be the same as from Kincardine, but in no case are higher rates to be charged than as per mileage table published on page 9 of tariff.

Rates from leading lumber points on pine and other softwood lumber, shingles, etc., are as follows: From Glencairn, Creemore, Aurora, Barrie and other points in group B to Toronto, 6½c.; Collingwood, Penetang, Coldwater, Waubaushene, Sturgeon Bay, Victoria Harbor, Midland, Fenelon Falls, Longford, Gravenhurst and other points in group C, to Toronto, 6½c.; Brace, bridge to Toronto 7c.; Utterson, Huntsville, Navor-Emsdale, Katrine to Toronto, 7½c.; Burk's Falls, Berriedale and Sundridge, to Toronto, 8c.; South River, Powassen and Callender to Toronto, 9c.; Nipissing Junction and North Bay, 10c. Rate from Goderich, Kincardine and Wiarton to Toronto, 6½c. These rates are per 100 lbs. Rates from Toronto east to Belleville are 7½c. per 100 lbs.: to Deseronto, 9c.; to Brockville and Prescott, 10c.; to Montreal and Ottawa, 11c. The rates on hardwoods average about from 1c. to 2c. per 100 lbs. higher than on softwoods. For rates on railway ties, mahogany, rosewood, walnut, cherry, and other valuable woods, application must be made to the district freight agent.

On the Canadian Pacific the rates on pine and soft woods may be illustrated as follows: Cache Bay, North Bay, Sturgeon Falls and Warren, to Toronto, 9c; Algoma, Cook's Mills, Massey, Spanish River and Whitefish to Toronto, 12c.; Ottawa to Toronto, 10c From Ottawa, Hull, Aylmer and Duchesne Mills to station on the Lake Erie and Detroit River, Erie and Huron, Toronto, Hamilton and Buffalo, and Michigan Central Railways, the rate is 14½c. per 100 lbs. Regulations apply as to minimum size of carload of 30,000 lbs., and an advanced rate is charged for hardwoods.

MODIFICATION OF HARDWOOD RATES.

THE Grand Trunk Railway and Canadian Pacific have made the rates on hardwoods from certain points to Toronto and Hamilton as follows. The regulations are over the signature of Mr. John Earls, W.D.F.A., of the G. T. R., and given in reply to a letter from Toronto hardwood men:

"After careful consideration we have come to the conclusion that, on and after Jan. 1st, 1895, a modification will be made in the present arrangements for hardwood lumber, to the effect that the rate will be 7½c. per 10c lbs from our Northern and Northwestern branches to Toronto and Hamilton. This rate, however, will not apply from main line points and the straight run between Toronto, Sarnia and Windsor; also that so far as rates on common lumber to points like Guelph, Galt London, Woodstock, Ingersoll, etc., from all lumber shipping stations the rate will be the same on hardwood as on pine." On the old principle, we suppose, that half the loaf is better than none, hardwood men have something, possibly, to be thankful for, though there is no good reason why the rates generally on hardwood should not be as low as on pine. It is understood that the C. P. R. rate will be made uniform at 7½c from same points.

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Williams Machinery Co., A. R., Toronto.

LUMBERMEN'S SUPPLIES
Eckardt, H. P. & Co., Toronto.

MACHINERY
Bertram, John & Sons, Dundas, Ont.
Canadian Locomotive and Engine Co., Kingston, Ont.
Darling Bros., Montreal.
Mowry & Son, B. R., Gravenhurst, Ont.
Northey Mfg. Co., Toronto, Ont.
Phelps Machine Co., Eastman, Que.,
Payette, P. & Co., Penetanguishene, Ont.
Petrie, H. W., Toronto, Ont.,
Small & Fisher Co., Woodstock, Ont.
The Wm. Hamilton Mfg. Co., Peterboro', Ont.
The Phelps Machine Co., Eastman, Que.
The Waterous Co., Brantford.
Williams Machinery Co., A. R., Toronto.

RAILWAYS
Flint & Pere Marquette Railroad.
Illinois Central R.R.

SAW MANUFACTURERS
Burns, E. R., Saw Co., Toronto, Ont.
Shurly & Dietrich, Galt, Ont.
Robertson & Co., James, Montreal, Toronto and St. John, N. B.

SPLIT PULLEYS
Dodge Wood Split Pulley Co., Toronto, Ont.

WHOLESALE LUMBER DEALERS
Donogh & Oliver, North Tonawanda, N.Y., and Toronto, Ont.
Shier, J. D., Bracebridge, Ont.
Wiggin, H. D., Boston, Mass.

MISCELLANEOUS
Axes, Campbell Bros., St. John, N. B.
Can. Office and School Furniture Co., Preston, Ont.
Electrical Apparatus, Royal Electric Co., Montreal.
Lumbermen's Clothing, W. Carss & Co., Orillia, Ont.
Lumbering Tools, Thos. Pink, Pembroke, Ont.
Magnolia Metal Co., New York.
Machine Knives, Peter Hay, Galt, Ont.
Metal Roofing, Pedlar Metal Roofing Co., Oshawa, Ont.
Patent Medicines, Ripan's Chemical Co., New York, N.Y.
Rails, John Gartshore, Toronto.
Silver Solder, P. W. Ellis & Co., Toronto.
Turbines, J. C. Wilson & Co., Glenora, Ont.

WHOLESALE PRICES CURRENT.

TORONTO, ONT.

TORONTO, July 29, 1896.

CAR OR CARGO LOTS.

1¼, 1½ and 2 inch cut up and better	33 00	36 00
2 inch picks and uppers	35 00	37 50
1x12 dressing and better, 60% 16 ft	24 00	26 00
1x10 fine dressing and better	23 00	25 00
1x10 and 12 Canadian dressing and better	20 00	22 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 mill run	16 00	18 00
1x10 and 12 common	13 00	15 00
1x10 and 12 mill culls	9 00	10 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	11 00	12 00
1 inch siding ship culls	10 50	11 50
1 inch siding mill culls	8 50	9 00
Cull scantling	8 00	9 00
1 inch strips 4 in. to 8 in. mill run	13 00	14 00
1 inch strips, common	11 00	12 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		2 25
XX shingles 16 inch		1 40
Lath, No. 1		1 60
Lath No. 2		1 30

HARDWOODS—PER M. FEET CAR LOTS.

Quality, 1s and 2s unless otherwise specified.

Ash, white, 1 to 2 in.		$26 00	$28 00	Cherry	1	to 1½	$50 00 $60 00
" " 2½ to 4		30 00	32 00	"	2	" 4	60 00 65 00
Ash, black, 1sts and 2nds, 1 to 1½ in.		17 00	19 00	Elm, soft	1	" 1½	14 00 15 00
Ash, black, 1sts and 2nds, 2 to 4 in.		19 00	21 00	" "	2	" 3	15 00 16 00
Ash, M. R., 1	" 2	15 00	18 00	" rock	1	" 1¾	16 00 18 00
Birch, 1	" 2	20 00	22 00	" "	1½	" 3	20 00 22 00
" 1½	" 2	22 00	24 00	Hickory	1½	" 2	28 00 30 00
" sqrs. 4x4	" 8 x 8	24 00	26 00	Maple	1	" 1½	16 00 17 00
Basswood 1	" 1¼	16 00	18 00		2	" 4	17 00 18 00
" 1½	" 2	19 00	20 00	Oak, red, p'n	1	" 1½	28 00 30 00
" m. r. 1	" 1¼	14 00	16 00	" "	2	" 4	30 00 32 00
Butternut 1	" 1½	23 00	25 00	" white	1	" 1½	28 00 30 00
" 2	" 3	25 00	28 00	" " "	2	" 4	30 00 35 00
Chestnut 1	" 2	24 00	26 00	" quart'd	1	" 2	46 00 50 00
				Walnut	1	" 3	85 00 100 00
				Whitewood	1	" 2	32 00 36 00

OTTAWA, ONT.

OTTAWA, July 29, 1896.

Pine, good sidings, per M feet, b.m.	$30 00	35 00
" " " "	26 00	30 00
Pine, good strips, " " "	18 00	25 00
Pine, good shorts, " " "	17 00	20 00
Pine, No. 1 dressing sidings, per M feet, b.m.	15 00	18 00
Pine, " " strips, " " "	13 00	14 00
Pine, " " shorts, " " "	13 00	16 00
Pine, 10 s.c. and better stock, " " "	11 50	13 00
Pine, 8 s.c. " " " " "	13 00	15 00
Pine, " sidings " " "	9 00	12 00
Pine, " strips " " "	7 00	9 00
Pine, " shorts " " "	9 00	11 00
Pine, box culls " " "	7 00	10 00
Pine mill culls	1 00	1 35
Lath per M No. 1	80	1 15
1x10 No. 1 barn	18	20
1x10 No. 2 "	16	18
1x8 & 9 No. 1 "	16	18
1x8 & 9 No. 2 "	15	17

QUEBEC, QUE.

QUEBEC, July 29, 1896.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For interior and ordinary according to average, quality etc., measured off	16 @	22
For fair average quality, according to average, etc., measured off.	20	26
For good and good fair average " " " " "	25	30
For superior " " " " "	32	40
In shipping order " " " " "	36	42
Waney board, 18 to 19 inch " " " " "	36	42
Waney board, 19 to 21 inch " " " " "	38	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	12
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	40	49

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average an quality	22	30

BIRCH.

16 inch average, according to average and quality	21	23

TAMARAC.

Square, according to size and quality	17	19
Flatted. " " "	15	18

DEALS.

Bright spruce, according to mill specification, $42 to $44 for 1st, $28 to $30 for 2nd, $25 to $27 for 3rd, and $21 to $23 for 4th quality. F.O.B. batteau

SAGINAW, MICH.

SAGINAW, Mich., July 29, 1896.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$45 00	Selects, 1in., 8in. and up wide	$40 00
1¼, 1½ and 2 in.	45 00	1¼, 1½ and 2 in.	41 00
2½ and 3 in.	53 00	2½ and 3 in.	47 00
4 in.	56 00	4 in.	50 00

FINE COMMON.

1 in., 8 in. and up wide	33 50	2½ and 3in., 8in. and up wide	42 00
1¼, 1½ and 2 in.	35 00	4 in.	45 00

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	23 50	2½ and 3in., 7in. and up wide	37 00
1¼, 1½ and 2 in.	31 00	4 in.	40 00

STRIPS. A AND B (CLEAR AND SELECTS).

1¼ in., 4, 5 and 7 in. wide	34 00	1 in., 4, 5 and 7 in. wide	32 00
6 in. wide	36 00	6 in. wide	36 00

FINE COMMON OR C.

1¼ in., 4, 5, 6 in. wide	30 00	1 in., 6 in. wide	30 00
1 in., 4, 5 in. wide	25 00		

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24 00	1 in., 4, 5, 6 in. wide	22 00

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in	16 00	1 in., 4, 5 and 7 in.	15 00
1 in., 6 in.	17 00	1 in., 6 in.	17 00

SHELVING.

No. 1, 1 in., 10 in. stocks	25 00	No. 2, 1 in., 7 and 8in. stocks	19 00
1 in., 10 in. and up wide	26 00	1 in., 10 in. stocks	21 00
1 in., 12 in. stocks	29 00	1 in., 12 in. stocks	24 00
1 in., 12 in. and up wide	30 00	1 in., 10 in. and up wide	22 00
1¼ in. 1½ and 2in., 8in. and up wide	29 00	1 in., 13 in. and up wide	25 00

BARN BOARDS OR STOCKS.

No. 1, 12 in.	20 00	No. 2, 9 in.	13 50
10 in.	16 50	8 and 7 in.	13 50
9 in.	16 00	No. 3, 12 in.	12 50
8 and 7 in.	16 00	10 in.	11 00
No. 2, 12 in.	16 00	9 in.	11 00
10 in.	14 00	8 in.	11 00

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$9 00	1 in., 13 in. and up wide	$11 50
1 in., 6 in. wide	10 00	1¼, 1½ and 2 in., 7 in. and up wide	11 00
1 in., 7 in. wide and up	10 00		

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9in. wide	17 00	1 in., 10 in. and up wide	18 00
1 in., 6 in. wide	18 00	1¼, 1½ and 2 in., 8in. and up wide	20 00

COFFIN BOARDS.

No. 1, 1 in., 13in. and up	20 00	No. 1, mill culls	8 00
No. 2	17 00	No. 2, or red horse	6 50

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23 00	No. 2	18 00
No. 1 (nearly clear)	21 50	No. 3	14 00

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16ft.	$8 50	Hemlock, 2x4 to 10, 12 to 16 feet	8 00
18 ft.	10 50	2x12	8 50
20 ft.	11 50	Add $1 to each additional 2ft. in length.	
22 and 24 ft.	12 50		

SHINGLES, 18-IN.

Fancy brands, XXXX	3 00	Standard brands, river made, XXXX	2 75
Clear Butts	1 90	Clear Butts	1 75

WHITE PINE LATH.

No. 1	1 50	No. 2	1 00
		Hemlock	1 00

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N. Y., July 29, 1896.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in.	$46 00	47 00	
2½ and 3 in.	50 00	54 00	
4 in.	55 00	57 00	
Selects, 1 in.	38 00	40 00	
1¼ to 2 in.	40 00	42 00	
2½ and 3 in.	47 00	50 00	
4 in.		52 00	
Fine common, 1 in.	35 00	37 00	
1¼ and 1½ in.	35 00	38 00	
2 in.	34 00	36 00	
3 in.		45 00	
4 in.		45 00	
Cut'g up, No. 1, 1 in.	26 00	29 00	
1¼ to 2 in.	32 00	33 00	
No. 2, 1 in.	16 00	17 00	
No. 2, 1¼ to 2 in.	22 00	23 00	
No. 3, 1¼ to 2 in.	17 00	17 00	
Shelving, No. 1, 13 in and up, 1 in.	30 00	@33 00	
Dressing 1¼ in.	24 00	26 00	
1¼x10 and 12		26 00	
1½ in.	24 00	25 00	
2 in.	26 00	28 00	
Mold st'ps, 1 to 2 in.	32 00	34 00	
Barn, No. 1, 10 and 12 in.	18 00	21 00	
6 and 8 in.	17 00	21 00	
No. 2, 10 and 12 in.	16 00	17 00	
No. 3, 10 and 12 in.	13 00	14 00	
6 and 8 in.	12 50	13 50	
Common, 1 in.	16 00	18 00	
1¼ and 1½ in.	18 00	20 00	
2 in.	18 00	20 00	

WHITE ASH.

1st & 2nd, 1 inch,	33 00	33 00	
1¼ to 2 in.	33 00	35 00	
2½ to 4 in.	36 00	40 00	
Strips	17 00	18 00	
Culls	9 00	10 00	

BLACK AND BROWN ASH.

1st & 2nd, 8 inch up,	20 00	22 00	Com. & good culls 10 00 12 00

BIRCH.

1st & 2nd, 6 inch & up, red	28 00	30 00	1st & 2nd, white, 6in. & up, 13 00
			Com & good culls. 10 00 12 00

ELM.

1st & 2d, rock, 8in. & up, 18 00 22 00 1st & 2d, soft, 8 in. & up, 16 00 18 00

MAPLE.

1st & 2d, hard, 6in. & up 18 00 20 00 1st & 2d, soft, 6in. & up, 17 00 19 00

WHITE OAK.

1st & 2nd, plain, 8 in & up	26 00	28 00	Clear squares, 5x5 to x8 35 00
Good common	15 00	17 00	1st & 2nd quartered, 6 in. up 45 00 50 00
Good culls	10 00	12 00	Common quartered 25 00 30 00

RED OAK.

1st & 2nd	25 00	27 0	Quartered 1st & 2nd 42 00 44 00
Common	14 00	16 00	Common 22 00 26 00
Cull	9 00	10 00	

NEW YORK CITY.

NEW YORK, N. Y., July 29, 1896.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply, rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$28 00	@ 40 00	Building orders $27 00 @ 37 00
Decking	44 00	50 00	

SPRUCE.

6 to 9 in.	14 00	14 50	10 to 12 in.	16 25	17 00
6 to 12 in.	14 50	15 75	Lath	1 85	1 95
9 to 12 in.	15 75	16 25			

HARDWOOD.

4/4 and thicker, No. 1 and 2			Black Ash, 10 to 16		23 00
" " "			Soft Elm, "		17 00
" " "			Hard Maple, "		21 00
" " "			Basswood, "		20 00
" " "			Birch, "		23 00
" "	Black Ash, Com. and Shipping Cull, M.C.O.				14 00
" "	Soft Elm,	"	"		12 00
" "	Hard Maple,	"	"		14 00
" "	Basswood,	"	"		12 00
" "	Birch,	"	"		14 00

ALBANY, N.Y.

ALBANY, N. Y., July 29, 1896.

PINE.

Uppers, 3 in. up	$50	$52	Dressing boards, narrow	$19	$21
2½ in.	50	52	West India shipping boards.	16	17
1 to 2 in.	45	48	Box boards	12	10
4 inch uppers	50	52	10-in. dressing and better	26	34
Selects, 2½ in. up	42	44	10-in. common	14	15
1 to 2 in.	38	42	12-in. dressing and better	26	32
Fine common, 2½ in. and up	40	42	Common, 1x12	14	16
1 to 2 in.	36	40	No. 1 barn, 1x12		20
No. 1 cut, 1 to 2 inch	25	35	1x10	18	21
No. 2	18	25	1x8	16	18
No. 3	17	20	No. 2 barn, 1x12	17	19
No. 1 molding, 1 to 2 in.	33	36	1x10	17	19
No. 2 molding, 1 to 2 in.	25	28	1x8	17	19
Stained saps		20	Shaky or star clear, 1 to 2 in.	19	21
Bracket plank	30	35	Dressing	16	18
Shelving boards, 12-in. up	30	32	Common	11	15

LATH.

Pine	$2 25	Spruce	$2 00

SHINGLES.

Sawed Pine, ex. XXXX	$4 25	$4 30	Bound butts, 6 x 18 $6 00 $6 15
Clear butts	3 25	3 35	Hemlock 2 15 2 30
Smooth, 6 x 18	5 40	5 50	Spruce 2 20 2 30

OSWEGO, N.Y.

OSWEGO, N. Y., July 29, 1896.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$45 00	@46 00	
Pickings, " "	36 00	38 00	
No. 1, cutting up, " "	31 00	35 00	
No. 2, cutting up, " "	24 00	23 00	
In strips, 4 to 8 wide, selected for moulding trips, 14 to 16 ft.	30 00	32 00	

SIDING

1in siding, cutting up		1¼ in selected	38 00 @43 00
ricks and uppers	32 00 @39 00	1¼ in dressing	20 00 22 00
1in dressing	19 00 21 00	1¼ in No. 1 culls	15 00 16 00
1in No. 1 culls	13 00 14 00	1¼ in No. 2 culls	13 00 14 00
1in No. 2 culls	11 00 12 00	1 in. No. 3 culls	11 00 12 00

1X12 INCH.

12 and 16 feet, mill run	21 00	24 00	
12 and 16 feet, No. 1 and 2, barn boards	19 00	20 00	
12 and 16 feet, dressing and better	27 00	31 00	
12 and 16 feet, No. 2 culls	13 00	14 00	

1¼X10 INCHES.

Mill run, mill culls out	$24 00	@24 00	No. 1 culls 17 00 18 00
Dressing and better	27 00	35 00	No. 2 culls 14 00 15 00

1X4 INCHES.

Mill run, mill culls out	17 00	21 00	No. 1 culls 14 00 15 00
Dressing and better	24 00	30 00	No. 2 culls 12 00 13 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	18 00	25 00	6, 7 or 8, No. 1 culls 15 00 16 00
			6, 7 or 8, No. 2 culls 13 00 14 00
6, 7 or 8, drsg and better	23 00	30 00	

BOSTON, MASS.

BOSTON, July 29, 1896.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$11 50	12 00	¾ inch	$ 9 25	9 50
Coarse No. 5	15 00	15 50	11-16 inch	8 50	8 75
Refuse	13 00	13 25	⅝ inch	8 00	8 25
Outs	9 00		Clapboards, sap ext.	45 00	46 00
Boxboards, 1 inch	10 75	11 00	Sap clear	41 00	42 00
⅞ inch	9 75	10 00	Sap, 2nd clear	34 00	36 00
			No. 1	23 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in.	$50 00	@52 00	Fine com., 3 and 4 in	46 00	52 00
1¼, 1½ and 2 in.	52 00	53 00	No. 2, 1 in. Fine com.	29 00	31 00
3 and 4 in.	58 00	62 00	1¼, 1½ and 2 in	30 00	32 00
Selects, 1 in.	44 00	45 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in.	45 00	47 00	No. 2	36 00	39 00
3 and 4 in.	52 00	55 00	No. 3	26 00	30 00
Moulding boards, 8 to 11 in. clear	37 00	39 00	Cut ups, 1 in	20 00	32 00
60 per cent. clear	32 00	34 00	Cut ups, 1¼ to 2 in.	24 00	38 00
Fine common, 1 in.	40 00	41 00	Coffin boards	19 00	22 00
1¼, 1½ and 2 in.	40 00	41 00	Common all widths	22 00	26 00
			Shipping culls, 1 in.	14 50	15 50
			do 1¼ in.	15 50	16 50

SHINGLES.

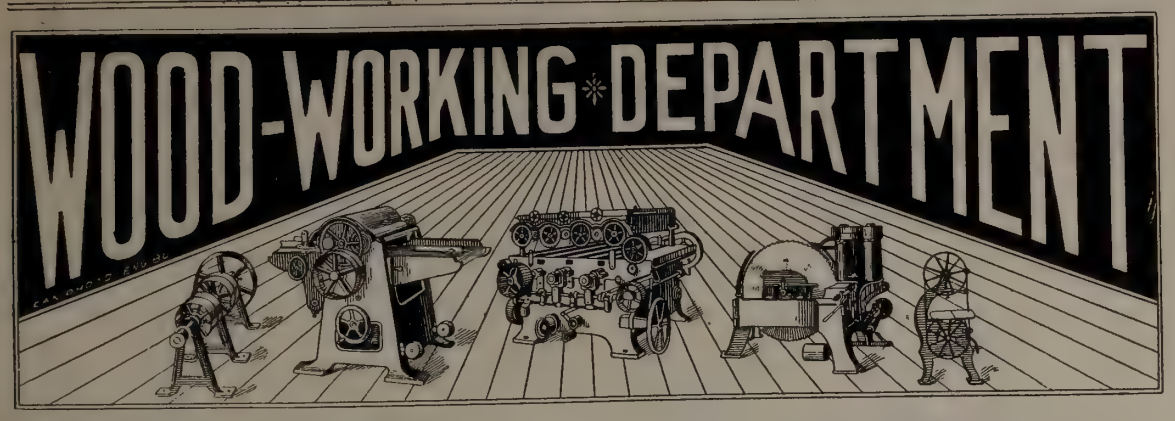
Spruce	1 30	1 50	Second Clear 1 75 1 90
Cedar, extra	2 65	2 90	Extra No. 1 1 25 1 50
Clear	2 25	2 40	

HEMLOCK.

Boards, rough	11 00	@11 50	No. 2 9 00@ 10 50
Planed	11 75	12 00	

LATH.

Spruce		By cargo.	1 30@ 1 90
By car	1 80@ 2 00		



EFFECTS OF KILN-DRYING.

After a long-range investigation of the subject, the Forestry Division of the Agricultural Department at Washington, sums up the evidence as to the effects of kiln-drying native woods as follows :

Although kiln-drying has become quite universal, opinions are still divided as to its effects upon the strength of the material and other qualities. Many objections and claims as to physical and chemical changes produced by the treatment remain unsubstantiated. The method most widely used and most severely criticised is that of the "blower" kiln, where hot air (180° F.) is forced into the drying room by means of powerful fans. Besides the many, in part, unreasonable and contradictory claims about closing or opening of pores, chemical or physical influence on the sap and its contents, albumen, gum, resin, sugar, etc., substances whose very existence in many cases is problematical or doubtful, the general claims of increased checking and warping, "casehardening," "honeycombing," etc., as well as reduction of strength, are still prevalent even among the very manufacturers themselves. The manner and progress of the kiln-drying may render this otherwise useful method of seasoning injurious. Rapid drying of the heavier hard woods of complicated structure, especially in large sizes and from the green state, is apt to produce inordinate checking and thus weakening of the material.

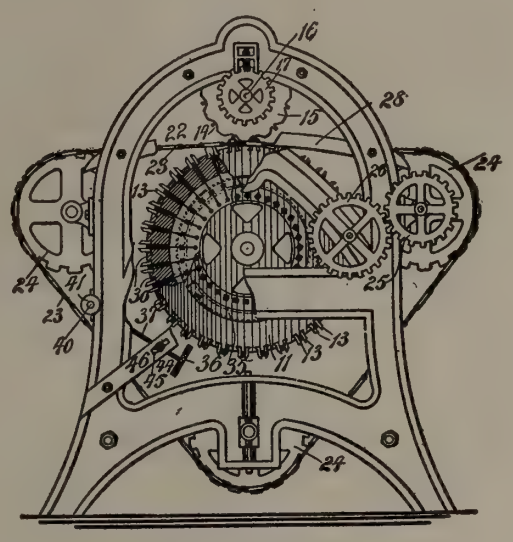
Well-constructed "blower kilns,' where the hot air is blown in at one end and escapes at the other (this latter always the entrance end for the material) are giving satisfaction. The best kiln, however, seems to be one in which ample piping in the kiln itself insures sufficiently high (up to 180° F.), uniform temperature in all parts of the kiln, and where the circulation, promoted by a suction fan, is moderate and under perfect control. In such kilns even timbers of large size can be dried satisfactorily with a temperature not over 150° F.

The valve-gear of an engine should be oiled more than once for a five hours' run. The steam warms it up so that we can not tell whether it is running dry or not by feeling of it, and it should be oiled frequently in order to be on the safe side.

If you have a good direct-acting steam pump that will run at a slow speed, do not let your water level fall as low as safety will allow and then pump it up rapidly, but keep it at about the same height in the glass all day, except just at night, when it should be raised as high as is safe, in order to provide for waste during the night.

RECENT WOODWORKING PATENTS.

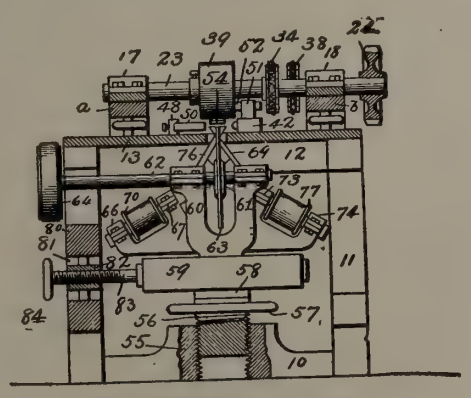
Patents for wood-working machinery have recently been granted in Canada as follows :



Stave Machine.

Patentee : The American Barrel Stave Machine Company, assignee of Wm. F. Hutchinson, both of New York, U. S., granted 1st April, 1896 ; 6 years.

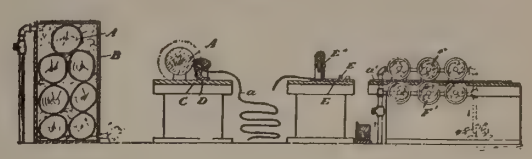
Claim.—A stave machine, comprising a revoluble cutting drum having circumferential knives, a bearing for the knives, and a flexible belt-like carrier moving tangentially across the face of the drum, the said carrier having cross bars to fit between the knives and serve as ejectors, rollers journalled on the carrier, and guides at the drum ends to support the rollers, with means for preventing the tipping of cross bars. The combination with the cutting drum, having peripheral knives, of the radially movable ejectors between the knives, the arms pivoted to the drum and the ejectors, the rods secured to the arms and projecting from the ends of the drum, and means, as the circular cam tracks and the tracks on the rods, for actuating the arms and ejectors by the turning of the drum, substantially as described.



Wood-Working Machine.

Patentee : John Richard Schelosky, St. Louis, U. S., granted 21st April, 1896 ; 6 years.

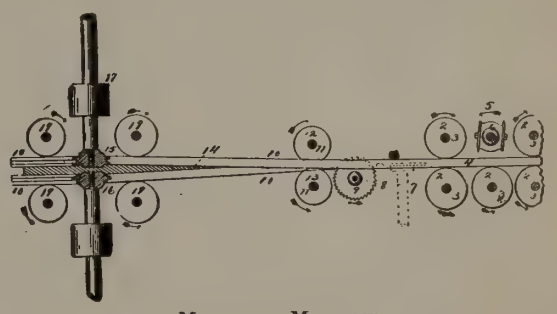
Claim.—The improved dovetailing machine constructed with a series of circular saws (as two or three) mounted in differential planes, and a single saw frame upon which all the arbors of said saws are mounted, and said saw frame simultaneously adjustable, vertically and horizontally with respect to the main stationary frame of the machine, in combination with a suitable main stationary frame, whereby all of the saws and their arbors may be simultaneously adjusted either vertically or horizontally, substantially as herein specified.



Manufacturing Cloth Boards.

Patentee : Wm. H. Marcon, Toronto, Ont., granted 21st April, 1896 ; 6 years.

Claim.—The method of producing cloth boards herein shown and described, consisting in first slicing the wood from the periphery of a log rendered soft in a continuous wavy or undulating flexible form of length of desired thickness, then gauging and cutting cross-wise into strips of desired width the flexible length of wood, and then subjecting each strip so separated cross-wire from end to end to pressure, then applying suitable cutters to the edge of the board, so as to round off the corners and finally sandpapering the board as set forth.



Matching Machine.

Patentee : Wm. H. Bullock, Oswego, N. Y., granted 28th April, 1896 ; 6 years.

Claim.—The combination with suitable cutters arranged alternately above and below a given plane of suitable separating rollers whereby alternate strips of lumber are spread vertically into the planes of the cutters, whereby the opposite edges of the respective strips are simultaneously tongued and grooved, with a slitting saw to cut the lumber into strips, and guides 22, which engage with the edges of said strips to hold them relatively to said cutters against lateral deflection.

When feeling of a crank-pin of an engine, while in motion, stand at the end of the frame and let it touch your hand as it passes. Never try to catch it when at about one-half stroke, for there is danger of getting caught on a set-screw, or of letting the hand pass in between the crank and the connecting-rod, where it will be injured.

Because an engine shows a fine exhaust, throwing out the puffs of steam with sharply defined lines of division, it is not conclusive evidence of a sharp cut-off, for one of the best looking exhausts that I have ever seen came from an engine that took steam from center to center. If an unequal amount of steam is admitted to the two ends of the cylinder, the exhaust will show it by throwing out puffs of unequal size, or what is known among the craft as a "short leg and a long one."

When packing the manhole cover of a boiler, it is a good plan to cover the inner edge of the plate around the hole with graphite, so that the iron may be kept from coming into contact with the gasket. Then when it is desired to remove it, it is quite possible to save the gasket and use it over again. I have pieces of a gasket that were used ten times by taking this precaution. Put none on the cover, but allow the packing to stick fast to it, which will prevent it from blowing out. If no graphite is at hand, use common white chalk.

OTTAWA LETTER.

[Regular Correspondence of the CANADA LUMBERMAN.]

DURING the past month a new lumber concern has been organized in the Ottawa valley, which will be known as the Hull Lumber Company. It will take over the business now being carried on by the firm of Buell, Hurdman & Co., as well as that formerly carried on by Buell, Orr, Hurdman & Co., of Hull. Application has been made for letters patent of incorporation, the applicants being A. A. Buell, of Burlington, Vt.; W. G. White, of Albany, N.Y.; F. W. Avery and C. E. Read, of Ottawa, and J. M. McDougall, of Hull. The capital stock of the company is placed at $600,000.

The Ottawa, Arnprior and Parry Sound and the Parry Sound Colonization railways have been amalgamated under the name of the Ottawa, Arnprior and Parry Sound railway. The Parry Sound Colonization Railway extended from Emsdale to Parry Sound and is about sixty miles in length. It was built by Mr. J. R. Booth some years before the O., A. & P. S. Ry. was mooted for the purpose of opening up the interior of the Parry Sound district to colonization, and also with the object of giving access to the lumber woods and bringing out the cut of logs from the interior to Georgian Bay, where they are towed to the American markets.

A sawdust explosion occurred under Wm. Mackey's raft of square timber while lying in the Ottawa river at the foot of the Chaudiere slides. Five men were sleeping at the lower end of the raft, which was composed of 95 cribs. The cribs were torn apart, breaking the huge boom chains, and the portion the raftsmen were on was floating down the river. After some difficulty ropes were thrown around posts on the raft above, from which they swung during the rest of the night.

Mr. J. W. Todd, who has been looking after the interests of Messrs. Watson & Todd in the Ottawa valley for the past couple of months, has returned to England.

Mr. J. B. McLaren, the noted lumberman, has been investing in British Columbia mines, having recently purchased 1,300 shares in the Le Roi mine, Rossland, for $6,500.

The square timber which passed down the Ottawa river en route to Quebec was of excellent quality. Mr. Mackey's raft is from Mattawa and Mr. Klock's from the Quinze.

The lumber exported to the United States during the past twelve months was valued at $1,835,758.31, as compared with a value of $1,742,265.84 during the previous twelve months. The figures for the quarter just ended were $565,361.96, as compared with $510,683.70 during the corresponding quarter of last year.

OTTAWA, Ont., July 24, 1896.

NEW BRUNSWICK LETTER.

[Regular Correspondence of the CANADA LUMBERMAN.]

GOOD progress is being made this season with log driving by Mr. Fred Moores, who has the contract from the St. John River Log Driving Company. About one hundred and fifteen millions of lumber were driven into the corporation limits this spring, and of this quantity about one hundred and twelve millions are in the Fredericton booms. There are still about three millions between here and Grand Falls, which he expects to get in within a few weeks. The boom company has already rafted sixty-seven millions, and will easily accomplish the work within the season if the lumber is forthcoming.

S. H. White & Co., of Sussex, may now be said to be among the largest lumber operators in the province. They have recently purchased the extensive mill and lumbering property of the Alma Manufacturing Company in Albert County, which, it is said, in addition to the fine water power mills in excellent order, contains a large store, warehouse and five comfortable dwellings and thirty-five thousand acres of excellent wood land. The price paid is said to be in the vicinity of $35,000. Messrs. White & Co. also purchased a short time ago the mill property at Point Wolf, which was owned by Geo. J. Vaughan.

Mr. J. W. Todd, of the lumber firm of Watson & Todd, Liverpool, Eng., was recently in this city. Mr. Todd states that his firm are shipping lumber from Montreal by seven or eight lines of steamers. He was not in a position to say whether they would make any shipments from St. John during the coming winter or not, but if the Beaver line are given a subsidy to come here, his firm will probably ship by way of this port.

BITS OF LUMBER.

The new Purvis mill at St. John has commenced running night and day.

Messrs. Smith & Wright have begun sawing in their new steam mill at Memel, Albert Co.

All the mills at Campbellton are running full time, while K. Shives is running night and day. Mr. Shives has lately added a new boiler, and has electric light for night work.

The exports of lumber from St. John in June was valued at $333,079, compared with $528,965, in June of last year, or a decrease of $195,886. The falling off was in both British and U. S. trade.

E. G. Evans, of Hampton, E. C. Elkin, C. T. Bailey and C. J. Wasson, of St. John, and Mark Gellert, of Waterville, Me., have applied for incorporation as the Cold King Mining & Milling Co., Ltd., with a capital stock of $500,000. The head office is to be at Fairville.

J. T. Sharkey, United States consular agent at Fredericton, gives the following statement of lumber exports from Fredericton, for the quarter ending June 30th, 1896: Hemlock boards, $27,242.78; pine and birch boards, $3,803.29; laths and spruce scantling, $709.50; shingles, $35,791.57; hemlock bark and sundries, $2,230.62.

ST. JOHN, N.B., July 24, 1896.

BRITISH COLUMBIA LETTER.

[Regular Correspondence of the CANADA LUMBERMAN.]

LUMBER COMBINES.

THE logger's combine of the Pacific coast are considering the advisability of proposing to the recently-formed lumber trust that logs shall not be purchased by members of the trust from others than members of the loggers' association. It is claimed that the small loggers, non-members of the association, are selling at prices so low as to demoralize the trade, and as combines seem to be the order of the day, their claims seem well founded that such combines should enact a reciprocity system. There are only four mills in the Northwest that refused to join the lumber trust, which is effective until January 1, 1897, when the membership is to determine the advisability of perpetuating the trust for a period of five years. The outside mills are located at Shamakowa, Or., Olympia, Moodyville and Chemainus, B. C.

THE BOARD OF TRADE ON LUMBER.

The annual report of the Board of Trade, presented on July 11th, says of lumbering on the coast: There was a steady improvement in the lumber industry during the year 1895, the quantity cut being 112,884,640 ft., or about 40 per cent. more than in the previous year. The foreign demand was more widely distributed than for some years past, but prices were low. The foreign demand has continued to improve during the past six months at advanced prices. A combine of nearly all the exporting mills on the Pacific Coast has been effected and a uniform scale of prices arranged. Attention is again called to the importance of grading all lumber for export. Such specific grading would protect our mill men and simplify the work of purchasers when placing orders. The sawmill being erected at Takush Harbor will be one of the best equipped in the province, and will be occupied mainly in cutting cypress. The cypress is one of our most valuable woods and commands a price almost equal to mahogany.

SAMPLES OF B. C. TIMBER.

The Royal City Mills, New Westminster, sawed recently two beautiful sticks of timber. They were cut by Messrs. Gilley Bros., at their camp on the Vancover road. These sticks are each 70 feet long, and square 36 inches. One tree was over 160 feet long, and, in addition to the 70 foot timber it produced three logs of 22, 24 and 32 feet in length, respectively. An idea of the very gradual taper in the girth of these trees may be had from the fact that one end of the longest log was about six feet in diameter, and the other end was trimmed off at 50 inches through. In the whole length there was not a single knot.

COAST CHIPS.

The Victoria Lumber and Manufacturing Co. are running their mill at Chemainus night and day.

There are at present loading lumber at the various ports eleven vessels for foreign shipment, having a combined capacity of 99,643 tons.

Forest fires are causing considerable destruction along the Salmon river. At Rossland and Trail Creek the heavy timber has been cut away to save the villages.

NEW WESTMINSTER, B. C., July 20, 1896.

MICHIGAN LETTER.

[Regular Correspondence of the CANADA LUMBERMAN.]

THERE is little encouraging to write of the lumber trade in the Saginaw Valley so far as sales are concerned. Notwithstanding that some of the mills are closed down, stocks are accumulating and the docks are filled with lumber. The shipments by water from the Saginaw river during the month of June shows the smallest for the same month in the history of the business. The following are the figures: Shipments from Bay City, 8,177,000 feet; shipments from Saginaw, 2,760,000 feet. Political matters are receiving the bulk of attention, as dealers now believe there will be little trade until after the Presidential election.

Logs are coming in freely from the Canadian side. Some of the rafts crossing the lake are having a rough time. Early in July a raft was broken by a gale and the logs scattered for a distance of a mile. Another raft, in tow of the Howard, got into difficulties, and six tugs were sent to her assistance, but their combined power could not cope with the storm. The raft drifted into the mouth of the Kawkawlin river and caught on a cluster of piles without breaking.

R. G. Peters, the Manistee lumberman, whose affairs became involved five years ago, is nearly out of the woods. By clever management he has paid obligations of $1,500,000, and already the greater part of his business interests have been declared solvent. At the end of this season the receiver, the Michigan Trust Company, will be discharged and Mr. Peters will continue the manufacture of lumber and salt.

The gradual but positive decline of the cargo trade, here as elsewhere on the lakes, is shown by the shipments by water from the Saginaw river during the past five years, up to July 1, as follows:

Year.	Lumber.	Shingles.	Lath.
1892.....	129,673,000	14,309,000	2,430,000
1893.....	75,410,000	10,750,000	5,063,000
1894.....	50,460,000	5,815,000	2,937,000
1895.....	49,231,429	170,000	650,000
1896.....	28,773,117	200,000	

There passed away on the 12th inst. one of Saginaw's best known lumbermen, Mr. Elzear J. King, from appoplexy. Few men in the valley were better known. In 1850 he commenced business as a lumberman in Ontario, removing to Sandusky in 1857 and to Saginaw in 1862. His age was 72 years.

SAGINAW, Mich., July 23, 1896.

LUMBER DEAL AT WEYMOUTH, N. S.

A RECENT despatch to the Halifax Chronicle states that a large lumber deal has taken place, whereby the Stehlin family of New France, Digby, bought the large lumber yards of G. D. Campbell, together with three large new buildings, wharves and nearly the entire south side of the Sissiboo river, which runs through the town. Two years ago the Stehlin family came out from France and opened up a settlement about fifteen miles back of Weymouth, and have named the place "New France." They have built a large saw mill at that place and a number of dwelling houses. Last year an electric plant was put in and now the settlement is lighted by electricity. They have one of the finest mills in the province. This year they applied for a right of way to build a railroad from New France to Weymouth. The road has been surveyed and work will begin at once. It will cost $20,000. This road will be used for bringing their lumber, etc., to Weymouth, for shipment. They have bought up thousands of acres of woodland in the interior. The land bought at Weymouth will be used as the terminus of the railroad. A number of large wharves will be built in addition to those they already have. This new enterprise will be a boom to Weymouth and will be the means of increasing the shipping of that port. The Stehlins have a large capital at their back and intend pushing their new enterprise for all it is worth.

THE NEWS.

—J. Moses, Vernon, Ont., has his new saw mill running.

—Mr. West's new saw mill at Indiantown, N. B., has commenced operations.

—C. Young, of Young's Point, Ont., has added a new planing machine to his outfit.

—J. Mundell & Co., Elora, Ont., will rebuild their furniture factory burned recently.

—Much valuable timber has been destroyed by forest fires in the island of Newfoundland.

—Smith & McLeod, saw mill owners, Vernon, B. C., are building a branch mill at Enderby.

—The Klock Lumber Co. intend rebuilding on a large scale to replace the mill recently burned at Aylmer.

—A sash and door factory is being erected at Halleybury, Man., and it is reported that a pulp mill may be built.

—Alphonse Tessier, Penetanguishene, Ont., will shortly rebuild his planing mill and equip it with modern machinery.

—George D. Prescott's steam rotary saw mill at West River, N. B., turned out recently 44,000 feet of lumber in 10 hours.

—A new post-office has been established at Gilmour's new lumber mills in Algonquin park, about thirty miles above Whitney.

—Kirkwood & McKinnon, of Sudbury, Ont., are building a pulp mill, which is to have a capacity of ten tons of dry pulp per day.

—Lovell & Son's saw mill at Coaticooke, Que., has been fitted with electric light, and has been running night and day for some time.

—The schooners Bavarian and Austin, loaded with pulp by the Sault Ste. Marie Pulp and Paper Co., of Sault Ste. Marie, Ont., have sailed for England.

—Mr. H. H. McLean, of Quyon, Que., whose mill was destroyed by fire recently, had insurance amounting to $10,000. The loss was in the vicinity of $15,000.

—A stone imbedded in a saw-log caused considerable damage in Messrs. Cockburn & Son's mill at Cache Bay, Ont. The circular saw and guides were destroyed.

—The Savanne Lumber Co., with headquarters at Penetanguishene, Ont., have lately purchased the mill at Budd's Mill, Ont., and transferred the machinery to their mill at Savanne.

—J. R. Eaton has enlarged the engine-house of his planing factory at Orillia, and put in a new boiler of one hundred horse power, with a Wheelock engine of seventy-five horse power.

—C. A. Moore, of Brandon, Man., has been appointed to the management of the new sash and door factory lately erected at Rat Portage by the Ontario and Western Lumber Company.

—A man named Wm. Kelly was caught in the machinery of a circular saw in the Deschenes mill a few days ago, and was on the point of being torn to pieces when the machinery was stopped.

—The logs for D. E. Sprague's saw mill at Winnipeg began to arrive down the Red river last week. They were cut in the district east of the Lake of the Woods and brought down the Rosseau and Red rivers to Winnipeg.

—An exchange states that Chicago parties are looking over the Georgian bay region with a view to getting control of large tracts of hardwood timber situated there. The timber is red oak, birch, hard maple, and some basswood, elm and ash.

—The largest raft of the season recently passed down the Longue Sault Rapids of the St. Lawrence river. It was owned by the Calvin Company, and was taken down by the oldest pilot on the river, Richard Dafoe. 61,000 feet of square timber was supposed to be in the draw.

—Messrs. R. H. Klock & Co., of Klock Mills, Ont., have sent up bush rangers to explore their new Quinze limits with a view of putting in several shanties this season. They are also cutting out a splendid waggon road from their Douglas farm on the shores of Quinze Lake to North Temiscamingue.

—Messrs. A. Charlebois and C. H. Maguire, of Quebec, and J. M. Fortier, T. Nadeau and T. Harkness, of Montreal, are applying for incorporation under the style of the Gascapedia Pulp and Lumber Company, with head office in Quebec, and a capital of $300,000, for the manufacture and sale of pulp and all kinds of lumber.

—Large as is the amount of Canadian lumber exported, it forms only one-quarter of the sawn lumber received in Great Britain, and only one-sixteenth of the square timber, the great proportion being the product of the north of Europe and the Southern States. Great Britain is the largest importer of timber among the nations of the earth, her own forest area being only about four per cent., and contributing but little towards the lumber requirements of the nation.

CASUALTIES.

—Three men were drowned off a raft of boom timber at Des Joachims, Ont., recently.

—Lewis Mills, son of Thomas Mills, of Wheatley, Ont., was drowned while bathing in the lake.

—A young man named James Davidson was struck in the side by a shingle bolt thrown from a saw in the Aberdeen mills at Fredericton, N. B. His injuries proved fatal.

—Arthur W. Gibbs was drowned at Humphreys' Bay, B. C., early last month. He had been working in Higgins' logging camp, and fell off a plank when crossing from a scow to the shore.

—The boiler in Robert E. Taylor's saw mill at Doyle's Pond, Tidnish, N. S., burst on the 4th inst. The boiler was thrown over the top of the engine. Fortunately the employees escaped injuries.

—Fred. Therriault, a native of New Brunswick, was drowned at Missoula, Montana, on the 14th ultimo, by falling off a log while working at the boom. He was in the employ of the Big Blackfoot Milling Company.

PERSONAL.

Mr. Andrew Thomson, a pioneer sawmilier of Oxford County, Ontario, is dead.

Mr. E. H. Lemay, wholesale lumber merchant, has been proposed for membership in the Montreal Corn Exchange.

Mr. J. E. Cox, son of Mr. Robert Cox, lumberman, of Ottawa, slipped on a banana peel recently and fractured his right leg.

Mr. W. C. Edwards, M. P., of Ottawa, has been re-elected by a large majority as member for Russell for the Dominion government.

Mr. John Murphy has been appointed by the Rathbun Company, of Deseronto, to fill the vacancy caused by the death of the late Mr. T. B. Butler.

Mr. Thomas Mackie, lumber merchant, of Pembroke, Ont., is now a member of the Dominion Parliament, having defeated the Hon. Peter White.

Mr. A. E. Dyment, son of Mr. N. Dyment, the extensive lumberman of Barrie, Ont., was elected for Algoma district on the Liberal ticket at the late Dominion elections.

Mr. C. Gauvreau, of Quebec, has gone to South Africa as the representative of Messrs. J. Burstall & Co., lumber merchants, of Quebec. Mr. Gauvreau is well known in the Canadian lumber trade.

Mr. James B. Klock, of the well-known lumber firm of R. H. Klock & Co., Klock's Mills, Ont., was the successful candidate in the Conservative interests at the recent Dominion election.

On the 7th of July Mr. J. L. Grahame Abbott, barrister, of New Westminster, B. C., was married to Miss Eliza Scott Alexander, daughter of Mr. R. H. Alexander, manager of the British Columbia Mills, Timber and Trading Co.'s mill at Hastings.

Captain Hugh Chisholm, a pioneer shipbuilder of Meaford, Ont., died on the 6th of July, at the age of 72 years. He built, at Port Credit, the first centre-board schooner on the north shore of Lake Ontario. Deceased was a brother of Mr. K. C. Chisholm, ex-M. P. P., Brampton.

Mr. Daniel O'Hara died at St. John, N. B., on the 2nd ultimo, at the advanced age of 93 years. At the age of 16 years he came to Canada and engaged in lumbering on the St. John river. From that period up to the time he gave up active work Mr. O'Hara had been engaged in connection with timber.

The Timber Trades Journal, of London, Eng., states that Messrs. E. J. B. Watts, of Pierce, Watts & Co., Cecil Pershouse, of the Hudson Dry Soap Company, and Harry Ashton, of Squire, Ashton & Co., left London on the 9th ultimo for a tour through the spruce-producing districts of New Brunswick and other timber territories of Canada. Their visit will probably extend over a period of two years.

TRADE NOTES.

It is stated that the Bain Wagon Co., of Brantford, Ont., will remove their entire plant to Woodstock on the first of September.

Mr. Thos. Pink, of Pembroke, reports a good demand for lumbermen's tools. MacNab Bros., of Orillia, are getting all their supplies from him.

Incorporation is asked for the McMillan & Haynes Company, of St. Catharines, Ont., to manufacture saws, axes and other tools; capital stock, $30,000.

A cordial invitation was received by THE LUMBERMAN from the Penberthy Injector Company, of Detroit, Mich., to be present at the celebration on the 25th ultimo of the manufacture and sale of 100,000 Penberthy injectors during a period of ten years, from June 5th, 1886, to May 12th, 1896. The employees of the company were given a holiday and excursion to "Beauvoir."

The advertisement of the A. R. Williams Machinery Co., Ltd., shows a cut of their new premises on Front St. west, Toronto, opposite the west wing of the Queen's hotel; also of their London Tool Works and Montreal branch, with the Union Station close by the Toronto premises. These premises are now fully fitted up, and the company are occupying their commodious business offices. The entrance, as stated above, is opposite the Queen's hotel. Users of machinery and machinery supplies will do well to call and inspect their stock as now arranged on these premises. The west side of their double warehouse is devoted to machinery supplies. Their show window in this line, showing twist drills, taps, stocks, dies, wrenches, oilers and other handy tools required in connection with mills of all kinds, is very attractive and worthy of notice. The eastern half of these warerooms makes a fine display of iron and wood-working machinery; in the window they have one of their "Eclipse" surface planers, similar to the "Eclipse" planer, matcher and moulder shown in these pages some months ago. They have also one of their Fox monitor lathes, with friction clutch in the head, in the same window, also a 17" swing × 8' bed engine lathe, one of their Barnes patent friction drills, a 20" drilling machine, a wing disc fan, a power-driven washing machine, etc. Their Sturtevant goods are displayed on the second floor of the building, and consist of pressure blowers, monogram blowers, shavings exhaust fans and hot blast apparatus for dry kilns. The company are anxious to see millmen and users of machinery, and a visit to their works will be appreciated by the proprietors.

FREE SITE FOR A MILL.

Mr. John Tapp, of Sheenboro, Que., writes as follows to an exchange:

"I hereby offer a free grant of twenty-five acres of my own deeded property at the mouth of Deep river, on the edge of a large bay, capable of holding two millions of logs, to any responsible lumberman or any other responsible man that wants to build a mill.

"I hope some such will accept of this offer, for there are a great number of young pine cut now-a-days that do not float over thirty or forty miles from where they were put in the water before going to the bottom, and any that does float are generally no larger than a broom handle when they get to Ottawa.

"No doubt the building of such a mill would encourage the construction of our North Shore railroad. And also if we get this railroad up to the mouth of Deep river it would encourage and strengthen us to pay this large bonus that we are taxed for yearly. This railroad would benefit any lumberman that would take hold of it on account of the small supply of logs. In our days the most of the logs are drifted down in booms and they wear and tear along the river, for every time they touch the shore they spill out two or three hundred logs, which lie beaten along the shore the most of the season until a fifteen inch log is worn down to about four inches. Another advantage I see is that there could be millions of feet of hard wood cut at the mouth of Deep river that could be brought in by farmers."

VIEWS OF A BANK MANAGER.

At the annual meeting of the shareholders of the Merchants' Bank of Canada, held in Montreal last month, Mr. George Hague, general manager, made the following remarks with respect to the forest products of Quebec:

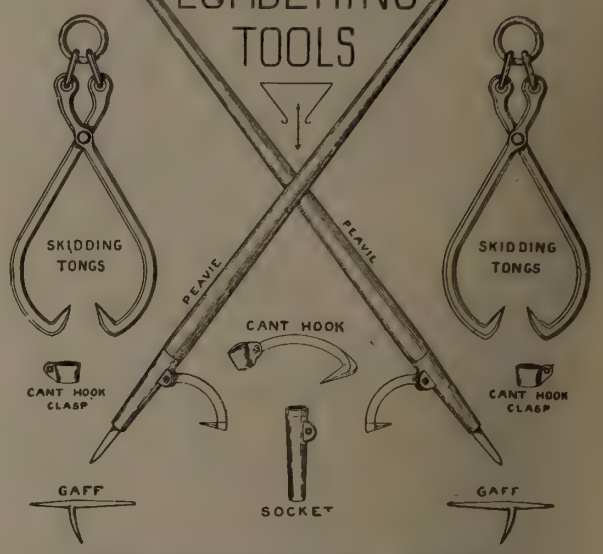
"The unsettled condition of affairs in the States is affecting prejudicially our great export of lumber to the American market. Fortunately the other great branches of the trade in our forest products are in a really presperous condition. The English market is active and strong, and contracts for this year's sales in the United Kingdom have been made by the shipping houses at better prices than for years back, a state of things which has given rise to a feeling of satisfaction and hopefulness, especially in this province and throughout the Ottawa valley. There is one development of recent date that is coming into increasing prominence. I refer to the products of our spruce forests. Many of these forests have been neglected on the supposition that they were almost valueless. Now, however, they are becoming valuable for the production of pulp for paper making. It is estimated that 75,000 cords of spruce pulp wood, or about 1,000 canal boat loads, will be taken out of Canada this season through the Chambly and Champlain canals and delivered at Ticonderoga and mills on the Hudson. Perhaps it is a pity that so much immature timber is sacrificed and sent out of the country in this way, but developments may go on in the future of a character we can hardly estimate at present. Experiments are now being made in Europe, with a view to the production of a kind of silk from pulp wood, the process being a close imitation of that by which raw silk is produced by the worm. If our forests, besides producing lumber and paper, and numbers of things that are made of paper, can also be utilized to produce silk, we may be independent by-and-by altogether of the looms of Lyons. This, however, may only be a fanciful picture. Yet, quite as strange things have happened, and anyone who has observed the extraordinary developments of electrical engineering during the last decade may well be pardoned if he believes almost anything to be possible in the way of future development."

A BUSINESS NECESSITY.

Messrs. Duff & Stewart, Bluevale, Ont., in remitting their subscription, write: "We look upon THE LUMBERMAN as one of the necessaries in running our business."

While riding on his bicycle early last month, Mr. E. C. Grant, of the Ottawa Lumber Company, was run down by a horse and buggy. Mr. Grant was knocked unconscious, besides receiving several minor wounds.

THOMAS PINK
MANUFACTURER OF LUMBERING TOOLS



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Y Hyson tea, good style and cup quality @	10c. "	Valencia raisins	4c. "
Congou tea, good style and cup quality @	11c. "	Evaporated apples (choice brights)	5½c. "
Choice medium beans	80c. bus.	Dried apples	3¾c. "
		Dried peaches	5½c. "
		Dried plums	6½c. "
		½ brls fine quality rich syrup	2c. "

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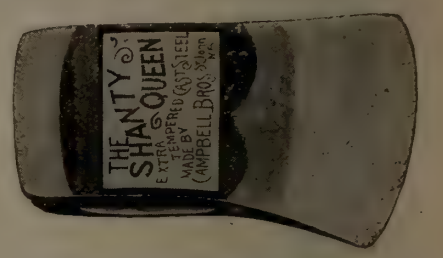

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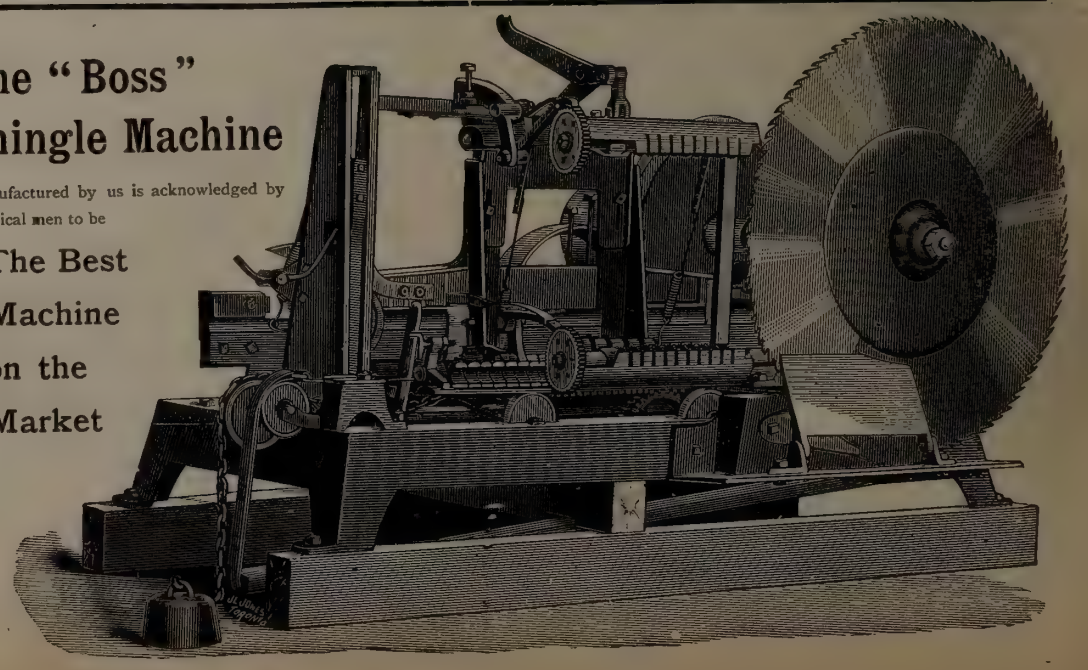

An exchange says: "Two workmen were discussing serious subjects. Quoth the younger, 'I say, Bill, what are these here stock companies?' 'Well, I'll explain it to yer. You an' Jim an' arf-a-dozen more of your mates put up a penny each and buys two ounces of 'bacca and a clay, then I calls myself the managing director, and I sits down and smokes the pipe and 'bacca. D'ye see?' 'Yes, but where do we come in?' 'On! you're the shareholders; look on and spit.'"

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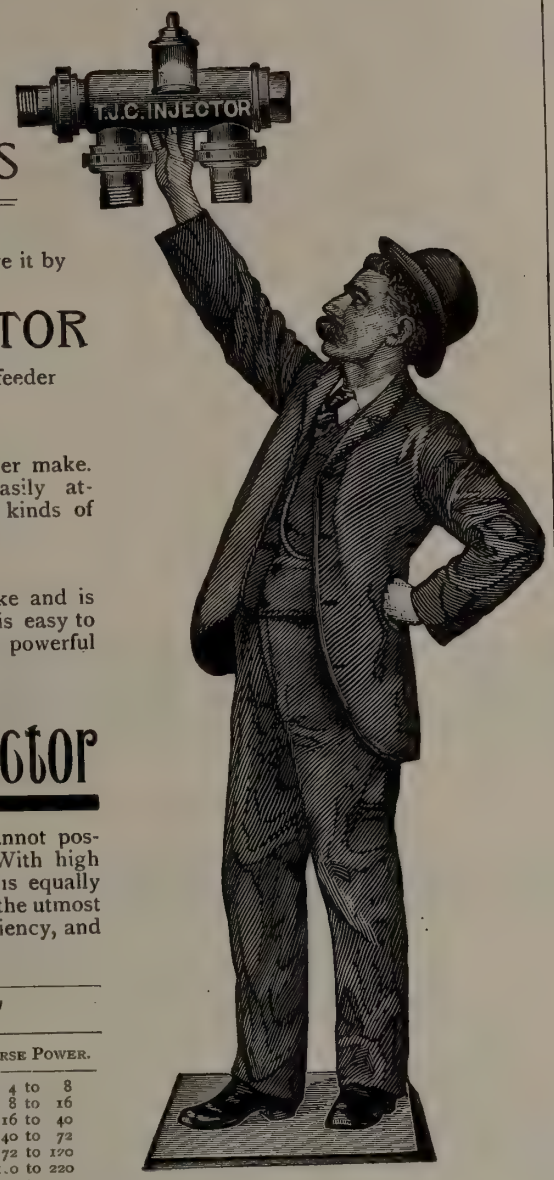

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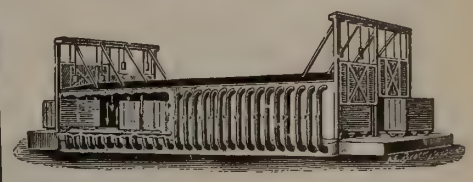

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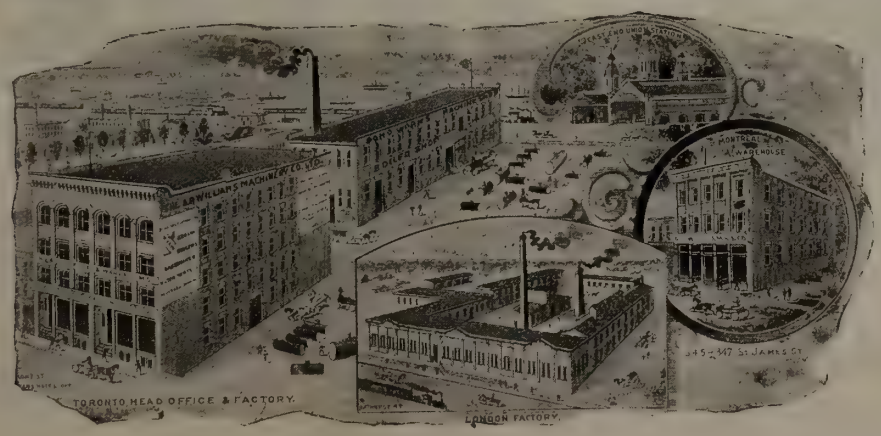

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Next make six inch first face, full value, equals six feet ; next, 12 inches second face, full value, equals 12 feet; leaving 15-16 on cant, 15½ inches wide, equals 12¼ feet, total, 30¼ feet.

Next make eight-inch first face, full value, equals eight feet ; 12¾-inch second face, full value, equals 12¾ feet, leaving 12/16 on cant, 16 inches wide, equals 10 feet, total 30¾ feet.

This shows a slight percentage in favor of the wider face the first time. Now, I do not care how deep the sawyer goes the first time, provided he does not take a board off in the slab, and I am satisfied that a great many mill men are trying to get a lot of narrow strips by light slabbing when they would get just as much money out of the log and have better lath stock if they would go for a wider face the first time. Let anyone diagram this and see if I am not pretty nearly correct.—S. D. Albright, in Hardwood.

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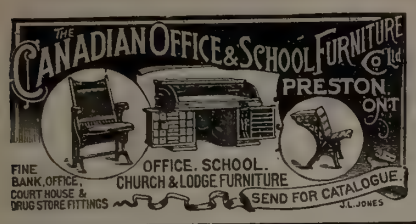

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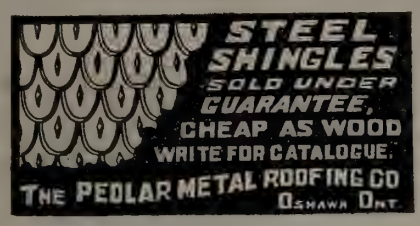

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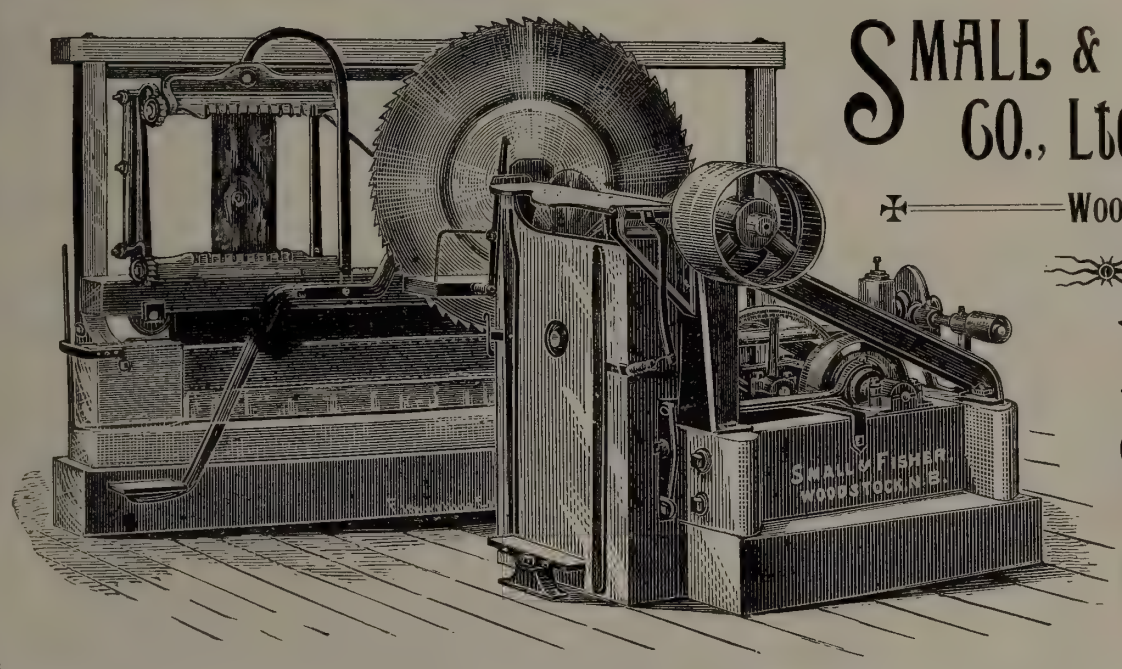

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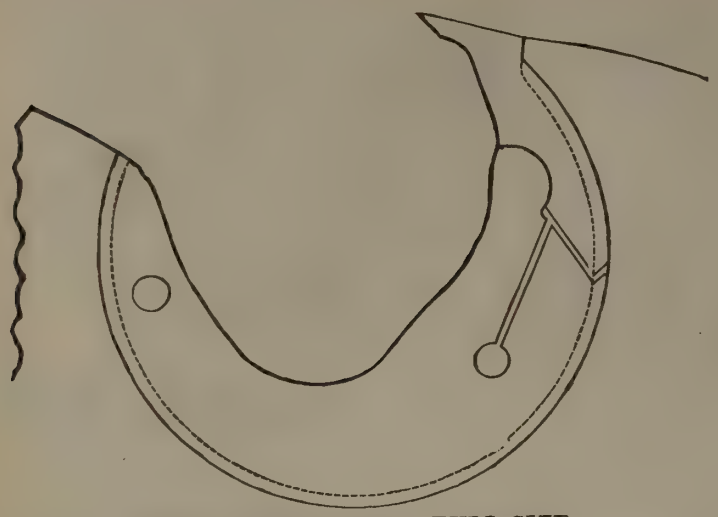

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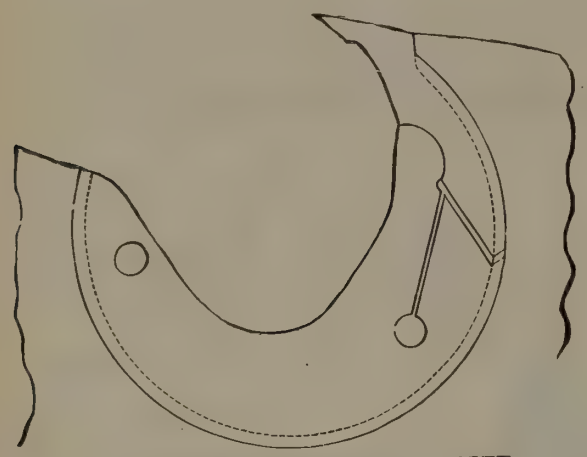

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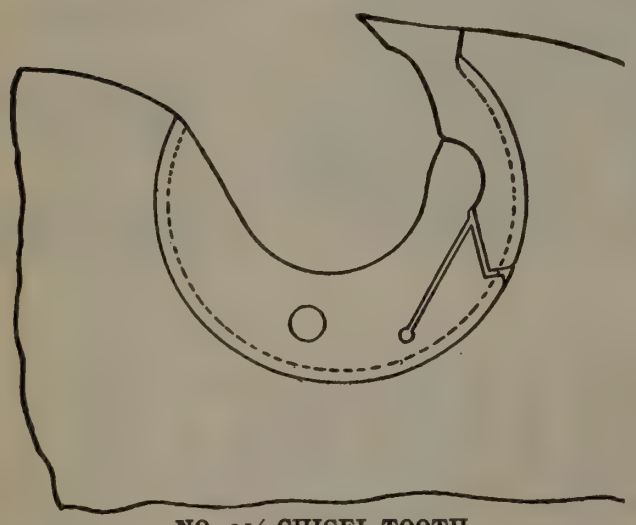

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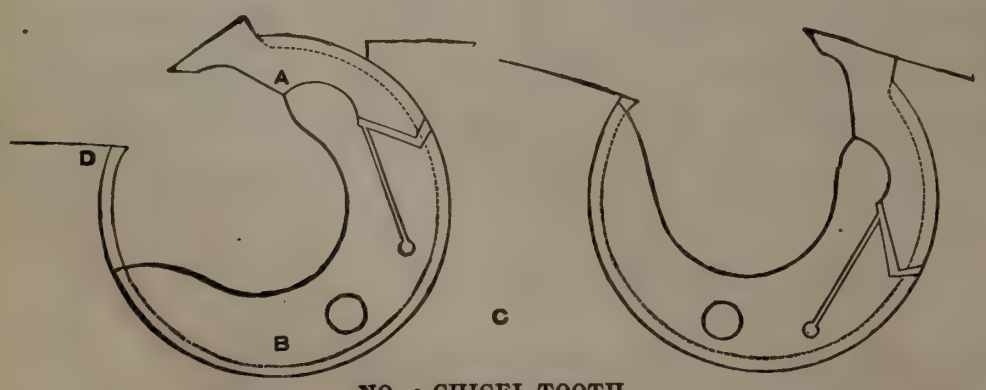

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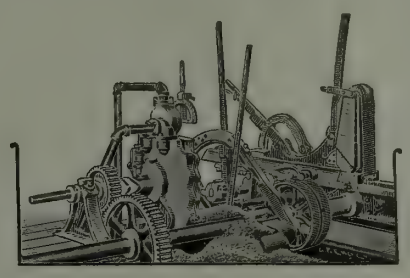

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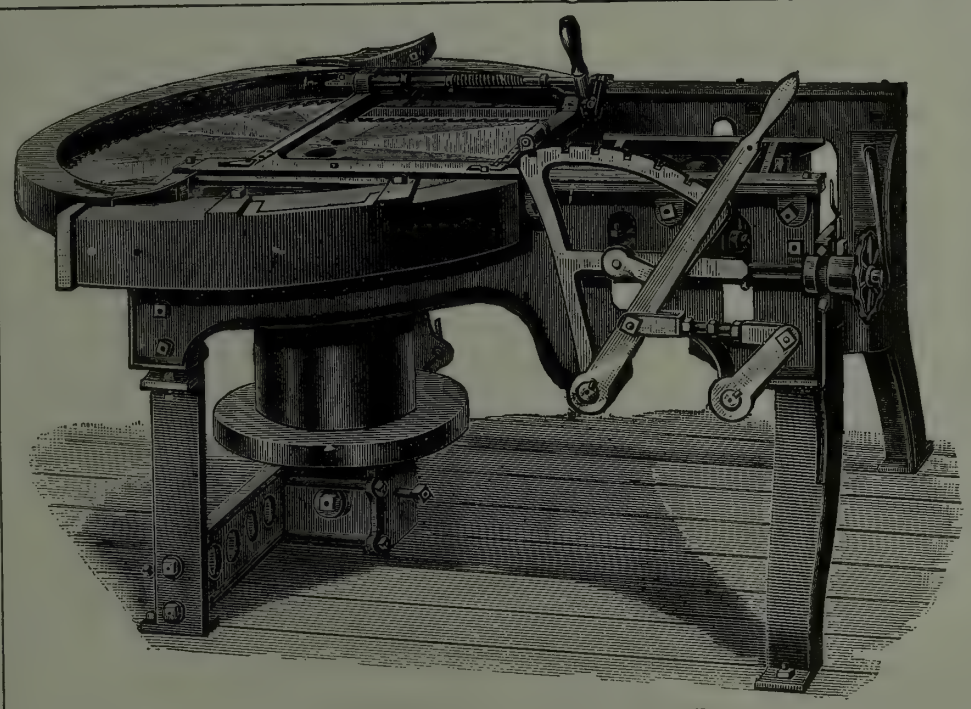

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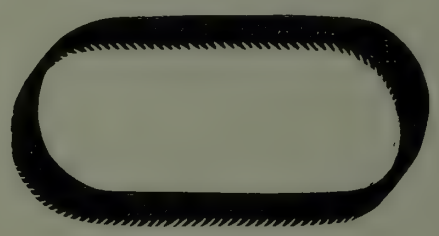
SIXTEEN REASONS, AND HOW TO AVOID THEM



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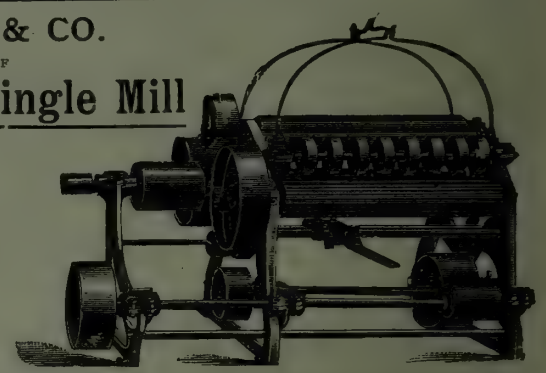

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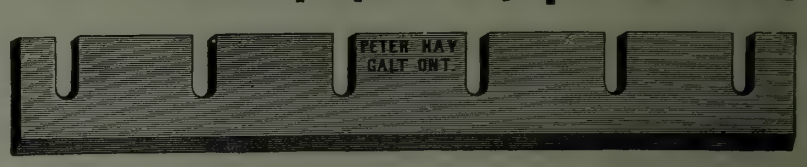

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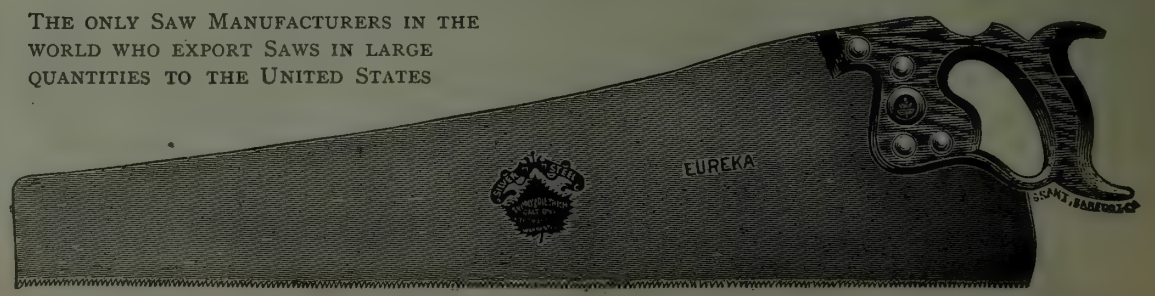

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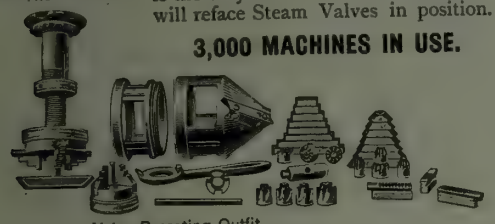

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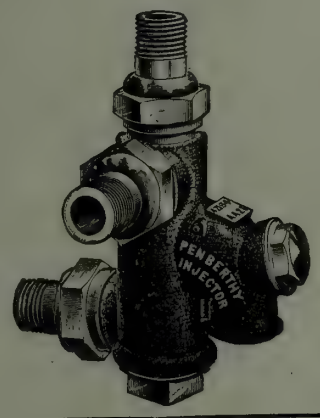

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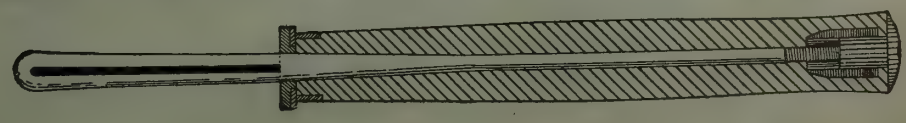

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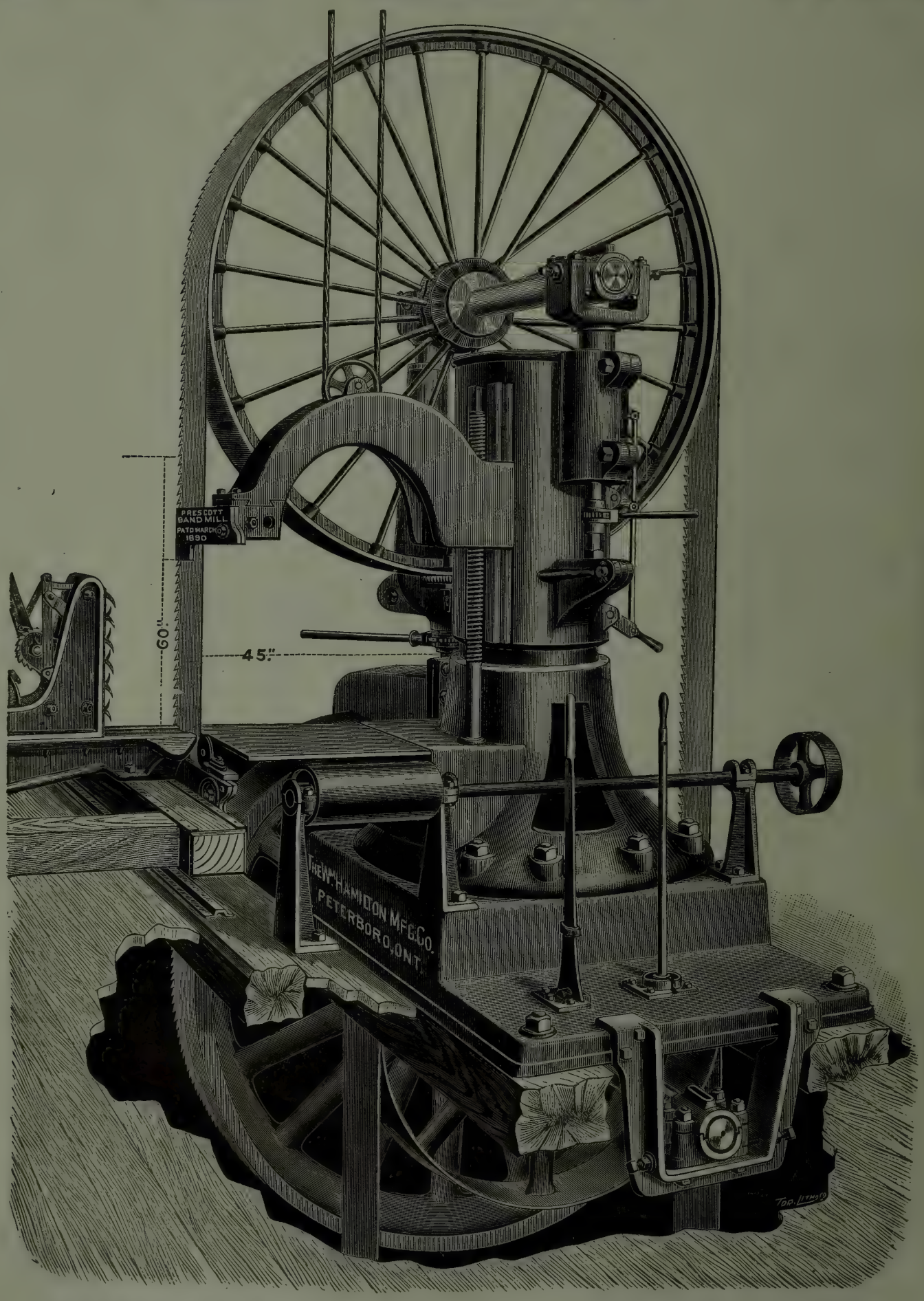

THE WM. HAMILTON MFG. CO., LTD.

PETERBOROUGH, ONT.

Branch Office: Vancouver, B. C.

THE CANADA LUMBERMAN

VOLUME XVII. NUMBER 9. } TORONTO, ONT., SEPTEMBER, 1896 { TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

WOOD PULP IN GREAT BRITAIN.

FROM the report of the High Commissioner of Canada for 1895, the following extracts are taken relative to the imports of and demand for Canadian pulp wood in Great Britain, which, in view of the desirability of the further extension of the trade, should be of interest to manufacturers :

"The use of wood pulp continues steadily to expand, the imports for 1895, 297,094 tons, valued at £1,574,400, showing an increase of nearly £150,000 over 1894. Although apparently the present large local consumption somewhat retards the export trade, I have no doubt that with the completion of the large mills at present under construction in advantageous positions, Canada will definitely enter the market as a powerful competitor with present sources of supply to a much larger extent than at present.

That the scope of the market is large is shown by the returns of the details of the total imports of 1894, the latest available, being 279,766 tons, valued at £1,432,400, of which Canada supplied £82,841. Norway held the first position with £694,919, Sweden coming next with £344,021, Germany supplying £76,-287, Holland, £66,563, Russia (Finland), £50,880, the United States, £48,489 (mainly of Canadian origin), and Austria, £25,960.

I see it stated that prominent French importers of wood pulp are investigating the Canadian sources of supply. Of equal interest to Canada is the continued growth in the British imports of foreign paper, which may be summarized as follows :—

	Cwt.	£.
1893	2,9 3,086	2,347,204
1894	3,381,732	2,654,070
1895	3,691,019	2,845,402

The details of the imports in 1895 are as follows :—

	Cwt.	£
Unprinted paper	2,084,784	2,046,106
Printed paper	76,895	254,042
Straw boards, mill boards, and wood pulp boards	1,527,340	545,354

Transatlantic news and printings are already known on this side, and more than one London daily paper is using this product. With our cheap supplies of raw material, the trade generally regards the outlook for Canadian export of paper to the United Kingdom as encouraging. In connection with the manufacture of paper, I should draw attention to the market that exists for certain classes of minerals found in Canada, which are used for fillings, etc., such as asbestos, talc, asbestine pulp, magnesite, powdered plaster, satinite, etc."

Messrs. Kennedy & Sons, of Glasgow, write of pulp wood as follows :—

"We have to state that very little came into Scotland last year, owing to Scandinavian makes being offered at prices which Canadian mills would not entertain.

"Outside of price, buyers here have a strong objection to the manner in which Canadian pulp reaches this country—ground pulp with 50 per cent. moisture, instead of being packed in canvas like Scandinavian pulp, comes in loose bundles without any covering at all, and so licks up all the dust and dirt of the landing sheds at ports of discharge, besides all the loose coal dust in wagons used in railing it to mills. The consequence is that it arrives at the mills in a very dirty condition. This is an important point which Canadian mills should look to if they wish to do business in Scotland.

"Chemical pulp should also come in bales. Hitherto it has come in rolls, which are difficult to handle. Space being lost in packing on board ship, there is a waste of room ; consequently a higher freight is demanded than for bales."

Messrs. Steinhoff, Sons & Muir, Limited, London, E.C., write : "We may state that as regards Canadian mechanical wood pulp, as far as we are concerned, there has been a considerable increase in the imports to this country during 1895, and we have been successful in introducing this material in several quarters where it had hitherto not been used. As regards the total quantities imported, we can say nothing, the official statistics only distinguishing between pulp from Norway and that from other countries.

"The quality we may safely assert to be, generally speaking, superior to Scandinavian makes. We have found this opinion endorsed by consumers, whom we find willing to pay higher prices than for other grades.

"The greatest obstacle to the development of trade here is found in the high rates of freights charged by the regular lines, on which shippers are bound to depend, as compared with the low rates from Scandinavian ports. Another drawback is the poor manner in which Canadian pulp is baled, many consumers objecting to the dirty state it arrives in, owing to insufficient protection.

"The Scandinavian product is infinitely superior in this respect, and it is a matter well worthy of the attention of Canadian makers who wish to cultivate a regular trade with Great Britain, which in normal years is certainly the legitimate outlet for Canada, especially the maritime provinces."

CANADA'S AMBITION.

YOUNG CANADA : "I'm going to have a Larger Slice of that Water-melon !"

During the past fifty years Saginaw, Mich., has furnished fully 40,000,000,000 feet of white pine lumber.

CORRESPONDENCE

Letters are invited from our readers on matters of practical and timely interest to the lumber trades. To secure insertion all communications must be accompanied with name and address of writer, not necessarily for publication. The publisher will not hold himself responsible for opinions of correspondents.

PROSPECTS FOR CANADIAN LUMBER IN SOUTH AFRICA.

CAPE TOWN, SOUTH AFRICA, July 1st, 1896.

To the Editor of the CANADA LUMBERMAN:

SIR:—I have received from your office the February and April numbers of your valuable journal, which have afforded me very interesting reading. I can assure you it would be in the interest of the Canadian lumber trade in particular and commerce in general if your journal were more widely circulated in Great Britain and the colonies. I have often wondered why it is that Canada, with its boundless resources, is content to remain so poorly advertised—in fact not advertised at all, for although I have done all that lay in my power since I took up my residence in South Africa to let it be known that the great Dominion is in existence, the fact is that in matters of commerce I found her almost unknown apart from the United States.

I have now succeeded to some extent by writing to the press and otherwise in letting it be known that similar lumber as that heretofore brought from the United States can be brought from Canada, and so also in regard to the hundreds of different manufactures which find their way here almost weekly from New York.

It may interest some of your readers and advertisers to be informed that three steamers arrive here monthly from New York direct. It would benefit us, however, and Canadian trade as well would be advanced if there was a direct line of transportation between Montreal and Cape Town.

In regard to the extension of the Canadian lumber trade, I have read with pleasure and approval the observations of your journal and its correspondents, and I have no hesitation in saying that the lumbermen, or the Dominion or Ontario Governments, or all combined for that matter, should appoint a suitable person in each market to look into and report to them on the conditions of trade. Samples of all woods should be supplied such persons and an effort put forth toward the extension of foreign relations.

I can in this letter only write generally as to the trade in this colony, and in order to get an insight into the trade of the Transvaal Republic, the Orange Free State and Natal, which take large quantities of lumber, it would be necessary to visit those sections of South Africa and East London and Delagoa Bay in particular. The total imports of unmanufactured and planed and grooved wood into this colony during the year 1895 amounted to $1,475,369.64, and of this amount pine is represented by the sum of $721,258.02, staves by $48,322.98, and hardwoods grown in Canada by the sum of $28,625.40. The consumption of hardwoods in this colony for this and succeeding years will largely increase, as the furniture and other industries requiring them are fast developing.

By a return which I have before me I notice that the total exports of lumber of all kinds from Canada to British South Africa during the fiscal year 1894-'95 amounted to the sum of $29,263, so that there appears to be room for extension of trade in this direction. No mention is made of a single stave having found its way here direct from Canada. I might also state that during the fiscal year mentioned, doors, sashes and blinds to the value of $6,050, came here from Canada, which is a very small fractional part of the value of those items brought from the United States.

There is always a good market here for spruce deals and scantling of good quality, and pine, and the conditions keep getting better. Good stock is essential and good prices are paid, and occasional cargoes could be supplemented by quantities of red pine and elm logs, ash and oak logs and planks, cheap pine boards for roofing, and clear—strictly clear and planed pine, qualities guaranteed, and to be shipped on the certificate of one of the supervisors of cullers that the cargo is in good order, with draft against documents.

Our customers here will take consignments of Canadian lumber (and other products and manufactures either by steamer from New York or sailing vessel from Canadian ports) and will send along letters of credit and directions as to how to draw, and I take this opportunity of bringing the matter to the attention of the Canadian mill-owner and dealer. Intending exporters are invited to correspond and send form of invoice of goods which they are able to supply. I might add that in deals 16 feet is the average length for this market.

The CANADA LUMBERMAN is much appreciated by the trade here.

Thanking you, Mr. Editor, in anticipation of being allowed so much space in which only partially to express my views on a subject of so great importance.

Yours truly,

THOMAS MOFFAT.

TWO COLLINGWOOD PLANING MILLS.

AMONG the industries of the town of Collingwood, Ont., are two of the best equipped and most prosperous planing mills to be found in Ontario. With its two railroads and two lines of palatial steamers, that town possesses the best of facilities for reaching distant markets, affording means for quick transportation, which accounts to some extent for the success of many of its industries. The two planing mills referred to are those of the Bryan Mfg. Co. and Wilson Bros., both of which manufacture builders' supplies, sashes, doors, mouldings, dressed lumber, mantels, counters, etc., besides carrying on a general contracting business. Their goods are shipped to all parts of Canada, although the chief trade, of course, is done in Ontario. By the two industries about 100 men are given constant employment.

THE BRYAN MFG. COMPANY

is composed of young men of energy and progressiveness. These qualities have enabled them to build up an extensive trade, and many of the best residences in the town have been supplied by this company. They make a specialty of office, school and church work and bank fixtures, and also manufacture boxes. Their present factory was erected in 1892, is 56x80 feet in size, and two storeys high, with boiler and engine rooms of 18x34 ft. and 16x36 ft. respectively. The office is in front and is nicely finished in hardwood.

The ground floor is taken up with a planer and matcher, surface planer, resaw, rip-saw, sticker, two cut-off saws, swing saw, band saw, box matcher, lathe, and an emery grinder. On the top floor is a mortiser, tenoning machine, sticker, band saw, shaper, buzz planer, pony planer, borer, cut-off saw, rip-saw, sand-paperer, door cramp, and a sash dove-tailer.

Exhaust fans, operated by a Sturtevant blower, draw the shavings from the machines to the boiler. The blower is also used for the dry kiln, 20x36 ft. Exhaust and live steam heats the building, which is lighted by electricity.

In the engine room is a 50 h.p. engine built by the A. R. Williams Machinery Co., supplied by a 65 h.p. boiler

of the same manufacture. A heater and a Northey feed pump are also in use.

Besides a large yard there are three store houses, one for mouldings, 24x50 ft.; one for boxes and box shooks, 15x40 ft.; and the other for flooring and siding, 20x40 ft., with two floors.

Nearly all the machinery was manufactured by McGregor, Gourlay & Co. and the Goldie & McCulloch Co., of Galt.

WILSON BROS.

have been established in business for a somewhat longer period. Starting in a small way a number of years ago, indomitable pluck and strict attention to business has secured for them an extensive connection. A specialty is made of the better class of interior hardwood finish. Their works consist of two buildings, the front one on Hurontario street being 110x30 ft., two storeys, with a side annex, 66x14 ft., containing the boiler and engine room, with dry kiln and office above. The rear building is 40x56 ft. and three storeys high.

In the front building on the ground floor is all the heavy machinery similar to the Bryan Mfg. Co. Above is the sash, door and blind machinery in full complement. The office of this company is neatly finished, and protected by fireproof doors. The dry kiln is 12x33 ft. A first-class engine and boiler supply the power. The rear building lately erected has a drive-way on the ground floor, where the matched and planed lumber is stored. The second floor is used for the fine work, such as finishing, panels,

mantels, stair railings, etc. The top floor is taken up as a store room.

The premises are heated by exhaust steam and lighted by electricity. The machinery therein is from the Galt firms of Cowan & Co., McGregor, Gourlay & Co., and The Goldie & McCulloch Company. Complete fire protection is afforded by hydrants in the yard and hose throughout the buildings.

THE PARAGON OF EXHIBITIONS.

THE major part of the entries having now been made for Toronto's big exhibition, which is to be held from August 31st to September 12th, it is possible to state definitely that the scale of the exhibition will really be greater than ever. Never before did the exhibits cover such a wide range as they will this year. It almost looks as if every province had striven to do its best to make the exhibition worthy of the country. At the forthcoming exhibition in Toronto there will be seen food products of Prince Edward Island; food products, manufactures, fruit and live stock, of Nova Scotia and New Brunswick; an extensive display of horses and cattle, manufactures and minerals, from Quebec; the products of forests, waters, mines, gardens, farms, studs, workshops and art studios of Ontario; the grain, minerals and horses of Manitoba; the grain and minerals of the North-West; and cereals, fish and minerals of British Columbia. The governments of Ontario, the Dominion and British Columbia will make special exhibits of the wealth of the earth, while the Canadian Pacific Railway will supplement these displays by showing cereals, vegetables and minerals from many points on their lines, to the extent of double what the company has shown in other years. In art especially will the exhibition be strong, with the three pictures painted by F. M. Bell-Smith, illustrating incidents connected with the death of Sir John Thompson, at Windsor Castle, for one of which pictures Her Majesty the Queen, Princess Beatrice and members of the Royal household gave special sittings. There will be Edison's wonderful Eidoloscope, an electric theatre; Ontario Trotting Horse Breeders' stake races; Lockhart's performing elephants; the magnificent historical spectacle, entitled the "Feast of Nations" and commemorating the "Taking of the Bastile," and a thousand and one other things; while in consideration of the cattle being on show the first week the railways have agreed to grant one fare for the round trip for the entire exhibition from all points in Canada, and to run a special cheap excursion the first week, on Sept. 3rd, and two the second week.

It is reported that Messrs. Cant Bros. & Co. have completed arrangements for the removal of their works from Galt to Lancaster, N. Y.

CANADA'S EARLY TIMBER TRADE.

The following interesting account of the origin of the Canadian timber trade was given by the lecturer on Trade and Commerce at the British American Business College, Toronto :

During the French regime little or nothing was done towards the utilization of the forest wealth of this country. The French recognized the grand possibilities in the forests of the new colony, and in their dreams of naval greatness, saw material for building and equipping fleets for commercial and military purposes. Regulations were issued to protect the trees from fire, but the forests of New France were considered as a future rather than a present source of wealth.

After Canada was ceded to England but little attention was paid for many years to its forest wealth. Northern Europe supplied the manufacturing world with wood, and as this trade was carried on almost exclusively in British ships, Englishmen were content to let well enough alone. Norway, Sweden, Denmark, Russia, were all consumers of British goods, and lumber afforded the exporter a convenient cargo for the return voyage. But in the wars which England waged during the latter part of the eighteenth century with several countries of Europe, inspired by Napoleon, the Baltic trade came abruptly to a close. Napoleon, in a gigantic project, known as the "Continental System," sought to strike a death blow at British trade by closing the ports of Europe against her ships. The politics of Europe at that time favored an alliance of Russia, Denmark and Sweden with France and Spain, against Great Britain.

Although the "Continental System" soon came to grief in face of the aggressive policy of Great Britain, the project served to impress upon her rulers the importance of developing trade between the different parts of the Empire. The North American colonies were looked to as the source of raw material, with the result that in 1800, 2,000 tons, and in 1810, 125,300 tons of Canadian timber were shipped to the ports of England. At this time England taxed the importation of timber, and in the new policy of colonial development, a preferential tax favoring the colonies was established. In 1809 heavier duties were levied upon the timber of the Baltic, while the duties upon Canadian timber were almost entirely repealed. The following year, in 1810, the duties upon the timber of Northern Europe were doubled, while in 1813, after navigation in the Baltic was again free, an addition of 25 per cent. was added to the already heavy duties. When the various duties on European timber were consolidated by the Act 59 Geo. III., c. 5, they amounted to £3 5s. per load in British ships, and £3 8s. when carried in foreign bottoms. These excessive duties, as might have been expected, gave rise to many complaints in England. The tax was almost prohibitive, and shippers, it is said, found it profitable to load timber in the Baltic, carry it to a Canadian port, and from there send it as Canadian timber to its destination in the United Kingdom.

The complaint was made that not only were English consumers compelled to pay more for their timber in assisting Canada, but English producers had lost valuable markets. The value of the exports to Sweden under this system of taxation declined in five years from £511,000 to £46,000 in value. This extraordinary falling off in commerce was due to the advance in shipping charges consequent upon the decreased number of vessels visiting the Baltic. The tonnage of British vessels arriving in the United Kingdom from the Baltic, which had reached 428,000 tons in 1809, fell to 242,000 tons in 1814. As a result of an investigation before the committees of the Lords and Commons on the foreign trade of the country, the duties were reduced from £3 5s. to £2 15s., while a duty of 10s. was laid upon the timber of North America. But this reduction was not sufficient to offset the difference between the cost of Baltic and Canadian timber. In 1845 the shipments from the Baltic was nearly one-third less than in 1809.

HON. R. R. DOBELL,

TIMBER MERCHANT AND STATESMAN.

It must be a source of gratification to lumbermen that one of the members of the council appointed to administer the affairs of our fair Dominion should have been chosen from among

Hon. R. R. Dobell.

their number, in the person of Hon. Richard Reid Dobell, whose portrait is herewith presented.

In lumber circles the name of R. R. Dobell is familiar throughout Canada and Great Britain, the subject of our sketch being the senior partner of the large exporting firm of Dobell, Beckett & Co., of Quebec, with branch house in Montreal. The business across the Atlantic is carried on at London, under the firm name of Richard R. Dobell & Co.

Mr. Dobell is an Englishman by birth, having been born in Liverpool in 1837, and is therefore 59 years of age. His father, George Dobell, was a successful tradesman in that city. Receiving his education at Liverpool College, he came to Canada when twenty years of age and settled in the city of Quebec, where he has resided ever since. For many years he successfully carried on business as a timber merchant under the name of Richard Dobell & Co. In 1885 a change of partnership took place, and the firm has since been known as Dobell, Beckett & Co.

Mr. Dobell has been associated in politics for many years, but on the occasion of the by-election in Quebec West in April, 1895, he signalized his defection from the Conservative party by standing as an independent candidate against the Conservative nominee, Mr. Thomas McGreevy. This contest was very close, the returns giving Mr. McGreevy a very small majority. At the late Dominion election, however, he again offered himself for public honors, this time being returned by a substantial majority. Mr. Dobell has always sought to promote the prosperity of the city in which he lives. He served as President of the Board of Trade, and was delegated by the Dominion Board of Trade to organize a conference in London to consider the advisability of a closer fiscal policy between Great Britain and her colonies. He was a member of the Executive Council of the Imperial Federation League in London. Since the re-organization of the Quebec Harbor Commission by the Government he has been a member of that body, and was largely instrumental in forwarding the construction of the Louise basin and docks.

In religion he is a member of the Church of England. He married Miss Elizabeth Frances, eldest daughter of the late Sir David Macpherson.

THE VALUE OF ADVERTISING.

One of the largest advertisers in London says: "We once hit upon a novel expedient for ascertaining over what area our advertisements were read. We published a couple of half-column ads, in which we purposely misstated half a dozen historical facts. In less than a week we received between 300 and 400 letters from all parts of the country, from people wishing to know why on earth we kept such a consummate idiot, who knew so little about English history. The letters kept pouring in for three or four weeks. It was one of the best paying ads. we ever printed, but we did not repeat our experiment, because the one I refer to served its purpose. Our letters came from school-boys, girls, professors, clergymen, school-teachers and, in two instances, from eminent men who have a world-wide reputation. I was more impressed with the value of advertising from those two advertisements than I should have been by volumes of theories."—Exchange.

When adjusting the piston, put it exactly in the center of the cylinder. If but the thickness of a piece of writing paper out of the center, do not call it good enough, but have it just right.

After you have taken a piece out of the main belt, or any other belt that you may have charge of, watch the bearings next to it closely for half a day, as the belt being tighter may cause them to heat.

The production of Argentine hardwoods has increased from a value of $21,071 in 1875 to $1,603,203 in nine months of 1895. That country abounds in a vast amount of hardwoods suitable for cabinet work and other purposes, but it requires capital and enterprise to develop the full timber resources of the region. Much of the timber is far back in the Chaco regions of the Parana and Paraguay rivers, which renders the cost of getting the product to market greater than capital has yet been able to undertake on an extensive scale.

In Harbor Springs, Mich., there is a large and flourishing wood toothpick industry. White birch is exclusively used in the manufacture of the toothpicks, and about 7,500,000 are turned out daily. The logs are sawed up into bolts each 28 inches in length, then thorougly steamed and cut up into veneers. The veneer is cut into long ribbons three inches in width, and these ribbons, eight or ten at a time, are run through the toothpick machinery, coming out at the other end, the perfect pieces falling into one basket, the broken pieces and refuse falling into another.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS AND MILLERS' GAZETTE

MONTHLY AND WEEKLY EDITIONS

C. H. MORTIMER
PUBLISHER

CONFEDERATION LIFE BUILDING, TORONTO

BRANCH OFFICE:

NEW YORK LIFE INSURANCE BUILDING, MONTREAL

The LUMBERMAN Weekly Edition is published every Wednesday, and the Monthly Edition on the 1st day of every month.

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One Copy, Weekly and Monthly, One Year, in advance..... $1.00
One Copy, Weekly and Monthly, Six Months, in advance..... .50
Foreign Subscriptions, $2.00 a Year.

ADVERTISING RATES FURNISHED ON APPLICATION

THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

TO VISITING LUMBERMEN.

Lumbermen visiting Toronto are invited to use the office of the CANADA LUMBERMAN as their own. We shall take pleasure in supplying them with every convenience for receiving and answering their correspondence, and hold ourselves at their service in any other way they may desire.

LUMBER IN ONTARIO.

JUST at the present time there is considerable speculation indulged in as to what extent improvement will come to the lumber trade of Ontario in the near future. There are to be found those who freely assert their belief that the bottom has been reached, and that from this time on an upward tendency will pervade the trade. The more pessimistic can see nothing that is encouraging in the future. It would seem strange that opinions entirely at variance with each other should be held by persons actively engaged in the trade, yet the cause thereof is not far to seek.

The course which the market for lumber in Ontario will take is largely dependent upon the result of the financial questions at issue in the United States, the extent of operations in the woods during the approaching season, and the attitude assumed by lumbermen themselves.

More than any of the other provinces is Ontario affected by the conditions which prevail in the lumber trade of the United States. The revival of business activity across the line, in which lumber would share, would bring to the Ontario lumber trade at least some proportion of relief. But on the result of the Presidential election this will to some extent depend, and at the present time the situation is one of uncertainty.

There are some features of the United States trade, however, which are indicative of improvement. In view of the accumulation of stocks and the limited demand for lumber, many of the mills are closing down much earlier than usual. In some cases this has been rendered necessary by lack of piling ground. Thus it is hoped that before the next winter's cut is placed upon the market the stocks will have been well cleared out, and manufacturers will have sufficient confidence in the future to advance prices to a point which would leave a fair margin of profit. The announcement is further made that there will be a general restriction in the input of logs next winter of twenty-five per cent. as compared with late years.

In Ontario the situation is much the same with respect to the quantity of lumber in the hands of manufacturers, particularly of white pine. During the present season manufacturing has been carried on to a much greater extent than the demand would warrant. The extent of operations in the woods during the season of 1896-97 cannot be fairly estimated as yet, but from reports received at this office it is evident that a curtailment will be made. We learn that several firms who have heretofore been heavy operators have decided to abandon operations next winter, in the hope of disposing of their present supply of lumber. It is quite probable that the smaller manufacturers will operate upon much the same scale as last year, the restriction in the input being with the larger concerns, which will prove the most inducive to an improvement in the market. Very little is heard of the contemplated movements of Michigan dealers who obtain their log supply from the Georgian Bay district, but the recent financial troubles of several of these firms will undoubtedly be followed by a limitation of their business.

Never was there a time, perhaps, in the history of the trade when an indication of confidence on the part of lumbermen was of greater necessity. The situation is to some extent in their hands, and one of the chief requirements in order to secure an improvement is a restriction in the output. It must be expected that revival will not be immediate, but we predict that the spring of 1897 will bring to the lumber trade of Ontario some extent of renewed activity.

THE FORESTRY PROBLEM.

ELSEWHERE in this number will be found extracts from the annual report of the Clerk of Forestry for Ontario. In dealing with the question of forestry, Mr. Southworth has presented strong arguments in favor of the systematic preservation of our timber lands, and has earned the thanks of all who have the welfare of the country at heart. The position of the science of forestry to-day as compared with that of a few years ago, and the increased attention which has been given the subject by the governments throughout the whole world, are strong indications of advancement. Yet so far as the United States and Canada are concerned, the problem is yet in its infancy, as no well-defined policy has been adopted.

The timber resources of Canada being a source of great wealth to the country, it behooves both the Dominion and Provincial governments to take steps to preserve, if possible, the forest lands. As pointed out in Mr. Southworth's report, there is no reason why this form of capital, like others, should not perpetually reproduce itself and yield ample interest from year to year. The cost of protection is small compared with the extent of damage done by forest fires, which is the main cause of destruction. Reports from forty-nine timber limits in Ontario where fire rangers were employed show that the quantity of timber destroyed in a certain year was valued at $41,600, which is a very small amount, especially as the season was an unusually dry one. Ninety-three fires were reported, and it is safe to say that had there been no system of protection in vogue, millions of dollars worth of property would have been destroyed. The employment of these rangers necessitated an expenditure of $26,253, half of which was borne by the Ontario Government and half by the limit-holders.

In the United States a Government Forestry Commission has been appointed to make an investigation of various forestry problems and outline an administrative policy on the subject. This commission will present a report in the autumn which will, no doubt, contain much valuable information. Two bills have also been introduced in the House of Representatives at Washington looking to the conservation of the forests. One provides that the Secretary of the Interior shall have avenues, about 1,000 feet in width, surveyed and marked through the forests on the public domain which are liable to destruction by fire, at intervals of from five to ten miles apart, in such directions as, when cleared, may be deemed most effective to prevent the spreading of fire, and that the timber thus parceled may be offered for sale at public auction, with the condition that the purchaser shall clear the entire width of that timber which he has purchased; and for those parts of the way which may not be so cleared, bids may be asked for the clearing of same. The other bill provides that any person who wilfully sets fire any timber, underbrush or grass, or shall allow or suffer fire to burn upon the public domain, shall be liable to a fine of $5,000, or imprisonment for two years. The former bill has been approved by the American Forestry Association, and will probably be passed by Congress. While the clearing of wide avenues through the forests would no doubt largely prevent the spread of fires, the permanent sacrifice of such a large portion of forest land is of considerable moment, and we doubt if the system would prove satisfactory in Canada.

In the New Forest, in England, which contains seventy-six thousand acres, we are told the land is kept free from underbrush, which is frequently the cause of fires, by simply authorizing the people who live in the forest to help themselves to the brushwood. Of course this system could not be put in successful operation in Canada, as large tracts of timber lands are entirely uninhabited.

In some parts of Europe the methods of lumbering are entirely different from those in vogue in this country. In Germany and France the trees are felled in such a manner as to protect as far as possible the growing crop of young trees, while in some instances the trees to be

cut by the lumbermen are marked by the government authorities.

In connection with the subject of forest protection in Ontario, it is pleasing to observe that the antipathy held by lumbermen against the movement has been largely overcome. Information has been freely given to the Bureau of Forestry along the lines requested, while improvement is also reported in the methods of lumbering. The necessity of such legislation as would ensure the perpetual reforestation of our timbered lands has, in fact, become recognized by all. The question to be solved is the most comprehensive and advantageous system to be adopted.

EDITORIAL NOTES.

WE predict ere long the quite general use of electricity for the operation of saw mills, and manufacturers contemplating the erection of new mills would do well to give the matter some consideration. A western exchange says: "At Folsom, California, the American River, Land and Lumber Company are now erecting a saw mill to be driven by electric power furnished by the Sacramento Power Company from the same plant that furnishes the city of Sacramento with its electric power and light."

IT is learned that there is an increasing demand in Canada for "Excelsior," or "woodwool," for packing purposes; in fact, we have heard it stated that the supply is not equal to the requirements. There is also a considerable foreign demand for this article, particularly from Great Britain, and its manufacture would seem to present an opening for profitable investment by some enterprising person. "Excelsior" is usually made from basswood, and put up in bales weighing about 80 lbs.

THE last quarterly report of the Department of Trade and Commerce of the Dominion contains the unrevised returns of the exports and imports for the year ending June 30th. It is pleasing to observe, as an evidence of advancement, that the value of exports for the past year was $3,300,000 in excess of the previous year, and nearly $2,000,000 above the record since confederation. The total exports of the product of the forest show an increased value in favor of 1896 of $3,054,135, the figures being $24,201,285 in 1895 and $27,255.420 in 1896.

OUR contemporary, Timber, of London, Eng., in a lengthy editorial, complains of the quantity of poor manufactured and improperly graded stock which finds its way to the British market from the United States. In the article a compliment is paid to Canadian manufacturers in the following words: "We speak without the slightest prejudice when we say that in the manufacture of lumber our American friends could learn a good deal from the Canadian millmen, whose sawing of third and even fourth quality stuff is beautifully done."

BEFORE this issue of THE LUMBERMAN will have reached its readers, the great Industrial Exhibition at Toronto will have commenced. The suggestion has been made by a lumber merchant that a building be secured at the Exhibition for the use of lumbermen, in which they could meet together for social conversation and the discussion of trade questions. Time will not permit of any steps being taken in that direction this year, but the proposition is worthy of consideration in future. As in former years, a large number of lumbermen and manufacturers will visit the Exhibition, and THE LUMBERMAN extends to all such a hearty invitation to call at our offices in the Confederation Life Building, where they will be afforded facilities for answering correspondence, and by so doing will confer a favor upon the publisher.

ON another page will be found an interesting letter from a correspondent in South Africa relative to the extension of Canadian lumber trade with that country. It is strange indeed that, as pointed out by our correspondent, Canada should be almost unknown in South Africa in matters of commerce apart from the United States. If our lumbermen desire to secure a greater portion of this trade, it is necessary that some such steps as suggested in the letter referred to should be taken. With respect to the trade in staves, of which mention is made, white oak staves are required for that market, and as the supply of white oak in Canada is well nigh exhausted, we cannot expect any development in that line at present. When they start to manufacture their own flour in South Africa there will be an opening for Canadian staves, or for any barrels that do not require to hold liquids.

OUR British Columbia correspondent informs us that there is some dissatisfaction among the members of the lumber combine resident in that province, which may result in their withdrawal from membership at the close of the present year. Should the report prove to be correct, the fact is to be regretted. One of the objects of the formation of the trust was, we understand, to advance prices to a point where the manufacturer could make a living profit, and if the efforts put forth to attain that end are to be met with opposition by manufacturers themselves, the hopes for improvement in the trade of the coast are not very encouraging. As is the case with all organizations, particularly when in their infancy, many points will require to be adjusted. Instead of withdrawing, as contemplated, those who have grievances should bring the questions before the association at the earliest possible moment, and endeavor to arrive at an agreement which will be most satisfactory to all and in the interest of the trade in general. The manufacturers of shingles on the western coast are suffering from lack of organization. While there is a fair demand for the output of the mills, the price at which Washington shingles are placed upon the market has made it impossible for British Columbia dealers to dispose of their product at a figure which would leave any margin of profit, and several manufacturers have resolved upon shutting down their mills rather than running them at a loss. In this fact is found an argument for the continuation of the lumber combine.

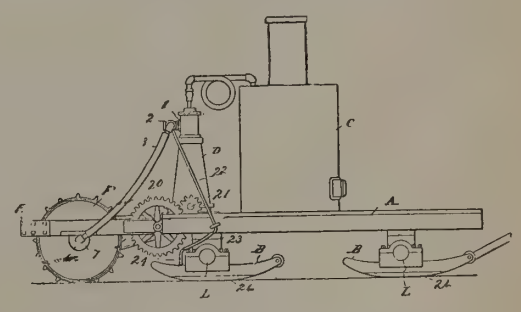
Doubling the length of a board of timber reduces the stiffness eightfold and the strength one-half. Doubling the width of a board doubles the stiffness and strength. Doubling the thickness of a board or the depth of a timber increases the stiffness about eightfold and the strength fourfold. If it is desired to double the length and retain the same stiffness, it is necessary to double the thickness or depth.

THE CIRCULAR SAW.

THE inventor of the circular saw now in use was Benjamin Cummings, and in a lonely, secluded spot in the north-west corner of the cemetery near the little village of Richmond, Kalamazoo county, Mich., the visitor will find on a white marble slab, nearly concealed from view by a large cluster of lilac bushes, engraved the simple inscription: "Benjamin Cummings, born 1772, died A. D. 1843." Nearly sixty years ago, at Burtonville, New York, and Amsterdam, this man hammered out at his own blacksmith's anvil the first circular saw known to mankind. According to an American contemporary, he was a noted pioneer in Richmond; a first cousin of one of the Presidents of the United States; a slave owner in New York State; a vessel owner on the North river before the days of steamboats; a captain in the war of 1812, where, after having three horses shot from under him, with one stroke of his sword he brought his superior officer to the ground for insult, and because he was a traitor and a coward; and, after being court-martialed, instead of being shot, he was appointed colonel in his place. The same man, nearly ninety years ago, at Albany, N. Y., took up and moved bodily large brick buildings, and, to the wonder and astonishment of the world, constructed a mile and a half of the Erie Canal, through a bed of rock, and he also built the first low bridges over the same. He also aided in the construction of the first ten miles of railway in the United States, and founded both the villages of Esperense and Bostonville, on the old Schoharrie, near Amsterdam.

STEAM LOGGING MACHINE.

MR. George T. Glover, of Chicago, has been granted a Canadian patent for an improved steam logging machine, as shown by the accompanying cut. The claim therefor is as follows: A hollow traction wheel or roller having teeth provided with heating chambers communicating with the interior of the wheel or roller, and means suitable for supplying steam to the interior of same, said wheel arranged upon a



hollow axle having its passage connected with the interior of the wheel or roller, and chambered teeth arranged upon the wheel and having three chambers connected with the interior of same. The combination as above, with boxes in which the ends of the axle are journalled, and a steam coupling 7 having a swivel connection with the axle and connected with a suitable steam supply. The runner provided with a groove 28 and a shoe 29 fitted to the runner so as to close over the groove, which latter forms a heating chamber which is supplied with steam, substantially as set forth.

The Gardner Tool Co., of Sherbrooke, Que., are expending a considerable sum on improvements to their factory.

FORESTRY IN ONTARIO.

COMPREHENSIVE REPORT ON THE PRESERVATION OF OUR TIMBER LANDS.

THE question of practical forestry is one which is receiving considerable attention at the present time by all civilized countries, and yet, perhaps, its importance is not recognized to the extent desired. True it is that rapid advancement has been made in this direction within the past few years, and the public are gradually becoming convinced of the necessity of the systematic preservation of forest lands.

In the province of Ontario the subject received recognition at the hands of the Provincial Government some years ago. In the year 1883 the Department of Forestry was created, the late R. W. Phipps becoming chief clerk. Mr. Phipps was an ardent student of forestry, and held the position up to the time of his death in February, 1894. A considerable interval elapsed between the time of his death and the appointment of a successor in the person of the late Hon. C. F. Fraser, who held the position for only a few months previous to his death in the fall of 1894. He was succeeded by the present incumbent, Mr. Thomas Southworth, and upon his appointment the office was transferred to the Crown Lands Department, where it is believed the work can be more advantageously carried on.

MR. THOMAS SOUTHWORTH.

Mr. Southworth is a thorough Canadian, a native of the soil. He was born in 1855 in the

MR. THOMAS SOUTHWORTH.

County of Leeds, Ontario, and was a continuous resident of that county until his removal to Toronto to assume the duties of Clerk of Forestry. Mr. Southworth's mother, Diantha Stoddard, was born in the same county, her parents, who migrated from Connecticut, having been among the pioneer settlers of Leeds. His father, Stephen J. Southworth, of Brockville, was a native of Vermont, but came to Canada over sixty years ago.

Mr. Southworth was educated at the country school in Kitley and the high school at Athens. Removing to Brockville, he was employed as local reporter on the Brockville Recorder, and afterwards as editorial writer. In 1879 he was married to Miss Mary Taylor, of Gananoque, sister of George Taylor, M. P. for South Leeds, and in the following year embarked in business as a job printer. In 1881 his business was amalgamated with the Recorder, a partnership being formed between him and the late Col. David Wylie, and from that time until he accepted his present position the business and most of the time the editorial management of the paper was in his hands.

ANNUAL REPORT.

The annual report of Mr. Southworth, which has just been issued, proves conclusively his qualifications for the position. In the introduction it is stated that the transfer of the position to the Crown Lands Department contemplates the establishment of a bureau under the direct control of the Department, with a well-defined sphere in the work of administration. Though the policy of the government in this regard has not been fully developed, the character of the work accomplished during the last few months will indicate in a measure the enlarged scope of the operations of the bureau.

From the report the following extracts are taken :

FOREST SUPPLY.

The object of forestry is two-fold. Hitherto, so far as this continent, at least, is concerned, it has usually been considered merely as a means of ensuring favorable agricultural conditions and preventing the deterioration of soil and climate. We have been so habituated to regard the forest wealth of America as practically inexhaustible, that while the disastrous effects of forest destruction upon agriculture forced themselves upon the attention of the public, and procured a receptive hearing for forestry proposals as a remedy for these very obvious evils, the other, and more important aspect of the subject, has hardly been accorded its due weight. Apart altogether from the influence of the forests in distributing moisture, regulating temperature, and in other ways maintaining favorable conditions for cultivation, the industrial interests of the country imperatively require their preservation as a perpetual source of timber supply. The forests of America, as a matter of fact, are very far from being inexhaustible, so far, at least, as the finest and most useful kinds of timber are concerned.

With the development of the country, moreover, the home demand for timber and wood products of all kinds is proportionately increasing, and as our United States neighbors are using up their forest supplies much more rapidly than ourselves, increased requirements for shipment across the line will soon enhance the value of our timber products. How extensive that demand is likely to be in the near future, and what inroads it will make upon our supplies, may be in a measure estimated from the report of Prof. B. E. Fernow, Chief of Forestry Division at Washington for 1893, in which he states that the consumption of wood in the United States is more than fifty per cent. over what their forest area could produce as an annual yield, and that the demand for wood material increases at the rate of over twenty-five per cent. every ten years. It requires, therefore, no great foresight to understand that in the course of the next generation the price of wood, especially of the more valuable kinds, is certain to rise enormously. As our staple manufacturing and mechanical industries are largely dependent upon an adequate and cheap timber supply, the preservation of this prominent factor in our national wealth is an equally important aim of forestry with the coincident benefit to agriculture.

FORESTS AS CAPITAL.

Owing to the lavishness of nature beyond all immediate requirements, and the earlier necessity of rapid clearance of the woods to provide for cultivation, Canadians have become habituated to wasteful methods of lumbering. Under the influence of the old associations and conditions we are accustomed to regard the axe as the precursor of the plough and to look upon forest utilization as synonymous with the forest destruction. Current discussion respecting the timber policy of the Dominion and Provincial Governments illustrates this habit of thought. The timber resources belonging to the public are correctly enough spoken of as "capital," but when it is sought to turn these resources to practical account it is often charged that in so doing the Government are "drawing upon their capital." There is no reason why this form of capital, like others, should not perpetually reproduce itself and yield ample interest from year to year without diminishing or impairing the original endowment. Judicious forest management involves no waste of capital. To preserve the forests, in the sense of leaving them untouched, is a waste from year to year of their natural increase, as the trees pass through the stage of maturity to decay and death. Without the interference of man there is a constant consumption of the forest products by the decomposition of the trees which have reached their term of existence, the only difference being, that under a regime of practical forestry, such trees, when they had reached their prime, would be selected for removal, while under natural conditions their decadence is gradual. To allow the forest trees to mature and decay under the erroneous idea that thereby timber resources were being rebanded for the future would be a waste.

ANNUAL GROWTH OF TIMBER.

The United States Department of Agriculture, through its forestry branch, has for some years been preparing returns of "timber physics," and among other things, something like close figures have been obtained of the actual annual growth of timber on an acre of forest land under ordinary forest conditions. These figures were derived from a very extensive series of actual measurement over a term of years on different lots in Maine and New Hampshire forests. The conclusions reached by the United States authorities differ materially from the estimate given by Brown and Nisbet, eminent English authorities in the matter of annual growth. While "Brown's Forester" estimates the annual growth on an acre of Scots pines at 100 to 150 cubic feet, the United States Division of Forestry places the annual growth in a New Hampshire spruce forest at only fifty-nine and a half cubic feet. In comparing these two estimates it must be borne in mind that Brown's estimate is for a Scotch plantation in which the trees have been carefully tended, and in which, because of this, the growth would be greatly in excess of that in an ordinary American forest, where overcrowding and other causes retard the growth. For the purpose of estimating the annual growth in Ontario, where the conditions are much the same as in the states mentioned, we will take the United States figures fifty-nine and a half cubic feet, or for facility computing, sixty cubic feet per acre as the average annual growth in the Crown forests under ordinary conditions.

The area of the timber-bearing lands still belonging to the Crown in Ontario can only be approximately estimated. According to a return to the House in 1893, there are about 21,000 square miles of pine lands under license, and

24,410 square miles of pine lands still unsold. These areas are exclusive of a territory of 89,000 square miles that is more or less timbered, but as it is not supposed to have large quantities of pine upon it, no account has been taken of it by the Department of Crown Lands. It is known, however, that much of it is well timbered, and where pine is not present there are large quantities of spruce and other woods. Assuming this territory to be fairly covered with timber, we will take half of it for the purpose of this calculation, which will give the total forest area of the Crown in Ontario as 89,910 square miles. As lumbering operations are being carried on to a greater or less extent in parts of the licensed area, we will allow for this and take 80,000 square miles as the timber area of the Province, certainly a very low estimate, having regard to not white pine alone, but to other timber as well. Eighty thousand square miles is equivalent to 51,200,000 acres. Estimating the annual addition of timber over this area at sixty cubic feet per acre, we have a total addition to the amount of timber each year amounting to 3,072,000,000 cubic feet. This estimate is of timber exclusive of tops and branches.

According to the report of the Commissioner of Crown lands for 1894 the amount of timber cut on the Crown lands, of all kinds in lumbering operations, amounted to 60,695,250 cubic feet for that year. Deducting this amount from the annual growth, there would be 3,011,304,750 cubic feet in excess of the cut of timber each year, as may be more clearly shown by the following table :

ANNUAL CUT OF TIMBER IN LUMBERING OPERATIONS AS PER CROWN LANDS REPORT, 1894.

	Cubic Feet.
Saw logs, boom timber, dimension stuff	53,200,555
Square timber, pine and other than pine	1,185,529
Cordwood	1,879,936
Pulp wood	1,381,504
Posts and shingle bolts (estimated)	767,872
Piles and head blocks	279,854
Railway ties and telegraph poles (estimated)	2,000,000
Total	60,695,258

ANNUAL GROWTH ON CROWN LANDS.

Estimated annual growth per acre of ordinary forest land adopted by the U. S. Forestry Bureau, 60 cubic feet ; total area of Ontario Crown Lands licensed and otherwise, pine-bearing and other forest land, say 80,000 square miles ; 80,000 square miles, or 51,200,000 acres, will produce per year according to this estimate, 3,011,304,750 cubic feet in excess of the annual cut of timber, or

	Cubic Feet.
Annual growth	3,072,000,000
Annual cut	60,695,250
Annual growth in excess of annual cut	3,011,304,750

This is assuming that the lumberman's axe is the only cause of the removal of timber. Unfortunately, however, this is not the case. The amount of timber destroyed by fire from one year to another is an unknown quantity. That the amount far exceeds what falls before the axe of the lumberman is probable, and in any scheme of forest perpetuation protection from fire must occupy the most prominent place. Notwithstanding the efforts of the Government fire rangers for the past few years the loss to the province through forest fires has been considerable, though vastly less than would have been the case had the protective measures employed not been used. If fires could be prevented or even very much lessened the present rate of cutting on the Crown lands could be continued indefinitely, for the annual increment of growth far exceeds the annual cut. These figures are of course theoretical for the reason that in much of the primeval forest the decay of over-ripe trees may be said to equal the growth of the others. This is not the case generally though, and more particularly where through lumbering operations the larger timber has been taken out, enabling the smaller trees to grow so much faster. Besides, the enormous difference of three billions of cubic feet will allow for considerable latitude in this respect.

FIRE PROTECTION.

In 1886 Mr. Aubrey White, now Assistant Commissioner of Crown lands, addressed a report to the Commissioner, strongly advocating the adoption of a system of fire-ranging. Acting upon this recommendation the present system, substantially embodying the plan submitted by Mr. White, was adopted with highly satisfactory results. The following are the leading provisions :—A number of men are placed upon the Crown Lands during the dangerous season, which lasts from May until about the close of September, in localities specially exposed to fire by reason of settlement, railway constructing, lumbering or any other cause. Where the land is under license, the co-operation of the limit-holders is requisite, it being optional with them to take advantage of the system. The number of men necessary to give adequate protection is decided by the owners of the limit, as being familiar with the country and the direction from which danger is likely to come. The selection of the men to be employed on the staff is also in their hands, the Department reserving the right to reject or remove any man whom they consider unfit for the position. The fire rangers are constituted officers for the enforcement of the Fire Act by section 14, and act under the instruction of the Department. They make the public acquainted with its provisions by putting up posters in conspicuous places and circulating copies of it among settlers and others. In case fires break out they are authorized to engage assistance for suppressing them, and should they become extensive it is their duty to notify both the limit-holder and the Department. Half of the expense incurred in maintaining the staff and suppressing fires is borne by the Crown Lands Department and the remainder by the owners of the limits. The pay of the fire rangers is fixed at $2 per day without board or other extras. They report at the end of the season as to the duties performed and number and extent of the fires which may have occurred.

The good effects of the system were specially manifested last year. Though the summer of 1895 was the dryest for many years, the temperature being unusually high in addition to the light rainfall, the destruction of timber by fire was remarkably small. In consequence of the danger the staff was strengthened in specially exposed places and closer vigilence maintained.

Reports from forty-nine timber limits where the system was in operation in 1895 show that as closely as can be estimated the quantity of timber damaged by fire amounted to 57,556,000 feet, valued at $41,600. The number of fires specifically reported was ninety-three, in addition to which there were many others, principally small ones not enumerated. Any one at all familiar with backwoods life and conversant with the conditions which prevailed prior to the introduction of the system can easily realize the enormous saving which has been effected by providing this safeguard against forest devastation. When the dry character of the season and the number of fires actually started but suppressed before they had made headway is taken into account, it can readily be seen that but for the presence of the fire rangers at the most exposed points, areas amounting to hundreds of square miles would probably have been ravaged and the losses to timber licensees and the public would have been immense. This saving has been effected by the employment of 114 men for a few months in the year, at a total cost of $26,253, shared between the public treasury and limit-owners.

WHAT TREES SHALL WE PLANT?

Recent observations lead to the conclusion that white pine will make merchantable timber much sooner than is generally believed, and instances are not wanting to show that under favorable circumstances trees of this variety thirty years old have yielded good marketable timber. In fact the white pine is a rapid-growing tree and a valuable tree to plant, the principal drawback to its merits in this respect being the amount of care required in the earlier stages of its growth.

The shellbark hickory is among the most desirable trees to plant for profit for the reason that it can be harvested when comparatively young and its nuts are marketable. If planted close together the young trees taken out in thinning have a value for carriage work. One cut of a hickory tree six inches in diameter will make about twelve or fourteen spokes. In small trees of say four inches diameter, the first two cuts are used for spokes, the rest for head-blocks and other parts of carriages. Prof. Budd, of Iowa, advises planting the nuts of the hickory where the trees are intended to remain. If planted for forest trees and not for nut-bearing purposes alone, the same authority advises planting the nuts eight feet apart each way with plenty of larch or tamrack seedlings between to act as nurse trees to the hickory. As they grow up the larch may be cut away and sold. The price paid by the makers of carriage wheels for hickory—which is now all imported from the United States—is such as to afford a return equal to from twelve to fifteen dollars per cord. The hickory grows best on a rich deep fertile soil, and while it will succeed on ordinary land should not be planted upon sandy or sterile soil.

Among other valuable trees to plant in view of the increasing demand for their timber for manufacturing purposes are the black ash, rock elm and black cherry.

Black walnut is also extremely valuable, but it takes a long time to mature. Prof. Sargent estimates that a hundred years of growth would be necessary to make it merchantable timber, as the young wood has not that rich, dark color that gives it its great value, although it seems to us this is an outside estimate.

The hard maple, although principally appreciated for its sugar product and as fuel, is also a valuable timber tree. It is used almost exclusively in the manufacture of shoe lasts, and is exported largely to Britain, where it is manufactured into mangle rollers and other articles. One firm in Ontario exported 100,000 maple blocks for mangle rollers in a year. It is also a tree of fairly rapid growth, and if planted close will make good timber that will not be materially injured by several seasons of tapping for sugar,

while for fuel it is among the very best of our native woods. The soft maple, while favored by bee-keepers on account of its flowers, is not so valuable as a timber tree, and is shorter lived.

Of the evergreens, next to the white pine in value for planting is the Norway spruce.

The basswood or linden is another of our most suitable trees for planting. It is a rapid grower, its wood is much prized by carriage, cabinet, piano and organ makers, while its flowers furnish our bees with the choicest honey. Principally because of this latter feature one of our most prominent apiarists, Mr. Allan Pringle, of Selby, has planted this tree quite extensively, as has also Mr. Thos. Conant, of Oshawa, who, however, regards the black walnut as the more valuable tree to plant.

The white elm, or rock elm, one of our most graceful and best shade trees for streets, is becoming yearly more valuable. The demand for the best quality of timber for the rims of bicycle wheels has assumed large proportions and makes it a valuable tree to plant. It is also used largely for wagon hubs.

USES FOR FOREST PRODUCTS.

The substitution of steel and iron to a large extent in the construction of ships and buildings has lessened the demand for oak for these purposes, but the scarcity of black walnut and rosewood helped to cause a change in the fashion in furniture. Oak became the popular material and in consequence this wood is in greater demand than ever. Hickory is also another wood that is also becoming more valuable. Where it was formerly used only for handles for axes and other tools, its present consumption in the manufacture of carriages has reached enormous dimensions. A new use for this timber is in the handle-bars for bicycles, which are likely to be made in future from hickory instead of steel tubing. The bicycle, which seems to be effecting a revolution in business in many ways, has furthermore created a heavy demand for rock elm, which is required for the manufacture of rims. As only a small percentage of the timber is good enough for the purpose, the increase in the total cut caused by this new demand is very large.

By far the most significant and far-reaching change, however, arises from the rapid and extensive growth of the wood pulp and paper making industry. The great expansion of daily journalism in Canada and the United States has created an enormous demand for white paper, various kinds of wood being brought into requisition as the invention of new processes rendered them available for the purpose.

While poplar, baswood and jack pine are used in the manufacture of paper pulp by the chemical process, for the cheaper mechanical process by which most of the pulp used in newspaper making is produced, spruce is almost exclusively employed. The spruce forests of Ontario are of vast extent and stretch to the far north surrounding Hudson's Bay. Many of these northern forests are composed exclusively of spruce trees, growing so densely that, although very old, they do not in some sections attain a diameter that would make them available for lumber. Until the rapid strides of the pulp industry drew attention to this raw material awaiting the future demand these forests were not largely taken into account in the stock-taking of the province. This is now changed, however, and spruce rivals the great white pine in its value to the state. It is now pretty generally conceded that Canada has the largest supply of spruce, the great paper-making material, in the world. As the supply in the United States becomes exhausted there can be no doubt that the spruce forests of Ontario will prove a source of wealth to the province, the extent of which it is difficult to estimate.

ANNUAL GROWTH OF TIMBER.

OTTAWA, 24th August, 1896.

To the Editor of the CANADA LUMBERMAN:

IN sending me a copy of the annual report of Mr. Southworth, the Clerk of Forestry for the Province of Ontario, you ask my views as to the correctness of his remarks relating to the annual growth of timber, as found on pages 33 to 36 of his report.

I must frankly confess that at first sight I was staggered by Mr. Southworth's statement that on the Crown lands of Ontario the annual growth of the forest is fifty times greater than the annual cut; for this is the unexpected conclusion to which we are unavoidably led by Mr. Southworth's figures (see page 35 of his roport), which give the annual cut at 60,695,250 cubic feet, and the annual growth at 3,072,000,000—that is to say fifty times more. But after testing, by such means as I will explain in a moment, the correctness of Mr. Southworth's statement, I must admit that he is theoretically right, on the assumption that each of the 51,200,000 acres of Crown lands, on which he founds his calculations, is capable of yielding an average growth of sixty cubic feet, and in justice to Mr. Southworth, I must here remark that he makes a liberal allowance for regions poorly timbered, for in giving the area of the Crown lands on which he founds his calculations he leaves out a good deal more than one-third of the total area of 134,000 square miles, as he deducts out of that 54,410 square miles, and founds his calculations on only 80,000 square miles, equivalent to his 51,200,000 square acres.

Now, this is the test by which I come to the conclusion that Mr. Southworth is theoretically correct. For many years past I have studied the rate of annual growth of some of our forest trees by measuring their annual rings. I am aware that it has been stated, on the strength of Charnay's observations in tropical regions, that these rings cannot be taken as indications of yearly growth everywhere, but I think that can apply only to tropical regions where the vegetation continues all the year round. With us, where the vegetation is abruptly interrupted in the autumn, to start again the next spring, I consider that each ring indicates the growth of one year, and I have found it so by experiments continued during the last eighteen years, cutting down trees sown by myself, so that I knew their exact age on counting the rings at the stump, which agreed with the number of years elapsed since the seed out of which the tree grew had been planted by me in the ground.

Over and over again, by measuring these yearly rings, I have tested, on the butt end of saw-logs, the rate of growth of the white spruce tree in our part of the country, Quebec, and found that it takes about ten years to add two inches to the diameter of the tree. At this rate of growth I find that a white spruce twelve inches in diameter will gain, in ten years, eight cubic feet, which would give four-fifths of a cubic foot every year, and if you allow 75 spruce trees to the acre, it will give you 60 cubic feet for the yearly growth. Perhaps there are not many acres on which will be found 75 good-sized spruce, but, on moderately well timbered land, the equivalent in bulk of the timber represented by 75 spruce trees, of say 14 inches at the stump, will be found in other trees, and it can be easily ascertained by comparing the yearly rings of the white spruce with those of the black walnut, butternut, pine, oak, ash, poplar, elm, and some others, that the growth of the white spruce is slower than that of the above mentioned trees, so that I feel justified, like Mr. Southworth, in adopting the United States figures of 59½ cubic feet (which he assumes at 60 feet for facility of computation), the more so that we have the statement of eminent authorities in England, who estimate the annual growth of one acre of Scotch pines at 100 to 120 cubic feet—nearly double the rate allowed by Mr. Southworth.

So that, in answer to your inquiry, I consider that he is right in his conclusions, provided always that his 51,200,000 acres be sufficiently well timbered to yield the yearly increase of 60 cubic feet per acre.

But because there are sufficiently good grounds for Mr. Southworth's conclusion that the rate of growth of our forest trees is so much greater than the rate at which they are cut down, we must not abandon ourselves to a feeling of false security and run away with the idea that our supply of valuable timber is inexhaustible, nor must we relax our efforts towards such a rational working of the Crown forests as will insure their preservation and improvement.

However, Mr. Southworth's statement (that the yearly growth of trees is so much in excess of the yearly cut) may apply to the general yearly increase in the growth of trees of all kinds, but it must be admitted that in all the forests comparatively easy of access, where pine and spruce used to be abundant, the cut of these two species of trees has been far in excess of their yearly growth, so that the lumbermen are compelled to go farther and farther every year for their supply of timber, and that the quality of what reaches the market is not such as it used to be. The question of interfering with the lumbermen, by limiting the proportion of trees to be felled yearly on each square mile of their limits, presents what appears insurmountable difficulties, for the present at least, in the absence of a regular system of management of our Crown lands, such as prevails in some of the countries of Europe, placed in such different circumstances from ours. However, sooner or later we shall have to open our eyes to the necessity of protecting our forests more effectively than we do now, if we wish to hand to those who will come after us the valuable inheritance which without any exertion on our part we now so fully enjoy, and we ought to be grateful to those who, like Mr. Southworth, give us food for serious thought, and make us feel it our solemn duty to watch over the life of our forests with more care than we have ever done.

Yours truly,

H. G. JOLY DE LOTBINIERE.

CANADA LUMBERMAN

WEEKLY EDITION

The Lumberman Monthly Edition, 20 pages } $1.00 PER YEAR { The Lumberman Weekly Edition, every Wednesday

THIS PAPER REACHES REGULARLY THE PRINCIPAL LUMBER MANUFACTURERS AND DEALERS THROUGHOUT CANADA, AND WHOLESALE BUYERS IN THE AMERICAN AND FOREIGN MARKETS.

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CANADA LUMBERMAN

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MONTREAL.

Weekly Lumberman, published every Wednesday. Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

Lumberman, Monthly. A 20-page journal, discussing fully and impartially subjects pertinent to the lumber and wood-working industries. Contains interviews with prominent members of the trade, and character sketches and portraits of leading lumbermen. Its special articles on technical and mechanical subjects are especially valuable to saw mill and planing mill men and manufacturers of lumber products.

☞ Subscription price for the two editions for one year, $1.00.

Lumbermen visiting Toronto are invited to call at the office of the CANADA LUMBERMAN. We shall have pleasure in giving them any information desired.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue.

FOR SALE.

A FEW CARS OF 1 IN. BASSWOOD AND Black Ash.

A. McDONALD, Peterboro.

FOR SALE.

TWO ALLIGATOR STEAM WARPING TUGS, in good working order. For prices and particulars apply to GILMOUR & Co., Trenton, Ont.

WANTED.

ONE OR MORE CARS OF 1¼" COMMON AND No. 1 and 2 Red Oak, in fair shipping condition. Quote price on cars, with rate of freight or delivered price at Buffalo. BUFFALO HARDWOOD LUMBER CO., 940 Elk St., Buffalo, N. Y.

LUMBER LIMITS FOR SALE

The following timber berths are offered for sale:—

License 95 and 6, No. 528, River Ottawa, berth P	33½ miles.
License 95 and 6, No. 529, River Ottawa, berth Q	37½ miles.
License 95 and 6, No. 489, River Gatineau, Lake Penichango	14 miles.
License 95 and 6, No. 349, River Ottawa, Mattawa	25 miles.
License 95 and 6, No. 347, River Ottawa, Mattawa	40 miles.
License 95 and 6, No. 348, River Ottawa, Mattawa	26¼ miles.
License 95 and 6, No. 470, River Ottawa, Mattawa	20 miles.
License 95 and 6, No. 471, River Ottawa, Mattawa	16 miles.

Information in regard to them may be procured from F. W. Powell, 17 Elgin street, Ottawa, or the Rathbun Company, Deseronto, Ont., also J. Y. Rochester, Mattawa, Ont., for the Mattawa Limits.

Should say 45 million feet on Grand Lake Limits, also 100,000 cubic feet board and square pine timber.

Should say 50 million feet B. M. on Mattawa Limits.

FOR SALE.

THE BEST SHINGLE MILL IN NEW Brunswick, situated at Campbellton, on the Restigouch River, containing thirteen Dunbar shingle machines—the mill is new—together with two hundred square miles of licensed timber limits, twenty-two years to run. For particulars apply to

A. E. ALEXANDER, Campbellton, N. B.

FOR SALE.

A STOCK OF LUMBER AT THE NEW MILL, Dyer's Bay, composed of basswood, 20,000 ft 2-in.; 50,000 ft. inch; 20,000 ft. 1¼-in., all winter cut; 75,000 ft. inch summer cut; 40,000 ft. elm, 1, 1½ and 3-inch; 40,000 ft. maple, 1 and 1¼-inch; 30,000 ft. birch, ash and oak; 40,000 ft. pine; 50,000 ft. cedar, cut all dimensions; 150,000 ft. hemlock, not cut. The above all in good shipping order. For particulars apply to WILSON BROS., Dyer's Bay, Ont.

SALE OF BURNT TIMBER

A QUANTITY OF PINE TIMBER, ESTImated at about four million feet, B. M., situated on lot 4 in 2nd concession and lots 3 and 4 in the 3rd concession of the Township of Rathbun, north-east of Wahnapitae Lake, in the District of Nipissing; and a quantity estimated at four and one-half million feet, B. M., situated on the shore of Lake Biscotasing, in the District of Algoma, on the main line of the Canadian Pacific Railway, having been damaged by fire, the undersigned hereby calls for tenders for the right to cut the same.

Tenders will be received up to and including the SEVENTH DAY OF SEPTEMBER NEXT, and must state the rate per thousand feet board measure, if made into saw logs, or per thousand feet cubic if made into square timber, which the tenderer is willing to pay as bonus or in addition to the ordinary Crown dues of one dollar per thousand feet board measure, on saw logs, and twenty dollars per thousand feet cubic on square timber. Separate tenders should be made for each quantity, and must be accompanied by a marked cheque for $200. The party awarded the right to cut will have to give a bond, with satisfactory sureties, for the performance of all the terms and conditions which may be required by the Department.

Mr. F. Sinclair, Forest Ranger at Sudbury, will give information respecting the timber, etc., and further particulars as to conditions may be obtained from this Department.

The figures as to quantity represent the Department's estimate only, and intending purchasers must satisfy themselves as to quantities and purchase upon their own estimates. The Department does not bind itself to accept the highest or any tender. Tenders should be marked "Tenders for Burnt Timber," and addressed to the Hon. the Commissioner of Crown Lands, Toronto.

J. M. GIBSON,
Commissioner of Crown Lands.

Department of Crown Lands,
Woods and Forests Branch,
Toronto, 1st August, 1896.

FIRES.

Murphy's saw mills at Murphy's Siding, about five miles from Owen Sound, were burned on Sunday last, together with a million and a half feet of sawn lumber, numerous logs, ties, and slabs. Loss, $25,000; insurance, $7,000.

In our issue of August 12th it was erroneously stated that Rolston's saw mill at Osgoode, Ont., was destroyed by fire. The loss was a saw, shingle and grist mill owned by J. Krupp, but which was formerly operated by Mr. Rolston.

Over one million feet of lumber at Joggins' Mines, N. S., was destroyed by fire last week. The lumber was owned by J. W. Hunter, of Leamington, and was being shipped to South America. It was cut last fall off the Cumberland Railway and Coal Company's property. The loss is estimated at $10,000.

CURRENT TRADE CONDITIONS.

ONTARIO.

Conditions in the lumber trade have shown no improvement during the past week; in fact, the whole month of August has been one of extreme quietness. Of course, there is some movement, but it is confined to filling such orders as are placed as a result of immediate requirements. Manufacturers are making strong efforts to effect sales in the hope of reducing stocks before the winter season is encountered, but in the absence of a stronger market wholesale dealers are averse to making contracts until the United States market shows signs of brightening. In the words of a wholesale dealer of Toronto, to secure any trade it is necessary to get out and drive for all you are worth. The middlemen are pursuing a policy of curtailment, and until such times as more confidence is established in the future, the purchase of large stocks is not likely to take place. These statements refer particularly to white pine, but are applicable in a less degree to the lumber trade in general. In the case of hardwoods there is some call for elm and basswood, while light sales of oak are reported for the American market. Hardwood prices are said to show signs of weakening, and manufacturers are willing to accept prices which were refused earlier in the season. On country account hemlock and cedar are being sold quite freely.

QUEBEC AND NEW BRUNSWICK.

Lumber manufacturers in New Brunswick are devoting nearly all their energies to supplying stock for the English market. There is little demand from the United States, although shipments last week show an increase over those of the previous week. Nearly all the mills are cutting for the British trade. Such is the demand for spruce that some dealers are predicting an advance in price of 50 cents a thousand, and in fact this has already been paid to St. John mills in order to ensure quick loading of vessels in port. This is only in exceptional cases, however, and cannot be taken as indicative of a general rise in values. Many of the smaller mills have used up their supply of logs, and should the strength of the British market be maintained until the close of the season, which it is thought it will, higher quotations will no doubt rule. Manufacturers who have heretofore catered to the United States market have transferred their business to the more profitable fields in Great Britain, while the South American market is also receiving some attention. Two cargoes were shipped to the latter country last week from St. John and two from Nova Scotia ports. The local trade is picking up a little, retail dealers being obliged to purchase for sorting up. Birch planks have declined, and are almost unsaleable at any price. The Quebec trade presents no new features. Apart from the foreign demand the call is mainly for hemlock and cheap building material.

BRITISH COLUMBIA AND MANITOBA.

Late reports from British Columbia are not of as encouraging a nature as earlier in the season. Interest is centred in the mining boom, and for the present much of the available money is being invested in that quarter. It is hoped, however, that when actual development becomes more marked, an increased demand for lumber will result therefrom. The foreign demand keeps steady, although not active. Bush fires have again broken out, and considerable timber is in danger of destruction. Of the Manitoba trade little can be said; there is some inquiry for consumption, and crop prospects are favorable. At various points grain elevators are being erected, for which some lumber is required.

UNITED STATES.

The uncertainty regarding the result of the Presidential election and the consequent depression in general commerce accounts largely for the present stagnation in the lumber business of the United States. The approach of the fall season should witness an increased demand, even though of small proportion, but the month of August is drawing to a close without any perceptible improvement. It is said to be one of the quietest months for many years, the purchases being of small lots for actual requirements. The opinion is becoming general that no positive revival of the lumber trade will take place until financial questions have been settled. There are, nevertheless, to be found some dealers who anticipate that the closing days of navigation will bring increased activity, their conviction being based upon the facts that retail stocks are very light, and that dealers have considerable funds in command with which to make purchases as soon as a feeling of confidence is established. It is not expected that values will advance this year, unless, perhaps, for special classes of lumber which are in short supply. A feature of the limited trade of the present is the uneven distribution—at some points a fair trade is doing, while at others the market is practically dead. For the first time this season dealers are finding the demand for oak falling off, in common with other

hardwoods. While there is a general depression, first-class stocks meet with ready sale at current quotations. From Michigan the report comes to hand that, owing to the paralysis in trade, a large quantity of logs will be carried over until next season, while it is also stated that there will be very little done in the woods next winter. The Boston market shows signs of brightening as a result of a foreign demand for spruce from England and pine from South America. There is a better tone pervading, and prospects for better prices are said to be encouraging. Buffalo reports tell of some movement, though at unprofitable prices. Complaint is heard of a scarcity of the better grades of pine. The New York market presents little activity, and buyers are given concessions in the shape of a reduction in prices.

The early shutting down of many of the mills is now an assured fact. This is chiefly in white pine centres. Probably the first of September will witness the cessation of operations of a large number, the logs being carried over for next season.

FOREIGN.

The effects of the holiday season in Great Britain have not yet passed over, a condition which is shown in the extent of purchases by consumers. The position of lumber as a whole, however, is considered strong, and arrivals of Canadian goods are eagerly sought for. At many points building operations have not been as brisk for years. Some speculation is indulged in as to the quantity of Canadian goods which will yet go forward before the close of the season, as on this will largely depend the strength of the fall market. It is believed that the greater bulk has already been received, in which case the danger of an overstock would be removed. Spruce deals continue to hold their strong position. At Liverpool cargoes landing are being removed direct into consumers' hands, and prices remain firm. Quebec oak has been sold to railway companies and other large consumers, as is also the case with waney and square pine and elm. Floorings are selling well, agents reporting no difficulty in disposing of the lots they have to sell. Prepared boards in all sizes have met with a good demand. At West Hartleport the pitch pine business is improving, while oak and other hardwoods are quiet. A correspondent of Timber, of London, writing from Cork, Ireland, says: "Messrs. Deaves Bros. are discharging a cargo of spruce deals from Quebec, and Mr. J. W. Richey has 374 stds. of Miramichi deals. Deals from the latter port seem to be growing in favor at the Irish ports, but there is a notable decrease in importations from St. John, but this is owing to tonnage being at other ports." The outlook for next season is quite encouraging, and if shippers are not too unreasonable in their prices, a healthy trade will probably be secured.

STOCKS AND PRICES.

CANADA.

Nearly 10,000,000 feet of deals cleared from St. John, N. B., for British ports last week.

McLachlin Bros., Arnprior, have sent sixty men to the Petewawa limits. The Hawkesbury Lumber Co. have dispatched twenty-six men to their limits.

The Chilean barque India has sailed from the Hastings mill, Vancouver, B. C., for Valparaiso. Her cargo consists of 797,311 ft. of dressed lumber valued at $6,734.09.

Cross & Ewing, lumber dealers, Dudswell, Que., are having a large quantity of hemlock bark prepared, and propose to cut about two millions of spruce and hemlock the coming winter.

J. O. Gilbert & Son, Bishop's Crossing, Que., will cut two millions of lumber the coming winter for Cross & Ewing. They also have a considerable quantity of logs and shingle stock in pond at present, which they intend to cut at once.

Of the lumber cut on the head-waters of the St. John river, N. B., last winter, some 17,500,000 ft. is hung up. The estimate is as follows: Mr. Dickey, 5,000,000 ft.; Kilburn & McIntosh, 4,000,000 ft.; Stetson, 4,000,000; Nobles, 3,000,000; Cunliffe, 1,500,000. This makes 132,500,000 ft. cut on the head-waters last year. Nothing can be done with the stranded logs until next spring. On the Tobique waters are 6,000,000 ft. of stranded logs, which will have to remain until next year. Of this amount, R. A. Estey has 2,000,000, Upham 2,000,000, A. J. Beveridge, 1,000,000, and D. Fraser & Sons 1,000,000. The water in the river has fallen so much of late that 4,000,000 ft. of the corporation drive have been hung up near Grand Falls.

FOREIGN.

The lumber mills, lumber, etc., of H. McC. Hart, at Sheet Harbor, N. S., have been sold to Hon. A. R. Dickey, for $60,000.

Over 15,000,000 feet of logs have arrived at Cheboygan, Mich., from Canada so far this season, and 30,000,000 feet is yet to go forward.

It is estimated that 70,000,000 feet of Canadian logs now in the river at Saginaw and Au Sable, Mich., will be carried over until next season.

The Bell Lumber Company, of Everett, Wash., has secured an order from W. A. Mears, of Portland, aggregating 1,000,000 feet, to be shipped to Japan.

Spruce frames continue to bring about $13.50 at Boston. Short lumber is moving moderately. Shingles and lath are quieter and clapboards are in only fair request.

Bliss & VanAuken, Saginaw, Mich., received a large lake raft from Georgian Bay last week. The raft experienced some hard weather, but reached its destination in safety.

Albert Peck, of Bay City, Mich., received a raft of 4,500,000 ft. from the Georgian Bay last week. This is the ninth raft taken from Canada this season, aggregating 40,000,000 ft.

At Churchill & Sim's last auction sale at London, Eng., Canadian goods sold as follows: 14 pcs. 18 to 20 in., 679 ft., £2 16s.; 15 pcs. 18 to 20 in., 624 ft., £2 17s.; 1st pine, 12x3x11, £22 15s.; 13x3x11, £23; 10x3x11, £19; 12x3x⅞, £15 5s.; 5th spruce, 12x3x9, £6 15s. and £6 10s.

THE SITUATION.

REFLECTED THROUGH CORRESPONDENCE OF THE "WEEKLY LUMBERMAN."

Joliette Lumber Co., Joliette, Que.: There is little demand, the principal call being for 3x9 spruce, 13 ft. long. Stocks are generally large, and prices declining.

Seaman & Newman, Wiarton, Ont.: Hemlock and cedar are in most demand, other stocks slow. Have sold 200,000 feet of hemlock to J. & R. Miller, of Ingersoll, at a fair price. Stocks at most mills are large. We think prices in hardwoods are advancing a little; we have sold all our stock and expect to ship by vessel before the season closes.

Isaac Rutherford, Dobbington, Ont.: Only solicited orders are secured. The most demand is for 2" rock elm, 14 and 16 ft. long, 2" soft elm and winter cut basswood. Stocks are large at the mills, and nothing is wanted but No. 1 and 2 and clear, at a lower figure than usual. The prices are from $1 to $2 less than two years ago. I think the millmen should sell out for one year at least, and not stock up.

BUSINESS NOTES.

A. F. Lockhart, saw mill, Hartland, N. B., has assigned.

The liabilities of W. H. Treworgy, lumber merchant, of Boston, are $365,000. A settlement has not yet been effected.

The Port Arthur Pulp-Timber Company, Port Arthur, Ont., is being incorporated, with a capital stock of $200,000, to manufacture and deal in timber.

A dispatch from Saginaw, Mich., states that Merrill & Ring, one of the largest lumber firms in the Valley, have asked for an extension of time from their creditors. The assets of the firm are more than half a million dollars, but owing to the recent failures of other large lumbering firms, they are unable to meet obligations.

The Delta Lumber Co., of Detroit, Mich., are said to have filed a mortgage on all their property in Wayne and Schoolcraft counties for the sum of $669,426.91. The assets of the company largely exceed the liabilities, although it is impossible to realize on the assets at the present time. The creditors are said to entertain friendly feelings towards the company.

SHIPPING MATTERS.

The steamers Cundall and Taff take in deals at Bangor, Me., for w. c. England, at 42s. 6d.

The steamship Brookside is on the way to the United Kingdom with a cargo of deals from Quebec.

The steamer Moldavia has been chartered by W. M. Mackay, of St. John, to load lumber at Halifax and Sheet Harbor.

The steamer Rawtor has sailed from Montreal for West Hartlepool, with a cargo of deals, consigned by McLean, Kennedy & Co.

The steamship companies at Montreal are taxed to provide space for goods. The rate on deals from that port to the United Kingdom is 42s. 6d., while last summer they were carried for 32s. 6d.

LUMBER FREIGHT RATES.

Lumber freight rates on the Canada Atlantic Railway are as follows: Ottawa to Toronto, 10 cents per 100 lbs.; Ottawa to Oswego, $1.90 per M ft., (3,000 lbs. and under per M ft.); Ottawa to Montreal, $1.00 per M ft., (3,000 lbs. and under per M ft.); Arnprior to Montreal, $1.50 per M ft., (3,000 lbs and under per M ft.); Ottawa to Buffalo, 12 cents per 100 lbs.: Ottawa to Port Huron and Detroit, 14 cents per 100 lbs. Ottawa to New York, water delivery, lots of 50 M feet and over, $2.50 per M ft; under 50 M feet, $3.25 per M ft. (subject to extra towage) 3,000 lbs. and under per M ft. Arnprior to New York, lots of 50 M feet and over, $3.00 per M ft.; under 50 M feet, $3.75 per M ft. (subject to extra towage) 3,000 lbs and under per M ft. Ottawa to Boston, Portland and common points, local 15 cents; exports 13c. per 100 lbs.; Arnprior to Boston; Portland and common points, local 17 cents; export 15 cents per 100 lbs.; Ottawa to Burlington, 6 cents per 100 lbs.; Ottawa to Albany, 10 cents per 100 lbs. Arnprior to Albany, 12 cents per 100 lbs.; Ottawa to St. John, N. B. and common points, 20 cents per 100 lbs.; Ottawa to Halifax, N. S. and common points, 22½ cents per 100 lbs Minimum carload weight for shipment of lumber, lath, shingles, etc., is 30,000 lbs., and rates quoted above are in cents per 100 lbs., except when quoted per M ft. the minimum carload charged is 10 M ft., lumber not exceeding 3,000 lbs. to the M feet. Ottawa rates apply on shipments from Rockland and Hawkesbury.

Lumber freight rates for pine on the Grand Trunk Railway have been made a fixture, as below. Of any intended change due notice will be given lumbermen.

General instructions in shipping by Grand Trunk are embodied in these words in the tariff schedule: On lumber in carloads, minimum weight, 30,000 lbs. per car, unless the marked capacity of the car be less, in which case the marked capacity (but not less than 24,000 lbs.) will be charged, and must not be exceeded. Should it be impracticable to load certain descriptions of light lumber up to 30,000 lbs. to the car, then the actual weight only will be charged for, but not less than 24,000 lbs. The rates on lumber in the tariff will not be higher from an intermediate point on the straight run than from the first named point beyond, to the same destination. For instance, the rates from Tara or Hepworth to Guelph, Brampton, Weston or Toronto, would not be higher than the specific rates named from Wiarton to the same points. The rates from Cargill and Southampton to points east of Listowel and south and west of Stratford will be the same as from Kincardine, but in no case are higher rates to be charged than as per mileage table published on page 9 of tariff.

Rates from leading lumber points on pine and other softwood lumber, shingles, etc., are as follows: From Glencairn, Creemore, Aurora, Barrie and other points in group B to Toronto, 6½c.; Collingwood, Penetang, Coldwater, Waubaushene, Sturgeon Bay, Victoria Harbor, Midland, Fenelon Falls, Longford, Gravenhurst and other points in group C, to Toronto, 6½c.; Brace, bridge to Toronto 7c.; Utterson, Huntsville, Navor-Emsdale, Katrine to Toronto, 7½c.; Burk's Falls, Berriedale and Sundridge, to Toronto, 8c.; South River, Powassen and Callender to Toronto, 9c.; Nipissing Junction and North Bay, 10c. Rate from Goderich, Kincardine and Wiarton to Toronto, 6½c. These rates are per 100 lbs. Rates from Toronto east to Belleville are 7½c. per 100 lbs.; to Deseronto, 9c.; to Brockville and Prescott, 10c.; to Montreal and Ottawa, 11c. The rates on hardwoods average about from 1c. to 2c. per 100 lbs. higher than on softwoods. For rates on railway ties, mahogany, rosewood, walnut, cherry, and other valuable woods, application must be made to the district freight agent.

On the Canadian Pacific the rates on pine and soft woods may be illustrated as follows: Cache Bay, North Bay, Sturgeon Falls and Warren, to Toronto, 9c.; Algoma, Cook's Mills, Massey, Spanish River and Whitefish to Toronto, 12c.; Ottawa to Toronto, 10c From Ottawa, Hull, Aylmer and Duchesne Mills to station on the Lake Erie and Detroit River, Erie and Huron, Toronto, Hamilton and Buffalo, and Michigan Central Railways, the rate is 14½c. per 100 lbs. Regulations apply as to minimum size of carload of 30,000 lbs., and an advanced rate is charged for hardwoods.

MODIFICATION OF HARDWOOD RATES.

The Grand Trunk Railway and Canadian Pacific have made the rates on hardwoods from certain points to Toronto and Hamilton as follows. The regulations are over the signature of Mr. John Earls, W.D.F.A., of the G. T. R., and given in reply to a letter from Toronto hardwood men:

"After careful consideration we have come to the conclusion that, on and after Jan. 1st, 1895, a modification will be made in the present arrangements for hardwood lumber, to the effect that the rate will be 7½c. per 100 lbs from our Northern and Northwestern branches to Toronto and Hamilton. This rate, however, will not apply from main line points and the straight run between Toronto, Sarnia and Windsor; also that so far as rates on common lumber to points like Guelph, Galt London, Woodstock, Ingersoll, etc., from all lumber shipping stations the rate will be the same on hardwood as on pine." On the old principle, we suppose, that half the loaf is better than none, hardwood men have something, possibly, to be thankful for, though there is no good reason why the rates generally on hardwood should not be as low as on pine. It is understood that the C. P. R. rate will be made uniform at 7½c from same points.

Telephone 5332 Established 1851

JOHN B. SMITH & SONS,

MANUFACTURERS OF

LUMBER Lath, Shingles, Doors, Sash, Blinds, Mouldings, Boxes, &c.

BILL LUMBER a Specialty

Cor. Strachan and Wellington Avenues, TORONTO.

MILLS

Having Brown Ash 12, 14 and 16 ft. firsts and seconds, inch Bass firsts and seconds 12 feet, or any other Hardwood Lumber, can sell same for cash by addressing

H. D. WIGGIN

No 89 State St., BOSTON, MASS.

Inspection at mill.

We Want to Buy

1 to 2 in.	1 and 2	Red Birch	6 in. and up.
1 to 4 in.	"	Brown Ash	"
1 to 2 in.	"	Plain Oak	"
1 to 3 in.	"	Soft Elm	"
1 to 4 in.	"	Hard Maple	"

Send lowest cash prices and full description of stock as to width, length and dryness.

LAWRENCE & WIGGIN

Hardwoods and Mahogany BOSTON, MASS.

WANTED 1 in. No. 1 and No. 2 Red Oak

BOSTON LUMBER CO.

No. 27 Kilby St. - BOSTON, MASS.

RONAN LINE

HUDSON RIVER LUMBER TRANSPORTATION. Water Connection from Albany with lumber points in Canada via Canadian Pacific Railway to New York Harbor, Long Island Sound and inland waters of New Jersey. . . .

CONNECTION—Canadian Pacific Railway; Rome, Watertown & Ogdensburgh; New York Central & H. R. Rd. Ronan Line.

OFFICES—Lumber District, Albany, N. Y.; 20 South St., New York. Telephone 711 Broad.

PARKER C. RONAN, Manager.

CANADIAN EXPORTERS AND WHOLESALERS

Thos. Meaney & Co. .

London Canadian Chambers

103 Bay St. - Toronto, Ont.

LUMBER

MILLMEN—Send us list of dry hardwoods.

Huntsville Lumber Co., Ltd.

—: HUNTSVILLE, ONT. :—

MANUFACTURERS OF LUMBER LATH AND SHINGLES

WE are open to cut White Pine and Hemlock Bill Stuff. Have for Sale a Quantity of Dry Mill Stocks and Sidings, also 16 in. Pine Shingles and 4 ft. Lath 1½ in. wide.

CORRESPONDENCE SOLICITED

THE PEMBROKE LUMBER CO. LTD.

MANUFACTURERS AND WHOLESALE DEALERS IN

DIMENSION TIMBER OF ALL SIZES AND KINDS, JOISTS, CAR DECKING, CAR SILLS, SHIP DECKING, AND ALL KINDS OF ROUGH AND DRESSED LUMBER.

Write us for Quotations on all Bills PEMBROKE, ONT

FOR SALE

Red Pine Dimension Logs, can be any length up to 50 feet to suit purchaser, and would contract for two to three million for next summer delivery at Spanish River. Special long lengths could be loaded on cars at Rayside, C. P. R. Will have five to six million feet of WHITE PINE, first cut on limit at Spanish River. And have about five million feet at mouth French River which could be delivered at opening of navigation . . . . . .

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Manufacturers of..... and Dealers in

LUMBER and DIMENSION TIMBER LATH and SHINGLES

We have the largest and best equipped Dimension Saw Mill in Eastern Canada. All our machinery is of the latest and most improved pattern, and we are prepared to quote prices on and supply at the shortest notice any orders that may be submitted to us.

Address, P. O. Box 1020, OTTAWA, ONT.

Ottawa Lumber Co. Ottawa Canada

WHOLESALE LUMBER, LATH, SHINGLES, ETC.

Write for Stock List

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JAS. G. CANE & CO.

WHOLESALE HARDWOOD • LUMBER •

35 Adelaide East, Toronto, Ont.

Send us full description and lowest price for any lumber you have for sale.

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LUMBER • LATH • SHINGLES

Contractors for Railway Supplies
BILL TIMBER a Specialty . . .

MIDLAND, ONT.

WANTED AT ONCE

About 300 cords 2 foot Hardwood, 1-2 Beech and 1-2 Maple, last winter's cut; also 150 cords of 4 foot all No. 1 Wood.

State Lowest Price f. o. b. Cars or Delivered in Toronto for whole or part.

THE REID CO., OF TORONTO, Ltd. Office, Cor. King and Berkeley Sts. Dock, Foot of Berkeley St.

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WHOLESALE

PINE and HARDWOOD LUMBER

OTTAWA - CANADA

YES, Everything Sold but Mill Culls of all thicknesses; Shorts of all thicknesses; Shingles in four grades (Made from Live Timber) and Lath in two grades. We are also prepared to make close quotations on Box Shooks, delivered at all points in Canada.

J. W. HOWRY & SONS LUMBER FENELON FALLS, ONT.

Lumberman's Inspection Book

Send four 3-cent Canadian postage stamps for a copy of the LUMBERMAN'S VEST-POCKET INSPECTION BOOK, containing rules for the Inspection of Pine and Hardwood Lumber in the Leading Markets of the United States and Canada.

Address:

The CANADA LUMBERMAN, Toronto, Ont.

KILN-DRIED BIRCH FLOORING SHEETING .. and .. CEILING **$20.00** SAMPLES BY MAIL **KNIGHT BROS.** Burk's Falls, Ont.

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Wholesale Dealers in **Lumber, Lath and Shingles**

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14 Canada Dock, LIVERPOOL, ENGLAND

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Write us if you have any . . . .

DRY SOFT ELM for immediate shipment.

SCATCHERD & SON - 1053 Seneca Street, BUFFALO, N. Y.

WANTED

1", 1¼", 1½", 2", 3" and 4" 1sts and 2nds Grey Elm. Also 1⅛" Rock Elm, Log Run.

Please quote prices delivered Black Rock, Buffalo, N. Y

T. SULLIVAN & CO. ◎ Buffalo, N. Y.

BUFFALO HARDWOOD LUMBER COMPANY

940 Elk St., BUFFALO, N. Y.

50,000 ft. 2 in. Nos. 1 and 2 and Common Soft Elm.
100,000 ft. 1¼ in. Nos. 1 and 2 and Common Soft Elm.
} **WANTED** {
30,000 ft. 2½ in. Nos. 1 and 2 and Common Soft Elm.
100,000 ft. 1 in. Nos. 1 and 2 and Common Rock Elm.

Are also in the market as CASH BUYERS for other kinds of Hardwoods. CORRESPONDENCE SOLICITED.

CANADA ATLANTIC RAILWAY

Ottawa, Arnprior & Parry Sound Ry.

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CANADA ATLANTIC FAST FREIGHT LINE

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Shortest and Quickest Route from OTTAWA, ROCKLAND, HAWKESBURY, ARNPRIOR and all points on Grand Trunk Ry. TO . . . BOSTON, PORTLAND, NEW YORK, DETROIT, TONAWANDA, ALBANY, &c., MONTREAL, TORONTO, QUEBEC, HALIFAX, ST. JOHN, &c.

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C. J. SMITH General Freight Agent Ottawa, Ont.

◎ Ottawa & New York Lumber Line ◎

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CANADA ATLANTIC RAILWAY. DELAWARE & HUDSON CANAL CO. WILLIAMS' LINE. } J. H. Williams Agent { 15 Lumber District, ALBANY, N.Y. NEW YORK OFFICE, 93 Wall Street Telephone 531 Broad.

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WHOLESALE PRICES CURRENT.

TORONTO, ONT.

TORONTO, August 26, 1896.

CAR OR CARGO LOTS.

1¼, 1½ and 2 inch cut up and better	33 00	36 00
2 inch picks and uppers	35 00	37 50
1x12 dressing and better, 60% 16 ft	24 00	26 00
1x10 fine dressing and better	23 00	25 00
1x10 and 12 Canadian dressing and better	20 00	22 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 mill run	16 00	18 00
1x10 and 12 common	13 00	15 00
1x10 and 12 mill culls	9 00	10 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	11 00	12 00
1 inch siding ship culls	10 50	11 50
1 inch siding mill culls	8 50	9 00
Cull scantling	8 00	9 00
1 inch strips 4 in. to 8 in. mill run	13 00	14 00
1 inch strips, common	11 00	12 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX shingles, 16 inch		2 25
XX shingles 16 inch		1 40
Lath, No. 1		1 60
Lath No. 2		1 30

HARDWOODS—PER M. FEET CAR LOTS.

Quality, 1s and 2s unless otherwise specified.

Ash, white, 1 to 2 in.	$26 00	$28 00	Cherry 1 to 1½	$50 00	$60 00
" " 2½ to 4..	30 00	32 00	" 2 " 4..	60 00	65 00
Ash, black, 1sts and 2nds, 1 to 1½ in....	17 00	19 00	Elm, soft 1 " 1½	14 00	15 00
Ash, black, 1sts and 2nds, 2 to 4 in.....	19 00	21 00	" " 2 " 3..	15 00	16 00
Ash, M. R., 1 " 2..	15 00	18 00	" rock 1 " 1¼	16 00	18 00
Birch, 1 " ..	20 00	22 00	" " 1½ " 3..	20 00	22 00
" 1½ " 2..	22 00	24 00	Hickory 1½ " 2..	28 00	30 00
" sqrs. 4x4 " 8 x8	24 00	26 00	Maple 1 " 1½	16 00	17 00
Basswood 1 " 1¼	16 00	18 00	" 2 " 4..	17 00	18 00
" 1½ " 2 ..	19 00	20 00	Oak, red, p'n 1 " 1½	28 00	30 00
" m. r. 1 " 1¼	14 00	16 00	" " 2 " 4..	30 00	32 00
Butternut 1 " 1½	23 00	25 00	" white " 1 " 1½	28 00	30 00
" 2 " 3..	25 00	28 00	" " " 2 " 4..	30 00	35 00
Chestnut 1 " 2..	24 00	26 00	" quart'd 1 " 2..	46 00	50 00
			Walnut 1 " 3..	85 00	100 00
			Whitewood 1 " 2..	32 00	36 00

OTTAWA, ONT.

OTTAWA, August 26, 1896.

Pine, good sidings, per M feet, b.m.	$30 00	35 00
" good strips, " " "	26 00	30 00
Pine, good shorts, " " "	18 00	25 00
Pine, No. 1 dressing sidings, per M feet, b.m.	17 00	20 00
Pine, " " strips, " " "	15 00	18 00
Pine, " " shorts, " " "	13 00	14 00
Pine, 10 s.c. and better stock, " " "	13 00	16 00
Pine, 8 s.c. " " " " "	11 50	13 00
Pine, " sidings " " "	13 00	15 00
Pine, " strips " " "	9 00	12 00
Pine, " shorts " " "	7 00	9 00
Pine, box culls " " "	9 00	11 00
Pine mill culls " " "	7 00	10 00
Lath per M No. 1	1 00	1 35
Lath per M No. 2	80	1 15
1x10 No. 1 barn	18	20
1x10 No. 2 "	16	18
1x8 & 9 No. 1 "	16	18
1x8 & 9 No. 2 "	15	17

QUEBEC, QUE.

QUEBEC, August 26, 1896.

WHITE PINE—IN THE RAFT.

	cts.	cts.
For interior and ordinary according to average, quality etc., measured off	16 @	22
For fair average quality, according to average, etc., measured off	20	26
For good and good fair average " " " " "	25	30
For superior " " " " "	32	40
In shipping order " " " " "	36	42
Waney board, 18 to 19 inch " " " " "	36	42
Waney board, 19 to 21 inch " " " " "	38	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	14	22
In shipping order, 35 to 45 feet " "	22	30

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	40	49

ELM.

By the dram, according to average and quality, 45 to 50 feet	30	32
" " " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average an quality	22	30

BIRCH.

16 inch average, according to average and quality	21	23

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

DEALS.

Bright spruce, according to mill specification, $42 to $44 for 1st, $28 to $30 for 2nd, $25 to $27 for 3rd, and $21 to $23 for 4th quality. F.O.B. batteau

SAGINAW, MICH.

SAGINAW, Mich., August 26, 1896.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$45 00	Selects, 1in., 8in. and up wide	$40 00
1¼, 1½ and 2 in.	45 00	1¼, 1½ and 2 in.	41 00
2½ and 3 in.	53 00	2½ and 3 in.	47 00
4 in.	56 00	4 in.	50 00

FINE COMMON.

1 in., 8 in. and up wide	33 50	2½ and 3in., 8in. and up wide	42 00
1¼, 1½ and 2 in.	35 00	4 in.	45 00

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	23 50	2½ and 3in., 7in. and up wide	37 00
1¼, 1½ and 2 in.	31 00	4 in.	40 00

STRIPS. A AND B (CLEAR AND SELECTS).

1¼ in., 4, 5 and 7 in. wide	34 00	1 in., 4, 5 and 7 in. wide	32 00
6 in. wide	36 00	6 in. wide	36 00

FINE COMMON OR C.

1¼ in., 4, 5, 6 in. wide	30 00	1 in., 6 in. wide	30 00
1 in., 4, 5 in. wide	25 00		

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24 00	1 in., 4, 5, 6 in. wide	22 00

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in	16 00	1 in., 4, 5 and 7 in.	15 00
1 in., 6 in.	17 00	1 in., 6 in.	17 00

SHELVING.

No. 1, 1 in., 10 in. stocks	25 00	No. 2, 1 in., 7 and 8in. stocks	19 00
1 in., 10 in. and up wide	26 00	1 in., 10 in. stocks	21 00
1 in., 12 in. stocks	29 00	1 in., 12 in. stocks	24 00
1 in., 12 in. and up wide	30 00	1 in., 10 in. and up wide	22 00
1¼ in. 1½ and 2in., 8in. and up wide	29 00	1 in., 13 in. and up wide	25 00

BARN BOARDS OR STOCKS.

No. 1, 12 in.	20 00	No. 2, 9 in.	13 50
10 in.	16 50	8 and 7 in.	13 50
9 in.	16 00	No. 3, 12 in.	12 50
8 and 7 in.	16 00	10 in.	11 00
No. 2, 12 in.	16 00	9 in.	11 00
10 in.	14 00	8 in.	11 00

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$ 9 00	1 in., 13 in. and up wide	$11 50
1 in., 6 in. wide	10 00	1¼, 1½ and 2 in., 7 in. and up wide	11 00
1 in., 7 in. wide and up	10 00		

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9in. wide	17 00	1 in., 10 in. and up wide	18 00
1 in., 6 in. wide	18 00	1¼, 1½ and 2 in., 8in. and up wide	20 00

COFFIN BOARDS.

No. 1, 1 in., 13in. and up	20 00	No. 1, mill culls	8 00
No. 2	17 00	No. 2, or red horse	6 50

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23 00	No. 2	18 00
No. 1 (nearly clear)	21 50	No. 3	14 00

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16ft.	$ 8 50	Hemlock, 2x4 to 10, 12 to 16 feet	8 00
18 ft.	10 50	2x12	8 50
20 ft.	11 50	Add $1 to each additional 2ft. in length.	
22 and 24 ft.	12 50		

SHINGLES, 18-IN.

Fancy brands, XXXX	3 00	Standard brands, river made, XXXX	2 75
Clear Butts	1 90	Clear Butts	1 75

WHITE PINE LATH.

No. 1	1 50	No. 2	1 00
		Hemlock	1 00

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N. Y., August 26, 1896.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in.	$46 00	47 00	No. 3, 1¼ to 2 in.	17 00	13 00
2½ and 3 in.	50 00	54 00	Shelving, No. 1, 13 in and up, 1 in.	30 00@33 00
4 in.	55 00	57 00	Dressing 1¼ in.	24 00	26 00
Selects, 1 in.	38 00	40 00	1¼x10 and 12	26 00
1¼ to 2 in.	40 00	42 00	1½ in.	24 00	25 00
2½ and 3 in.	47 00	50 00	2 in	26 00	28 00
4 in.		52 00	Mold st'ps, 1 to 2 in.	32 00	34 00
Fine common, 1 in.	35 00	37 00	Barn, No. 1, 10 and 12 in.	18 00	21 00
1¼ and 1½ in.	35 00	38 00	6 and 8 in.	17 00	21 00
2 in	34 00	36 00	No. 2, 10 and 12 in.	16 00	17 00
3 in.		45 00	No. 3, 10 and 12 in.	13 00	14 00
4 in		45 00	6 and 8 in.	12 50	13 50
Cut'g up, No. 1, 1 in.	26 00	29 00	Common, 1 in.	16 00	18 00
1¼ to 2 in.	32 00	33 00	1¼ and 1½ in.	18 00	20 00
No. 2, 1 in.	16 00	17 00	2 in	18 00	20 00
No. 2, 1¼ to 2 in	22 00	23 00			

WHITE ASH.

1st & 2nd, 1 inch,	33 00	33 00	2½ to 4 in.	36 00	40 00
1¼ to 2 in.	33 00	35 00	Strips	17 00	18 00
			Culls	9 00	10 00

BLACK AND BROWN ASH.

1st & 2nd, 8 inch up,	20 00	22 00	Com. & good culls	10 00	12 00

BIRCH.

1st & 2nd, 6 inch & up, red	28 00	30 00	1st & 2nd, white, 6 in. & up,	18 00
			Com. & good culls	10 00	12 00

ELM.

1st & 2d, rock, 8in. & up,	18 00	22 00	1st & 2d, soft, 8 in. & up,	16 00	18 00

MAPLE.

1st & 2d, hard, 6in. & up	18 00	20 00	1st & 2d, soft, 6in. & up,	17 00	19 00

WHITE OAK.

1st & 2nd, plain, 8 in. & up	26 00	28 00	Clear squares, 5x5 to 8x8	35 00
Good common	15 00	17 00	1st & 2nd quartered,	
Good culls	10 00	12 00	6 in. up	45 00	50 00
			Common quartered	25 00	30 00

RED OAK.

1st & 2nd	25 00	27 00	Quartered 1st & 2nd	42 00	44 00
Common	14 00	16 00	Common	22 00	26 00
Cull	9 00	10 00			

NEW YORK CITY.

NEW YORK, N. Y., August 26, 1896.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply, rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$28 00 @ 40 00	Building orders	$27 00 @ 37 00
Decking	44 00 50 00		

SPRUCE.

6 to 9 in.	14 00	14 50	10 to 12 in.	16 25	17 00
6 to 12 in.	14 50	15 75	Lath	1 85	1 95
9 to 12 in.	15 75	16 25		

HARDWOOD.

4/4 and thicker, No. 1 and 2	Black Ash, 10 to 16	23 00
" " "	Soft Elm, "	17 00
" " "	Hard Maple, "	21 00
" " "	Basswood, "	20 00
" " "	Birch, "	23 00
" "	Black Ash, Com. and Shipping Cull, M.C.O.	14 00
" "	Soft Elm, " " "	12 00
" "	Hard Maple, " " "	14 00
" "	Basswood, " " "	12 00
" "	Birch, " " "	14 00

ALBANY, N.Y.

ALBANY, N. Y., August 26, 1896.

PINE.

Uppers, 3 in. up	$50	$52	Dressing boards, narrow	$19	$21
2½ in.	50	52	West India shipping boards.	16	17
1 to 2 in.	45	48	Box boards	12	10
4 inch uppers	50	52	10-in. dressing and better	26	34
Selects, 2½ in. up	42	44	10-in. common	14	15
1 to 2 in.	38	42	12-in. dressing and better	26	32
Fine common, 2½ in. and up	40	42	Common, 1x12	14	16
1 to 2 in.	36	40	No. 1 barn, 1x12		20
No. 1 cut, 1 to 2 inch	25	35	1x10	18	21
No. 2	18	25	1x8	16	18
No. 3	17	20	No. 2 barn, 1x12	17	19
No. 1 molding, 1 to 2 in.	33	36	1x10	17	19
No. 2 molding, 1 to 2 in.	25	28	1x8	17	19
Stained saps		20	Shaky or star clear, 1 to 2 in.	19	21
Bracket plank	30	35	Dressing	16	18
Shelving boards, 12-in. up	30	32	Common	11	15

LATH.

Pine	$2 25		Spruce	$2 00

SHINGLES.

Sawed Pine, ex. XXXX	$4 25	$4 30	Bound butts, 6 x 18	$6 00	$6 15
Clear butts	3 25	3 35	Hemlock	2 15	2 30
Smooth, 6 x 18	5 40	5 50	Spruce	2 20	2 30

OSWEGO, N.Y.

OSWEGO, N. Y., August 26, 1896.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$45 00	@46 00
Pickings, " "	36 00	38 00
No. 1, cutting up, " "	31 00	35 00
No. 2, cutting up, " "	24 00	23 00
In strips, 4 to 8 wide, selected for moulding trips, 14 to 16 ft.	30 00	32 00

SIDING.

1in siding, cutting up 1icks and uppers	32 00	@39 00	1¼ in selected	38 00	@43 00
1in dressing	19 00	21 00	1¼ in dressing	20 00	22 00
1in No. 1 culls	13 00	14 00	1¼ in No. 1 culls	15 00	16 00
1in No. 2 culls	11 00	12 00	1¼ in No. 2 culls	13 00	14 00
			1 in. No 3 culls	11 00	12 00

1X12 INCH.

12 and 16 feet, mill run	21 00	24 00
12 and 16 feet, No. 1 and 2, barn boards	19 00	20 00
12 and 16 feet, dressing and better	27 00	31 00
12 and 16 feet, No. 2 culls	13 00	14 00

1¼X10 INCHES.

Mill run, mill culls out.	$24 00	@24 00	No. 1 culls	17 00	18 00
Dressing and better	27 00	35 00	No. 2 culls	14 00	15 00

1X4 INCHES.

Mill run, mill culls out	17 00	21 00	No. 1 culls	14 00	15 00
Dressing and better	24 00	30 00	No. 2 culls	12 00	13 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	18 00	25 00	6, 7 or 8, No. 1 culls	15 00	16 00
			6, 7 or 8, No. 2 culls	13 00	14 00
6, 7 or 8, drsg and better	23 00	30 00			

BOSTON, MASS.

BOSTON, August 26, 1896.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$11 50	12 00	¾ inch	$ 9 25	9 50
Coarse No. 5	15 00	15 50	11-16 inch	8 50	8 75
Refuse	13 00	13 25	⅝ inch	8 00	8 25
Outs	9 00		Clapboards, sap ext.	45 00	46 00
Boxboards, 1 inch	10 75	11 00	Sap clear	41 00	42 00
⅞ inch	9 75	10 00	Sap, and clear	34 00	36 00
			No. 1	23 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in.	$50 00	@52 00	Fine com., 3 and 4 in	46 00	52 00
1¼, 1½ and 2 in.	52 00	53 00	No. 2, 1 in. Fine com.	29 00	31 00
3 and 4 in.	58 00	62 00	1¼, 1½ and 2 in.	30 00	32 00
Selects, 1 in.	44 00	45 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in.	45 00	47 00	No. 2	36 00	39 00
3 and 4 in.	52 00	55 00	No. 3	26 00	30 00
Moulding boards, 8 to 11 in. clear	37 00	39 00	Cut ups, 1 in.	20 00	32 00
60 per cent. clear	32 00	34 00	Cut ups, 1¼ to 2 in.	24 00	38 00
Fine common, 1 in.	40 00	41 00	Coffin boards	19 00	22 00
1¼, 1½ and 2 in.	40 00	41 00	Common all widths	22 00	26 00
			Shipping culls, 1 in.	14 50	15 50
			do 1¼ in.	15 50	16 50

SHINGLES.

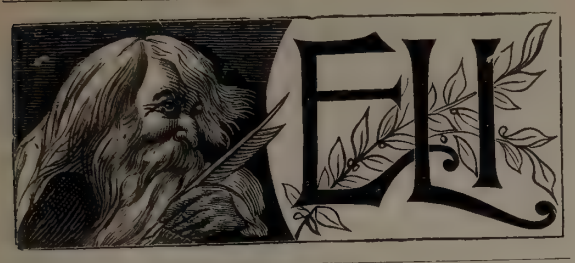
Spruce	1 30	1 50	Second Clear	1 75	1 90
Cedar, extra	2 65	2 90	Extra No. 1	1 25	1 50
Clear	2 25	2 40			

HEMLOCK.

Boards, rough	11 00	@11 50	No. 2	9 00	@ 10 50
Planed	11 75	12 00			

LATH.

Spruce			By cargo	1 30	@ 1 9
By car	1 80	@ 2 00			



DURING the four or five years of business depression through which we have been passing, all classes have been on the lookout for indications of returning prosperity. As a rule they have seen little of an encouraging character, while with some things have been going from bad to worse. I met a man thus situated recently, to whom I propounded the oft-put question: "What is the business outlook?" The answer I received is worthy of preservation. Said he: "Two or three years ago you and I were living on our Faith that the times would improve. Last year we thought we could discern signs of promise and lived on Hope. This year I am living on Charity."

* * *

Although the practise of assisting your friends by endorsing notes has fallen somewhat into disrepute and is not carried on to the extent it was in the days of our forefathers, it is as yet too prevalent. Many an enterprising and industries business man has been forced to seek the forbearance of his creditors as the result of a too liberal use of his signature in an effort to assist his friends, while others have been forced into insolvency. A striking instance of this was pointed out to me by a friend who is closely allied with the lumber business. Speaking of the recent financial disturbances of the trade, he remarked that only three years ago a certain Michigan manufacturer was reputed to be a millionare. "In addition," he said, "to having his extensive plant and stock all paid for, he held government bonds for $300,000. But the endorsing of notes for his friends, together with the depression in the lumber industry and depreciation in values, has now necessitated his assignment, and it is reported that creditors will not receive twenty-five cents on the dollar." This is simply one instance of how rapid is the descent when the reins of business are not tightly grasped in your hands. So long as you are willing to sign accommodation notes, you will not be lacking in friends, but when your name is about to suffer financial stigma, how many will come forward with a helping hand.

* * *

The evolution which is taking place in business circles from day to day is not regarded with much significance, but when one looks back even a very few years, many changes are discernable. As I sat in the office of Messrs. Delaplante & Bowden, lumber merchants, Toronto, Mr. Bowden related something of the history of the lumber business in Toronto since the existence of his firm. "Looking back over the sixteen years of our business life in Toronto," he said, "we can see great changes. When we commenced business in 1880 there were about twenty wholesale dealers, but those who are left can be counted on the fingers of your one hand. At that time Christie, Kerr & Co. were the dealers of Toronto, while S. C. Kanady & Co. were also quite prominent. Then there were the Tennants, S. S. Mutton & Co., Donogh, McCool & Oliver, A. H. Campbell & Co., McArthur Bros., Hillock & Kent, Wm. Latch, Muskoka Mill & Lumber Co., and a number of others, only a few of whom are still with us. Some have gone out of the business entirely, their places in the trade being filled by new dealers, while others have removed to new fields." Mr. Bowden's remarks brought to me a feeling of remorse that the trade had lost so many prominent and honorable dealers, yet I could not but feel reconciled by the knowledge that we have to-day a fair representation of equally good standing.

* * *

Few men are more closely in touch with lumber matters in general than Mr. John Scully, of John Scully & Co., Toronto, who are dealers in timber limits and contractors' supplies. Mr. Scully is also a keen observer, and is possessed with the faculty of sizing up the situation at a glance. As his firm supply a large number of men for the woods each year, I inquired of him what the outlook was for the approaching winter. "I must admit," he said, "that there is nothing very encouraging as yet. We have had only a few inquiries for men, and in view of the large quantity of lumber at present in stock and the limited demand, activity is scarcely expected. We have been established for eighteen years, and this is one of the quietest seasons we have had so far as the lumber business is concerned. I know of several lumbermen who will not operate next winter; they prefer to leave the lumber in the tree rather than add to their already large stock in the yards. However, this is one of the factors which will materially assist in bringing about an improvement." Mr. Scully incidentally drew my attention to a piece of soft coal in his window, which, he said, came from West Virginia. The mine was owned by Canadians, who proposed placing it upon the market here.

* * *

"The advent of the bicycle is said to have proved disastrous to a number of industries, but to the lumber trade it has brought increased business. An authority in the United States says: "It is estimated this year that fully 800,000 wheels have been manufactured. Practically all of these have been equipped with wood rims. Each wood rim requires two and one-half feet board measure, and allowing one-third for waste that would mean a consumption of 6,000,000 feet, almost exclusively rock-elm. This does not include guards and handle-bars. The consumption of 6,000,000 feet of rock elm may not look large in a business which is accustomed to handle hundreds of millions of feet of lumber, but then it must be remembered that only about 15 per cent. of hard maple is available for the purpose, and that such a large amount of one of the minor hardwoods is almost significant. One of the next improvements which is scheduled to make its appearance in 1897 at the cycle show is the wood handle bar. Like the wood rim a year or two ago, it had been ridiculed, but its good points are beginning to be recognized. Wood, principally hickory, perhaps a little ash, is to be used instead of steel tubing, not because of any decrease in weight, for that will remain about the same, but because of the superior elasticity of the wood making the wheels easier to ride and less fatiguing to the hands and arms."

RUSSIAN TIMBER RESOURCES.

THE attention of some American lumbermen has been attracted recently by the offer of the Russian government to make contracts for the output of mills along the new Siberian railway and to issue ninety-nine-year leases for timber at a few cents an acre per year, says the Times-Democrat. In view of this, perhaps some facts regarding the forest resources of this great empire may be of interest.

According to Mulhall, the well-known English statistician, Russia has 423,000,000 acres of forest, while the United States has 466,000,000. In our own country, of course, the forest resources are being worked to a far greater extent than are those of Russia. This fact is shown in a general way by the annual product of Russia, which is about 6,200,000 cubic feet, valued at $200,000,000, while the annual product of the United States is estimated at 9,300,000 cubic feet, valued at $560,000,000. Hence, taking the forest resources not yet utilized, Russia is by far the most important timber country in the world. The forest area of European Russia is about 37 per cent. of the total area.

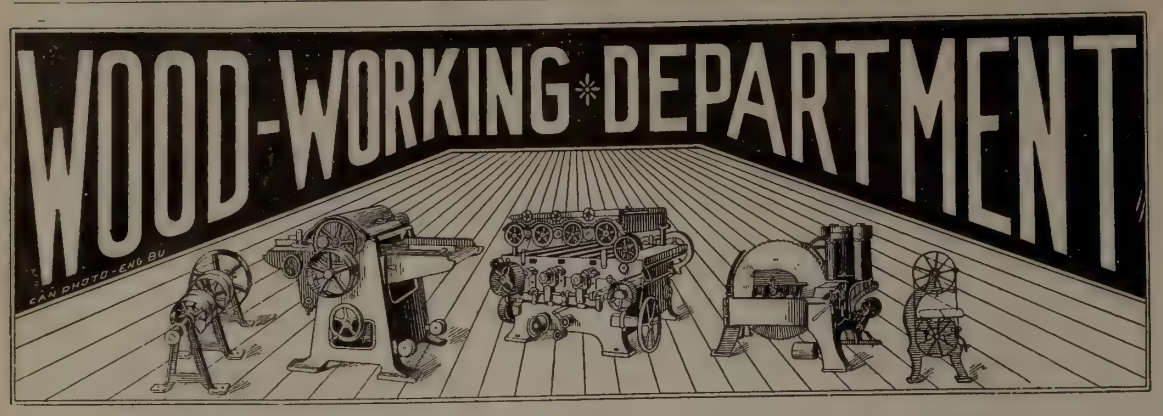
When we consider that the next largest timber exporting country in Europe, Sweden, has a forest area of only about 44,000,000 acres, and that the forests of the latter country are much depleted, we realize how great is the forest wealth of the Russian empire, and what an important part she will play in the future of timber supplies when Sweden's export trade shall have deminished largely and when the vast American continent will need all of the timber she grows for home consumption.

No nation on earth figures so large an annual consumption of lumber per capita as does the United States, averaging 150 cubic feet a year for each inhabitant. Canada shows a consumption of 100 cubic feet, Russia 70 cubic feet, and Great Britain only 14 cubic feet. It is evident that the forests of the United States will not suffice for its home consumption for many more years without importing timber from other sources.

Mulhall gives the crown forest of Russia as 330,000,000 acres in 1860. Timber, the London lumber paper, states in a recent issue that about 300,000,000 acres of Russia's forest lands are state or crown lands, and are an important source of revenue to the imperial exchequer. Wood and grain are Russia's principal exports, the two main products from which she derives her wealth. Thus the government of Archangle alone yields a revenue of $800,000 a year from its crown forests, while eighty-eight provinces of Russia yield together a revenue of about $10,000,000 a year.

It is said that the average yield of timber for each 1,000 acres of forest area in Russia is greater than the same in Canada. Russia has a great wealth of water-ways also, while her proximity to the great wood consuming or importing countries, such as Great Britain, France, Germany, Holland, Spain, Belgium, Portugal and Denmark, adds greatly to the demand for her forest products as well as to their value. The only other wood importing countries are the British colonies, such as the Cape of Good Hope, Australia and others.

The Washington Forestry Association has been formed in Seattle for the purpose of preventing forest fires and the protection of the forests.



CUTTING VENEER.

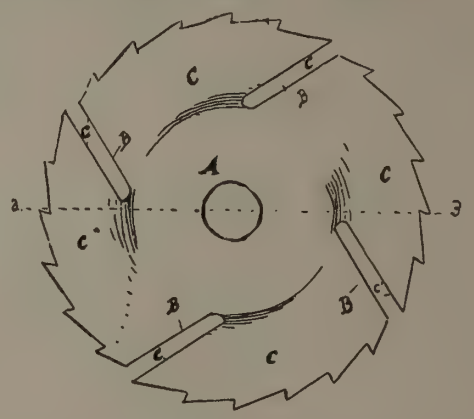
EXPERIENCE proves that, while the finer and thinner veneers are sliced tangentially from the side of the logs, there are woods that cannot be cut this way, no amount of boiling or steaming rendering it possible to cut them without breaking down the tissues to such an extent as to destroy their surfaces in polishing, while others become discolored from steaming or boiling and, being too hard to cut otherwise, have to be sawed. The fine-toothed, thin-gauge circular with flanged centre is the favorite for cutting all ordinary veneers thicker than thirty to the inch; twenty to the inch is the thickness most commonly used for cabinet work and finishing, but much thinner is used in the case of rare and costly woods, or rare abnormal or accidental figures, as in case of burls. Some woods have to be cut much thicker, being unable to bear handling when too thin. Genuine ebony, the only fine, really jet-black wood known and large enough to be of any use, will not stand sawing much below one-fourth of an inch in thickness, owing to its extreme brittleness or want of cohesion, but there are other woods that may be cut as thin as writing paper and still be handled in large sheets. Other woods will lose their fine color on exposure to the atmosphere, especially a smoky one; these are cut only when immediately wanted, and they are kept covered until the finishers can put on a protective coat of some preparation.

CEMENT SPLICES IN BELTS.

THE first requisite towards making a good cement splice in a leather belt is a cement which will stick. A good substitute for belt-makers' cement consists of two parts common and one part of isinglass or fish glue. Most well-known belt makers manufacture a form of cement, and each one claims that his cement is the best in the world, etc. Most of these cements are good, and there is very little, if any, choice between them. Most of them may be purchased in quantities to suit, at a price ranging from 60 to 70 cents per pound, and a pound of this cement will go a long way in making up the splices. Scarf the belt to a length equal to the width; in double belts make a long and a short lap, both edges being placed so as to follow the run of the belt. In other words, the fag end of the lap should run with the pulleys, not against them. When the belt is placed wrong end to and the thin edge of the lap goes first to the pulley, the splice is sure to suffer, and frequently will be torn in two by the rolling up of the thin edge of the scarf. Let the short lap be one-quarter of the long lap one whole width in length. These laps had better be planed down with an ordinary carpenter's plane. To do this, the belt may be pegged with ordinary shoe pegs upon a board so that the end of the belt coincides with the extreme edge or side of the board. The vigorous application of the floor plane soon reduces the end of the belt, and if a good deal of care is taken to keep the scarf of even lengths a good job may be done in a very short time. The scarf being perfected, place a board over the belt, and clamp rods so that the belt may lie upon it. Then apply the cement according to directions, and when the ends of the belt are placed together hammer them lightly, but thoroughly, and if the belt must be had for immediate use drive pegs enough through the leather to hold the splice while the cement is setting. If possible leave the clamps on the belt for one hour or more before starting up. Such a splice should run a year at least, and if there is no stretch to the belt, and the power expected of it is not too great, it may be two or even three years before further attention is required of that belt.

PATENTS FOR WOOD-WORKING MACHINERY.

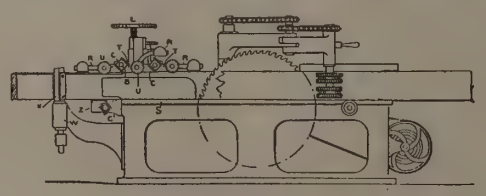
THE following patents of interest to wood-workers have been granted for Canada:



GROOVING SAW.

Patentee: Charles Baar, Grand Rapids, Mich., granted 10th June, 1896; 6 years.

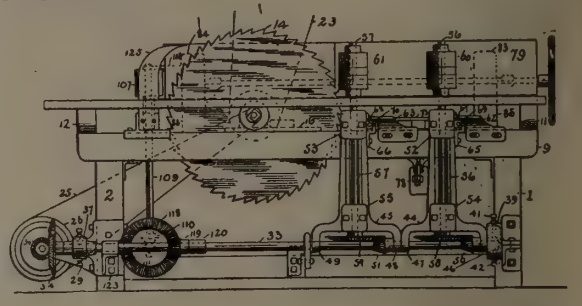
Claim.—A circular grooving saw, having a flat central portion and a series of deep openings extending from its periphery to said central portion, thereby forming toothed segments, detached from each other at their adjacent ends, said segments being turned or twisted out of the plane of the central portion of the saw, and formed with a series of cutting teeth, and turned or twisted in opposite directions, substantially as described.



WOOD-WORKING MACHINE.

Patentee: William Tickle, Liverpool, Eng., granted 7th May, 1896; 6 years.

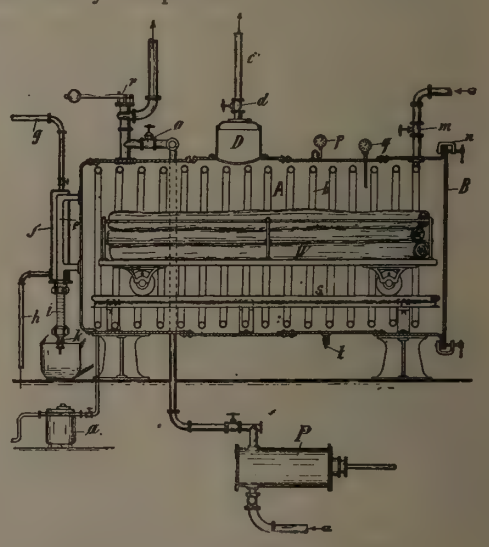
Claim.—In a saw frame or bench providing in combination therewith a series of cutters at the back of the saw or of the saw teeth, whereby boards are not merely sawn from the timber, but can be either on top or bottom or both tongued, grooved, moulded, planed, rabbeted, or the burred or frayed edges smoothed off in one operation, substantially as described. The combination with a saw frame, a cutter arranged at one side or both sides of the board or plank being cut, whereby at the same time that the boards are being sawn, they can be planed or moulded as desired. In combination with a saw bench, one or more cutters C, C', and a side cutter X, substantially as described. In combination with a saw bench, the cutters C and weighted rolls U, substantially as and for the purpose described.



SLAB-SAWING MACHINE.

Patentee: A. W. Goodell, Philadelphia, Pa., granted 22nd June, 1896; 6 years.

Claim.—In a slab-sawing machine, a saw attached thereto, a movable fence thereon, means to move the fence simultaneously at each end from a single operative point, upright feed-rolls therefor seated upon a rectangular shaft, the rolls being in longitudinal and removable sections, and carried in a yoke upon a shaft normally upright but having means for side adjustment. In a saw, a table, a frame, a movable fence and a driven delivery-roll thereto attached, feed shafts, feed-roll shafts swingingly attached thereto, means to press the feed-rolls automatically and by hand against the material being operated upon, and stops secured to the framing to limit the movement of the equalizing lever, substantially as specified.



PROCESS OF PRESERVING TIMBER.

Patentee: Frederick M. Grumbacher, Berlin, Germany, granted 23rd June, 1896; 6 years.

Claim.—The hereinbefore described process for preserving and hardening wood, consisting in first subjecting the wood to a preliminary drying at a comparatively low temperature and then to complete preserving and hardening under pressure at a higher temperature, substantially as hereinbefore described.

THE NEWS.

—The Portneuf Pulp Mill Co., Portneuf, Que., has been dissolved.

—P. Hamm has started in the lumber business at Rosefeld, Man.

—Mr. Edwards, of Colborne, has started a cooper shop at Port Hope.

—Joseph G. Halfpenny's saw mill, Beaver Creek, B.C., was recently burned.

—James McKinlay is erecting a spool factory at Black River, Kent County, N. B.

—A. J. Smith, lumber merchant, Woodville, Ont., has opened a business at Thornbury.

—James McKinlay, of Quebec, will operate a spool factory at Kouchibouguac, N. B.

—J. McMartin has purchased an interest in the Klemes & Curry saw mill at Sandon, B. C.

—Edward Parsons, of Sand Point, will cut 10,000 ft. of logs for the Pembroke Lumber Co.

—J. T. Simpson, of Moose Jaw, N. W. T., is putting a saw mill in operation at that place.

—D. A. Jonah, of Petitcodiac, N. B., has made extensive improvements to his furniture factory.

—H. A. Manwaring, of Birtle, Man., has disposed of his lumber mill to Mr. Peden, of Rossburn.

—At Nakusp, B. C., there is a large saw mill owned by Genellie & Co. Mr. J. E. Poupre is manager.

—An electric light plant has been placed in the saw mill of Mickle, Dyment & Son, at Severn, Ont.

—F. W. Upham, of Chicago, recently shipped fifteen car loads of cottonwood for Holland and Germany.

—E. A. Simpson & Co., lumber and planing mill, Moose Jaw, N. W. T., have sold out their lumber stock to H. McDougall.

—The Kootenay Lumber Co. is erecting a saw mill at Lardeau, B. C. The mill will have a capacity of 20,000 feet per day.

—Toner & Gregory's mill at Collingwood, Ont., was recently closed down for a couple of weeks owing to a scarcity of logs. A raft went to pieces just as it was nearing the port.

—The water power and property of the Buckingham Pulp Co., at Buckingham, Que., has been purchased by Walter Williams for $15,000. The pulp mills were destroyed by fire a few years ago.

—The Menominee Iron Works, of Menominee, Mich., are said to have received a request through the Japanese consul at Tacoma to bid on the machinery for establishing a complete modern saw mill in Japan.

—A new match manufacturing concern has been established at Buckingham, Que., to be known as the McLaren Match Co. The company will be composed of the five sons of the late James McLaren, lumberman.

—It is stated that the site of the saw mills of Ross Bros., at Buckingham, Que., will be occupied in the near future by large pulp and paper mills, while a steam saw mill will be erected at some point further north.

An agreement has been entered into between the town of Midland, Ont., and the Manitou Wood and Pulp Co., by which the company will erect a pulp mill in consideration of tax exemption and other privileges granted by the town.

—An American syndicate will, it is said, purchase a site at Three Rivers, Que., on which to erect large pulp and paper mills, the products of which will be exported to Europe. The concern will have a capitalization of $2,000,000.

—J. O. Gilbert & Son, Bishop's Crossing, Que., are placing a new 100 h.p. engine and boiler in their water mill, six miles from that place, preparatory to cutting about two million feet of lumber for Cross & Ewing the coming winter.

—Alex. Ross, of Wingham, has in his possession a chip of oak taken from a log that was cut down over 65 years ago. The oak was felled when logging a roadway in the vicinity of Brucefield in 1831, and lay on the roadside until three years ago.

—Moses Knight, of Burk's Falls, is seeking to recover from several insurance companies and Mr. J. C. Thomson, of Hamilton, the sum of $6,000, the amount of insurance on some lumber destroyed by fire in the yard of the Katrine Lumber Co. at Katrine, Ont.

—Mr. Burrill, of the Drummond Lumber Co., Forest Dale, Que., has invented an ingenuous device for lighting a country road. Having to travel through dark forest roads, he constructed a storage battery in his wagon, and ran fine flexible wires along the reins to the head of each horse, where an incandescent light of small candle power was fixed to the head piece of the bridle.

—Incorporation has been announced of the Rat Portage Lumber Co., composed of D. C. Cameron, Walter Ross, William R. Dick, Hugh W. Kennedy and Matthew Brown, of Rat Portage, and J. A. McRae, of Niagara Falls. This is a reorganization of the Ontario & Western Lumber Co., of Rat Portage, which formerly worked under a Dominion charter, but has now been organized under Provincial rights.

—Alex. McEwen, of Calumet, Que., has patented an invention for the floating of hardwood timber down the rough streams from the lumber districts. Heretofore it has been the practise to fasten with withes a hard and softwood log together and so start them down the stream. Mr. McEwan's invention consists of bolting the light and heavy logs together, a light iron bolt with a coil spring at one end being used. The main advantage is in the spring, which, when the logs strike a rock or other obstacle, lessens the jar. The system is said to work satisfactorily and to be less expensive than the old-fashioned method.

CASUALTIES.

—Robt. Wilson, an employe in Cushing's mill at Union Point, N. B., had three fingers taken off one of his hands by a lifting saw.

—Duncan Hayes, employed in the McLaren mills at Buckingham, was seriously injured recently. While shutting off the water to stop the mill, the crank struck him in the face, horribly lacerating it.

—An employee in J. R. Booth's mill at Ottawa, named Emile Bedard, while oiling the machinery in the lower portion of the mill, is supposed to have fallen into one of tail races and been swept into the falls.

—A man named Beaupailant was seriously injured in Booth's mill at Ottawa. He was caught in the shafting by the arms and carried between the machinery and a beam, a width of not more than eight inches. His clothing was completely torn off.

—James Mackey, a lumberman of Arnprior, 56 years of age, while in a state of somnambulism, walked out of a third story window at the Buller House, Ottawa, and received injuries which resulted in his death. Deceased had just returned from taking a raft of square timber to Quebec.

—A. W. Gillingham's saw mill at the North Forks of the Old Man's River, 60 miles from MacLeod, N. W. T., was recently the scene of a fatal accident. A boiler exploded, killing three men, named Smith, May and Edsall, and injuring Messrs. Gillingham and Nelson. The mill was completely wrecked.

PERSONAL.

Mr. J. B. Klock, M. P., is spending a few weeks at Le Quinze.

Mr. John Yuill has resigned his position with the Pembroke Lumber Co., and will remove to Calabogie.

Mr. Joseph Shirley, a lumber culler in the employ of J. R. Booth, Ottawa, died from the effects of the excessive heat.

Ald. Scott, of the Georgian Bay Lumber Company, returned a fortnight ago from his European trip, much benefitted by the holiday.

Mr. Beland, of the firm of Beland & Martineau, lumber dealers, Quebec, has been appointed to the position of clerk of the Federal public works for the city.

Mr. Charles H. Day, private secretary of Mr. E. W. Rathbun, of the Rathbun Company, Deseronto, died in the general hospital at Kingston on the 17th August from an attack of typhoid fever.

Sympathy is expressed with Mr. Donald Fraser, of the lumber firm of Donald Fraser & Sons, Fredericton, N. B., in the death of his wife, which took place on the 4th of August. Deceased was 54 years of age.

Mr. J. H. Brumwell, of Bridgenorth, Ont., gave THE LUMBERMAN a pleasant call last week on his return from a visit to Buffalo. Mr. Brumwell operates a saw mill in Peterboro' county, and reports a fair trade. He states that timber in his locality is becoming scarce.

TRADE NOTES.

A. A. Benson, the maritime province representative of the Waterous Engine Works Co., has returned recently from a business trip through Nova Scotia.

The Waterous Company, of Brantford, shipped last month a large portable saw mill to Australia which weighed 80,000 lbs., with 72" lower and 40" upper, "Hoe" chisel tooth saw.

H. Murphy, of Ottawa, recently shipped a complete friction feed to A. Lunsden, for his saw mill on the Upper Ottawa, and a complete outfit, including engine, boiler, and other machinery, for Gehan Bros.' mill at Bearbrook, Ont.

The William Hamilton Manufacturing Co., of Peterboro', are manufacturing eighteen sets of gearings for the Sault Ste. Marie Pulp & Paper Co. The same company are also building a complete saw mill for British Columbia, and one for Mania, N. B.

The following is a copy of a letter received by the Emerson Company, which speaks for itself:

CHARLESTON, W. VA., May 27th, 1896.

THE EMERSON CO., Baltimore, Md.

GENTLEMEN,—We herewith hand you settlement in full for the 100 ft. "Automatic Compression" dry kiln which we purchased from you under a guarantee that it would dry 50,000 ft. per week of oak lumber in a manner satisfactory to us. The lumber, as you know, is used by us in the manufacture of the furniture, and the requirements are very exacting. After a test of the kiln we find that it comes fully up to what you promised in the quality of the drying, and in quantity of output it far exceeds your guaranteed capacity. The basis of the contract we made with you was for one inch lumber (oak), and it comes from the kiln in an elegant condition and bone dry. We are sure we can dry fully twenty thousand feet per week more than you guaranteed. We have also taken up some oak, six quarters thick, which was in the kiln the same length of time as the one inch, and it was bone dry and uninjured; also some half-inch quarter sawn oak, green from the saw, with the same results. We have dried poplar squares, 5x5, and also 2 inch poplar plank, both coming out absolutely perfect, being neither warped, checked or case hardened. The kiln is economical in the use of steam and the equipment is very complete and of the highest order, just as you promised it would be. We have been using metal side condensing kilns and have had a great deal of trouble in getting dry lumber, although we had three of these kilns. It took them from 18 to 25 days to dry the same lumber that your kiln dries in a week, and the lumber from your kiln works splendidly in our machines, not being case hardened in the least. We cheerfully accept the kiln, and are satisfied that your system is the only one suitable for drying hardwoods, and are fully convinced that the "Automatic Compression" system is "the thing."

Yours very truly,

ROY FURNITURE CO., by J. C. Roy, Pres.

PUBLICATIONS.

Cassier's Magazine for September contains, among other valuable engineering articles, the following: "Milling Machine Practice," by H. B. Binsse; "When it is Economical to Use a Condenser," by Wm. H. Wightman; "The Steam Turbine," by Prof. John H. Barr; "Filtering Water for Steam Boilers," by Wm. H. Odell.

One of the neatest catalogues which has reached our desk is that of the Emerson Company, of Baltimore, Md., descriptive of their well-known automatic "Compression" dry-kilns. It is bound in a handsome morocco cover, and contains about one hundred pages of nicely printed letterpress, with numerous illustrations, together with testimonials from customers using the kilns.

We have received a pamphlet containing a copy of the act passed on the 12th of January, 1895, establishing the Laurentides National Park in Quebec, also full information concerning the management of the same. The park was set apart by the local legislature for the preservation of the forest, fish and game, is 2,531 square miles in size, and is situated in the counties of Montmorency, Quebec and Charlevoix.

Owing to the increasing attention being directed to British Columbia and the rapidly growing interest in its mineral, forest, and other resources, Mr. R. E. Gosnell, Librarian of the Legislative Assemby and Secretary of the Bureau of Statistics, has decided to issue a Year-Book, which will contain statistical information of much value to those desirous of being informed concerning the province. It will contain concise information covering the whole period since confederation. The size will be of ordinary octavo, containing between 300 and 400 pages of closely-printed matter. The price will probably be $1.50. The work is now in course of preparation.

OTTAWA LETTER.

[Regular Correspondence of the CANADA LUMBERMAN.]

Many of the lumbermen in the Ottawa Valley have already dispatched men to the woods, and in all probability the winter's cut will be an average one. Operators have been encouraged by the strong position of the British market both with respect to deals and thin lumber.

Mr. Brisbois, foreman for the Hawkesbury Lumber Company, has taken about fifty men to the Des Moine district, and Wm. Mason & Sons have sent up the same number to their limits. Buell, Hurdman & Co. propose putting in seven camps, two on the Quinze river and five at Lake Ostoboing. Mr. John Ryan, agent for J. R. Booth, has taken a large corps to the Temiscamingue limits. The Shepherd & Morse Co. and the E. B. Eddy Co. have also sent gangs away. Mr. Thomas Carpenter has dispatched two gangs to McLaughlin Bros.' limits on the Winawa in charge of Mr. William Calder, the popular clerk. Last winter the McLaughlins had five camps and nearly three hundred men employed.

By the destruction by fire of Ross Bros.' mills at Buckingham about 150 men are thrown out of employment. The mills were the oldest in the Ottawa Valley, having been first built about seventy years ago. This is the third time they have suffered from fire, the last one being about 40 years ago. It is proposed to erect a temporary structure at present, and during the coming winter a permanent building will be constructed.

Mr. Monte Gendron, of Ottawa, has been appointed manager for the David Moore Lumber Co.'s estate at Garden River, Ont.

An unusually large and fine raft of square timber arrived at the foot of Parliament Hill a fortnight ago, where it was banded in charge of Ephrian Lalonde, pilot. It comprised 257 cribs, and was taken out of the Fraser river at Coulonge.

The W. C. Edwards Co. are erecting an immense shed in their lumber yards in New Edinburgh for storing seasoned lumber.

Wm. Mason & Sons are opening a retail lumber yard in Hintonburg.

Bailey's mills at Aylmer are running night and day in order to get the logs which they have on hand cut up.

J. M. McLaurin, of East Templeton, who for many years has carried on an extensive business in connection with lumbering and mining operations, is about to dispose of his property and stock to accept a situation with the well-known lumber firm of Skillings, Whitney & Barnes, Burlington, Vt.

OTTAWA, Ont., August 24, 1896.

BRITISH COLUMBIA LETTER.

[Regular Correspondence of the CANADA LUMBERMAN.

The Pacific Coast Lumber Co. review the situation in the province as follows: "Trade for the past two months has been very slow and unsatisfactory, still the first half year shows considerable improvement over the same period last year. Prices are not what they should be by a good deal. So far as the shingle trade is concerned, it is generally conceded here that until good, well-made 6 by 2 shingles will bring about $1.40 at the mills the Washington mills may have the trade. After they have given away all their accessible timber we will be glad to have them come up here and buy up British Columbia timber at big prices and make money out of it, the same as the Michigan men did in the eastern part of Canada when their timber ran out."

The Victoria Lumber & Manufacturing Co.'s mill at Chemanius is running to its full capacity day and night. A large part of this season's product is destined for China. This mill is one of the finest in the province, the equipment being of the most modern character. The capacity is about 350,000 feet per day. A complete electric light plant has recently been installed, including 500 incandescent lights and a number of 300 moguls placed on the wharves to permit of loading the ship.

From present indications it will not be all smooth sailing for the British Columbia lumber combine. The members in this province have, it is said, threatened to secede from the organization on January 1st next, at which date the membership is to determine the future existence of the trust, and if sufficiently large, its permanent organization for five years is to be effected. The Chemainus mill, owned by eastern capitalists, is securing the bulk of the foreign trade, and is taxed to its full capacity to fill orders, while the combination mills have only few orders. This is accounted for to some extent by the fact that foreign lumber dealers have a natural aversion for trusts. It is also stated that several Puget Sound manufacturers entertain similar views with respect to withdrawal from the trust, and future developments are awaited with interest.

COAST CHIPS.

The Sayward Mill & Timber Co., Ltd., Victoria, B. C., is winding up its business.

McNair Bros'. shingle mill, Hastings, has again resumed opeaations after the recent fire.

A. H. Harmon has been appointed liquidator of the Burrard Inlet Red Cedar Lumber Co., of Port Moody.

NEW WESTMINSTER, B. C., August 19, 1896.

NEW BRUNSWICK LETTER.

[Regular Correspondence of the CANADA LUMBERMAN.]

The Dominion line of steamers will give a fortnightly service between St. John and Glasgow next winter. Mr. Robert Reford was here some days ago in that company's interest. From present indications the transatlantic business next winter will be conducted on a much more extensive scale than it was last year, and no industry will profit to a greater extent than that of lumber.

The shingle mills at Restigouche are running to their full capacity day and night. Some of the owners are of the opinion that the duty will be again placed upon shingles by the American government.

Hon. A. T. Dunn, the new surveyor, has been elected to the provincial government by acclamation. It is believed that he will prove to have strong capabilities for the position for which he has been chosen. He has recently returned from a trip up north, where he made the acquaintance of the prominent lumbermen.

Mr. S. H. White, of the firm of S. H. White & Co., Sussex, who have purchased the well-known mill and lumber property of the Alma Lumber Company in Albert county, recently paid a visit of inspection to the mills and other buildings. Mr. White was accompanied by W. H. Wallace, of Wallace Bros., builders, and it is probable that extensive alterations and improvements will be made preparatory to commencing the winter's operations.

BITS OF LUMBER.

Swim Bros. have completed their saw mill at Doaktown.

The new Purves mill at Carleton is operating day and night.

The Collins mill at Woodstock has been rebuilt by G. H. Collins.

Some Maine lumber manufacturers have been cruising the wood lands of Messrs. Rourke, at St. Martins, with a view, it is suid, of purchasing the property. The cut of Rourke Bros. this season will be about three and a half millions.

ST. JOHN, N. B., August 23, 1896.

WOOD-PULP INDUSTRY.

Colonel Bailey, Lecturer in Forestry in the University of Edinburg, Scotland, writes as follows on the subject of the wood-pulp industry :—

"For the manufacture of wood pulp, poles of from 4in. to 8in. or 12in. in diameter, or even larger sizes are used. They are treated in either of two ways. Under the mechanical process the poles are cut into billets, and ground into pulp by a rotating grindstone, with a continuous flow of water ; under the chemical process they are converted into cellulose by the action of sulphurous acid or of caustic soda, or in some other way. The mechanical is the cheaper method. The following species of trees are used, viz., spruce, aspen and other poplars, lime, beech, birch.

"Before the manufacturing process is commenced, the billets are barked and all knots and unsound defects are bored out of them. The extra work involved in doing this adds considerably to the cost of production ; and if knots and other defects are numerous, their removal greatly reduces the bulk of wood-substance available for making pulp. Manufacturers, therefore, prefer to buy straight-grown, clean-stemed poles ; and if they could obtain a sufficient supply of such raw material at a reasonable price in this country, it is hardly conceivable that they would insist on importing it. In a commercial undertaking the manufacturer will buy in the best market, and will feel no prejudice against 'home-grown' wood if it will answer his purpose as well, and if it be cheaper or as cheap as the wood he can obtain from abroad.

"Artifical silk has been spun from cellulose, and ropes have been made from spruce wood by a process which separates out the wood fibres, after which they are twisted together. The same class of wood is required for these industries as for the manufacture of wood pulp.

"Such wood cannot be produced under the system of wide planting and severe early thinning which is so generally followed in this country. To grow poles suitable for the manufacture of wood pulp or wood silk, the plant should be put in not more than 3in. or 3½in. apart, and the wood should not be thinned. The advantage derivable from thus growing the trees are that the stems will be tall and straight, that the substance of the wood will be of the best kind for the purpose, and that the side branches will die young ; the stems will be comparatively free from large knots and unsound defects. But in addition to these advantages, the number of stems to the acre will largely exceed that which would be grown under the system of wide planting and heavy thinning ; so that not only will the material produced be of a quality more suitable to the purpose in view, but the crop will be a much heavier one than could be grown under that system.

"A dense crop of this kind, realised every 15 to 25 years, should pay extremely well, and it would be exposed to very much less risk than if it had to stand long enough to produce timber for sawing ; while, if any accident did befall it, the loss would not be so great as if the crop represented the accumulation of 80 to 100 years' growth."

KIND WORDS.

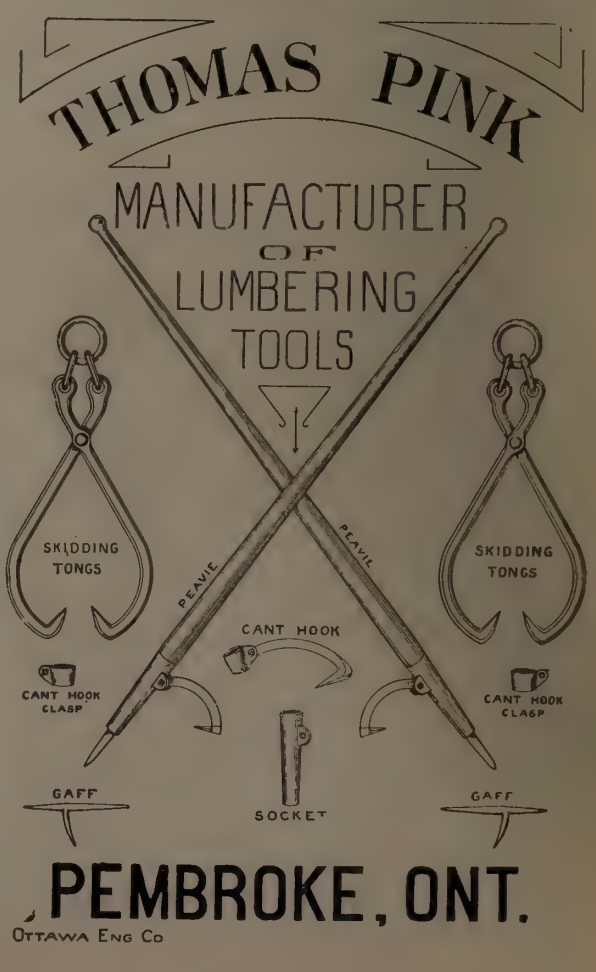
"Would be lost without the LUMBERMAN."—J. O. Gilbert & Son, Bishop's Crossing, Que.

"The LUMBERMAN comes regularly, and I would not like to be without it."—J. Krupp, Metcalfe, Ont.

"I consider the LUMBERMAN indispensable to the trade."—R. Carrol, Clarksburg, Ont.

The annual value of timber imports into Great Britain and Ireland is nearly £18,000,000 sterling, besides a further £8,000,000 a year for "minor forest produce." In addition to these amounts, the import of wood pulp for the manufacture of paper represents an annual value of nearly £1,500,000.

AN oak tree which stands in the middle of the high road leading from Leamington to Warwick is said to mark the centre of England. How long ago it was planted is not known, except by computation from its girth, which is about 12 feet, and shows the tree to be between three and four hundred years old. There is no geometrical centre of England, but tradition has warranty for the importance it gives to this ancient oak. The bole would be cut from Berwick-on-Tweed to Southampton, Carlisle to Selsea Bill, Birkenhead to Eastbourne, Holyhead to Deal, St. David's Head to Lowestoft, Land's End to Ingoldmell's Point, Devonport to Saltfleet, Bridport to Hornsea, Portland Bill to Scarborough, Bournemouth to Saltburn, the Needles to Sunderland, Brighton to Lytham, Hastings to the mouth of the Dee, Greenwich to Abergele, Hythe to Conway, Dovercourt to Bangor, and Harwich to Aberdovey. These are all places on or near the coast, and they do not exhaust the list.



CUTTING MAHOGANY IN HONDURAS.

While the camp is being made the "hunter" is off exploring. The precious swietenia mahogani does not grow in clumps and groves like our pine and walnut, but each monarch stands alone in solitary state, amidst a dense growth of other huge trees, its trunk concealed by a wild tangle of vines, orchids and underbrush, requiring the closest attention of the experienced woodsman to detect it. In a tropical wilderness where the trees are so thick that one can hardly force his way between them, the whole hung with an impenetrable mass of verdure as with a curtain, their mingled tops a solid wall which makes eternal twilight below, and every trunk twined round and round with creepers—it is not an easy matter to distinguish species. The hunter climbs the tallest tree that he can find comparatively clear, and from its top his practised eyes detect the foliage of the coveted mahogany. He then counts the trees in line, notes carefully the direction, distance and every landmark, slides down from his leafy observatory and proceeds to blaze a trial to his "find." This done he marks the trees with his machete and returns to camp. Each man in a company is assigned his particular work—some to fell the trees, others to cut truck-roads through the jungle, others to collect and haul the wood and water, etc. The cutters turn out from camp as soon as it is light enough to see—which in the tall, dense woods means a much later hour than in the regions where the sun has a better chance to show itself; and generally by noon tree cutting for the day is finished. All work is done by the task system, which is said to be the only way of handling native labor; that is, one man's "stent" is to cut two trees, from 8 to 10 feet in circumference; two men are given three large trees to bring down, or four men are detailed to lay low some forest giant, perhaps 25 feet in circumference.

To the tenderfoot that seems a task impossible of accomplishment. Owing to its enormous buttresses the trunk can not be cut near the ground, so the axemen are obliged to rig up a platform, 10, 15, 26 or as many feet high as the buttress extends. These platforms are called "barbecues," though how that word applies nobody but an Englishman who prides himself on correct use of the language can say. The "barbecue" is made of slim poles, one on each side of the tree, on supports, and two other poles laid across them; also, one on each side of the tree. The axman mounts this platform, with one foot on each pole, two men to a tree, on opposite sides, and rapidly fell the tree. It is a marvel how men can stand on these slender poles and chop down enormous trees; but they do it, and quickly, too. In an incredibly short time the stately monarch of centuries totters and falls, crashing its way through the crowd of smaller trees. The trunks and branches are then squared, and are ready for transportation. In felling a valuable tree every precaution is taken against breaking or splitting it, and thus spoiling the lumber. This manner of cutting on a platform seems very wasteful, as it leaves in the stump an average of 400 feet of the best part of the tree, so far as beauty of grain is concerned—to say nothing of the gnarled and twisted roots, which bear the same proportionate additional value that our walnut roots do to the rest of the tree; but no better way has yet been devised. Three hundred trees are considered a good season's work for one camp, each tree yielding 2,000 feet of timber, on a modest estimate of the average.—Quebec Chronicle.

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Choice medium beans	80c. bus.	Dried apples	3¾c. "
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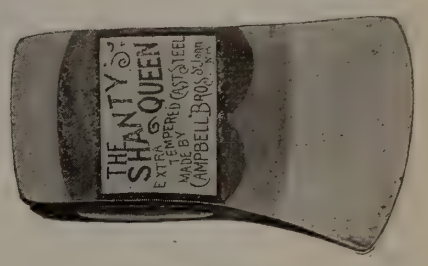

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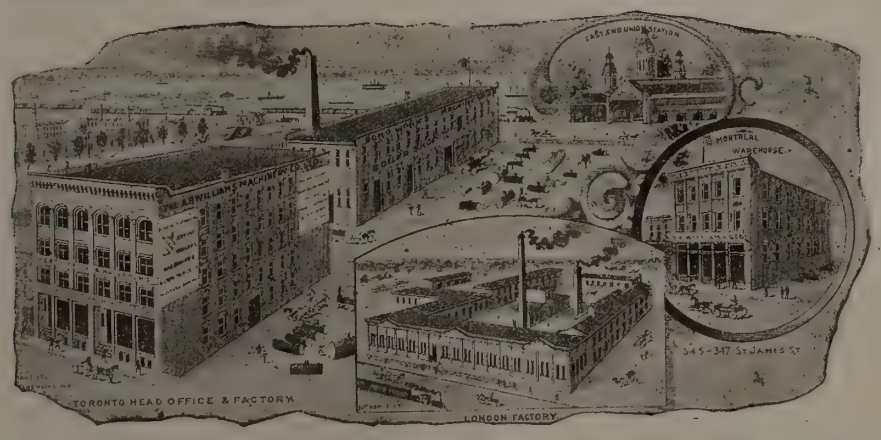

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MAKING LUMBER IN JAPAN.

A writer from Japan says: Lumber is worth about twice as much in Japan as it is in the United States and Canada. Common lumber, which is sold for $10 and $12 a 1,000 feet, will bring 40 yen—that is, $20 gold—in Japan. This is due to the scarcity of timber and the great labor required to work it up by their primitive processes. They have been cutting timber off their mountains in Japan for 2,500 years, and although the forests have been reproduced again and again during that period, it is difficult and expensive to get logs down from the mountain sides in the absence of the necessary facilities. The Japs usually go into the woods and cut one log at a time, which they haul out by hand or by oxen for many miles. When streams are convenient they use them; but they have no saw mills in the mountains, although there is an abundance of water power everywhere. I understand, continues the writer, they have tried them, but have not been successful. They cut all their lumber by hand with a wide and thin saw during a time of the year when they have nothing else to do, and each man that is engaged in business that requires lumber usually buys his own logs and cuts them up himself at odd times. Women and men both work at it. One man or woman will work on the top of the log while another works underneath, but usually not with the same saw. I have seen four or five men working on the same log, each sawing off his own board. They raise the log at an incline of 45°, with one end on the ground and a rest about the middle, and when the work is down to the rest they tie it up and begin at the other end again. All the lumber is dressed by hand. I have found but one planing mill in the country; that is in Yokohama. It employs about 150 hands and, curiously enough, its entire product is made into boxes and shipped to India. It does no business in the local market. The machinery is all from Boston. The manager tells me that the company is thinking of enlarging the plant by adding a sash factory and machinery for making blinds and doors, also for the India market. I do not know why they do not sell their goods in the local market, but I presume there is a good reason for it; perhaps they get better prices for it in India.

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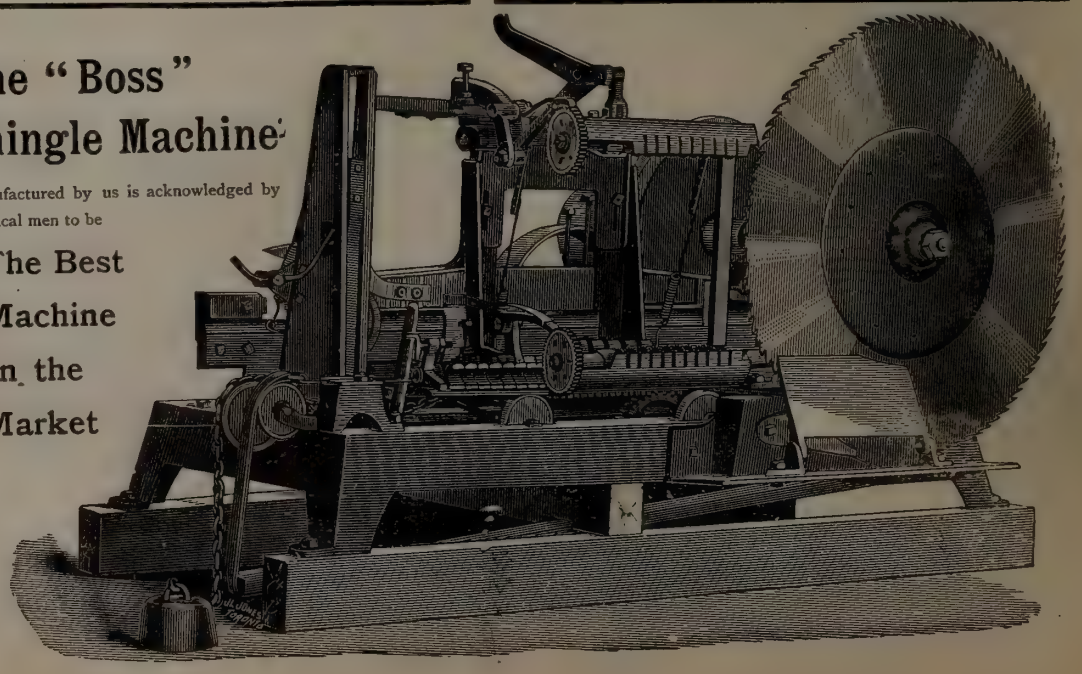

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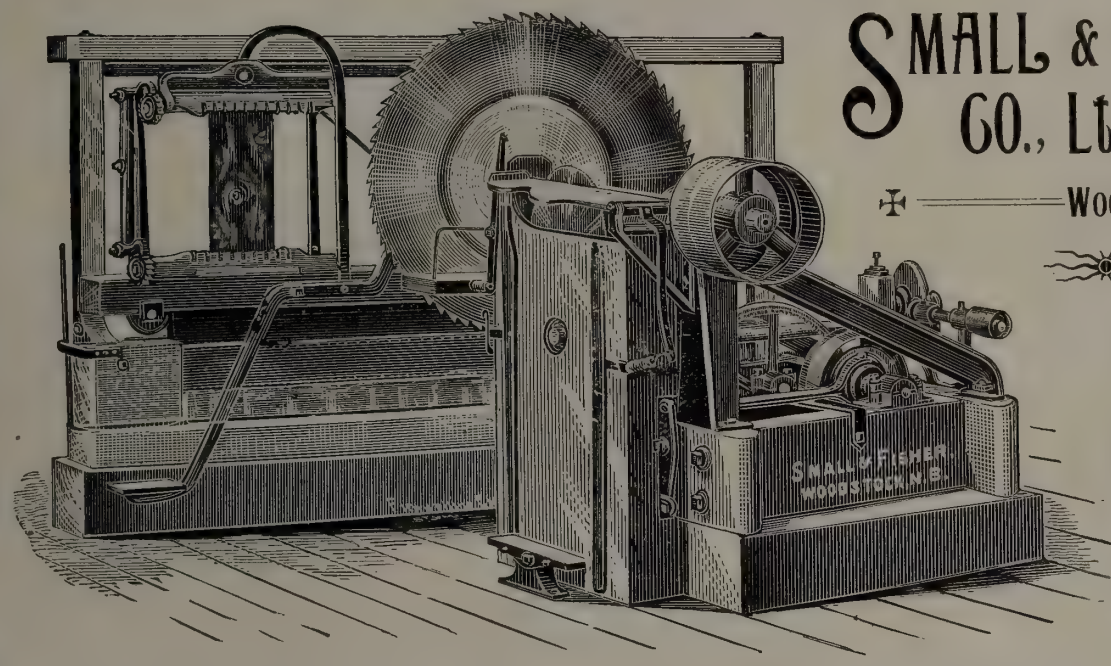

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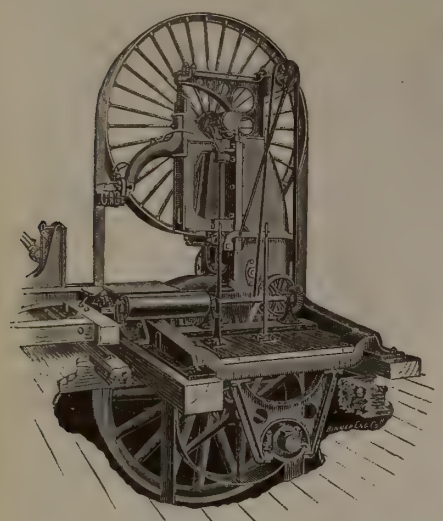

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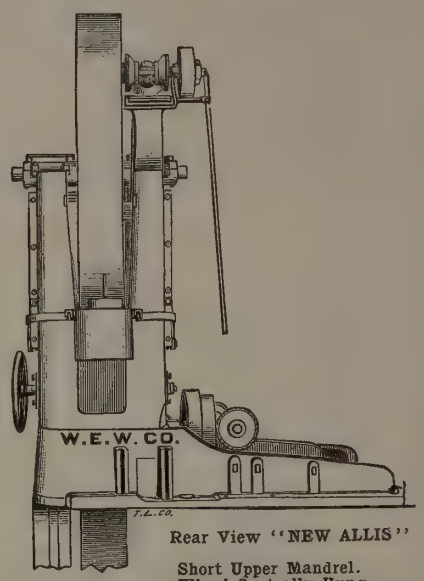

Rear View "NEW ALLIS"

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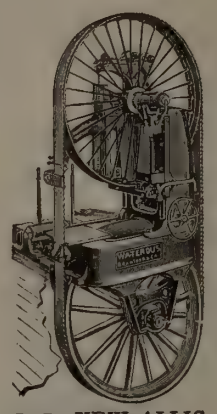

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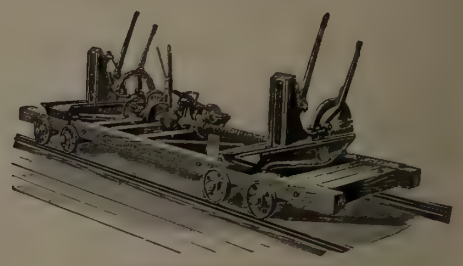

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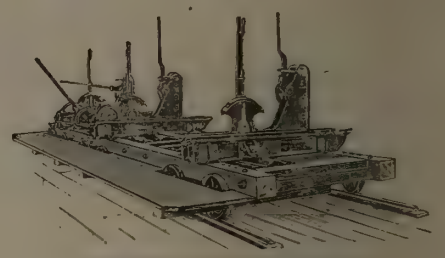

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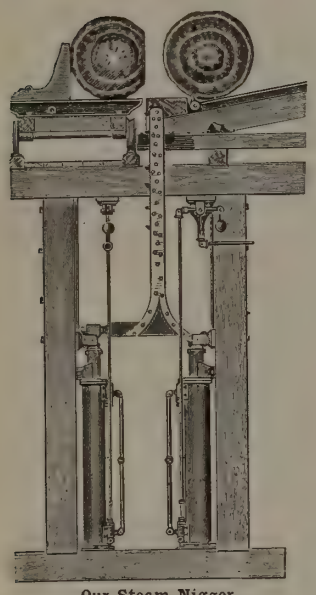

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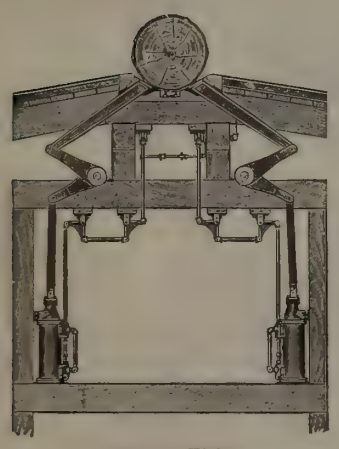

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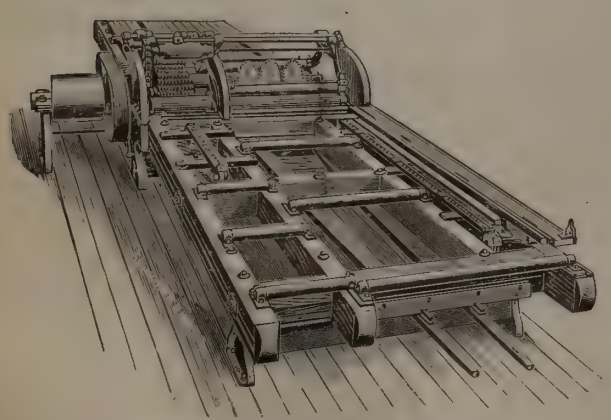

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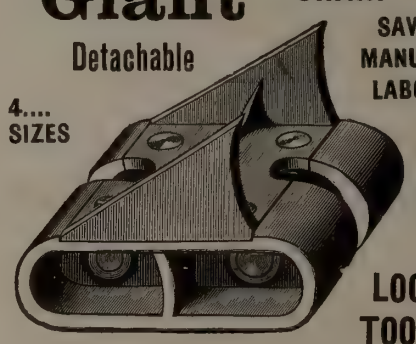

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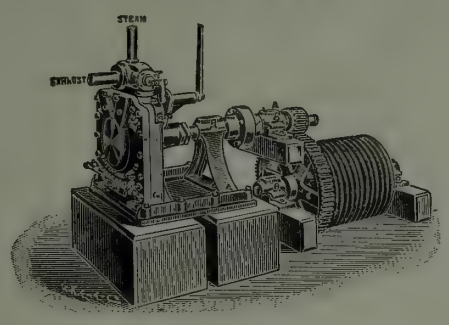

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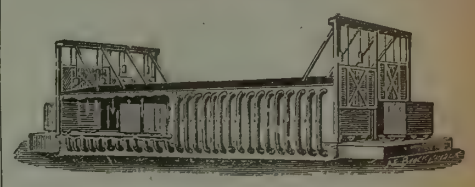

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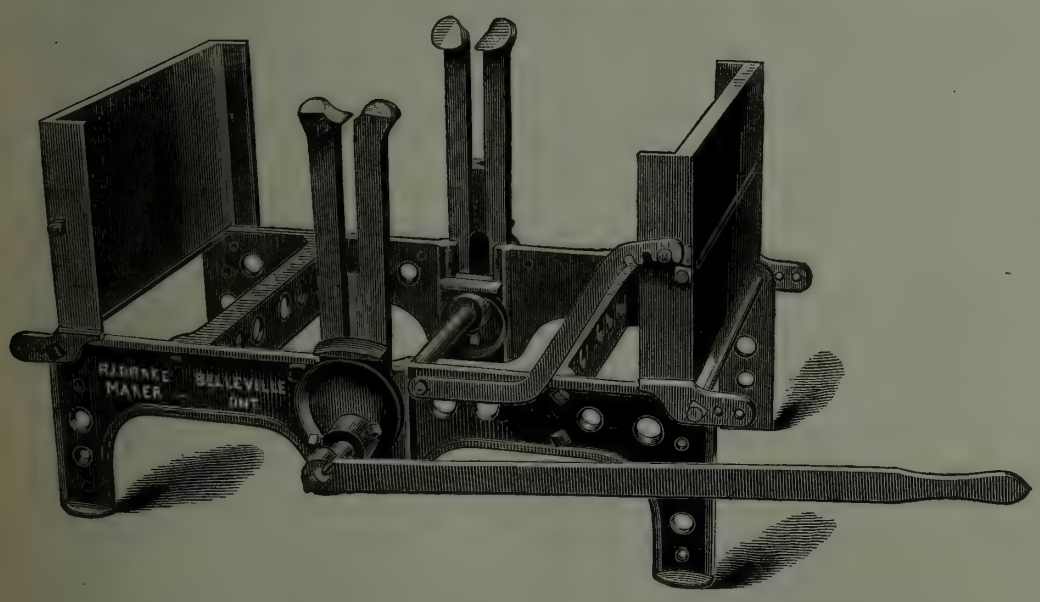

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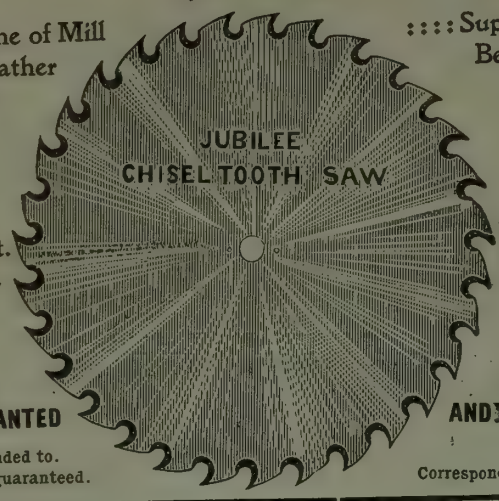

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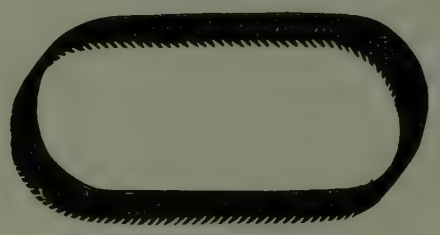
SIXTEEN REASONS, AND HOW TO AVOID THEM



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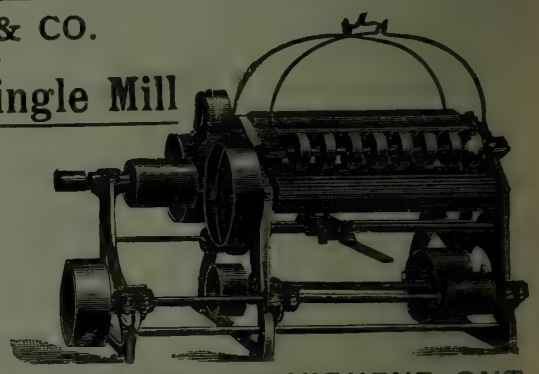

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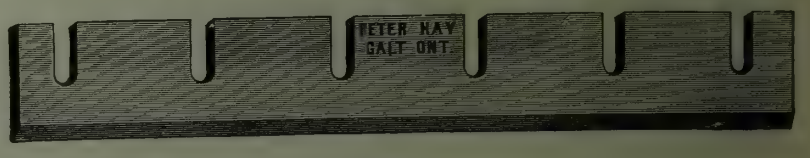

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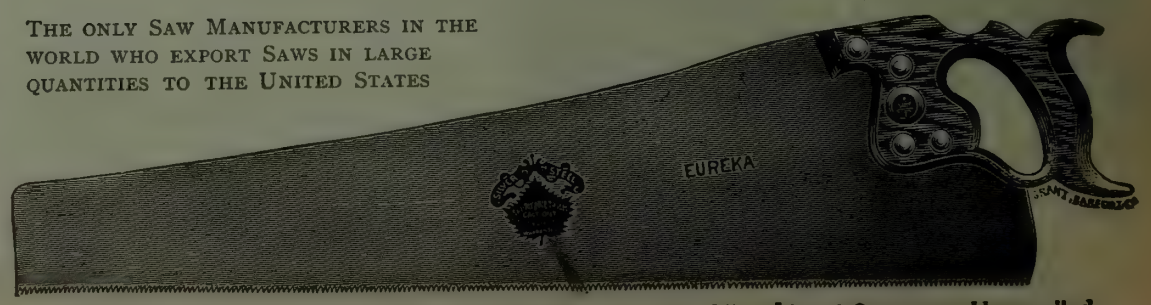

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WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XVII. NUMBER 10. | TORONTO, ONT., OCTOBER, 1896 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

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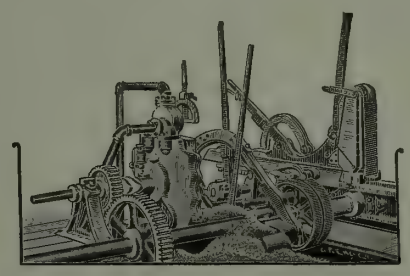
The accompanying cut shows the Dake Engine as attached to saw mill carriage set work. The engine, as shown, is reversible, advancing and receding head blocks at the will of the operator. Does away with coil springs used for receding head blocks, and is a practical assistant to a saw mill carriage, enabling the setter to handle the heaviest logs with ease. Steam is carried to engine by means of steam hose, or by swinging steam pipe with knuckle joints, taken from near the centre of carriage travel. As applied to carriage work, it has been in actual operation for over a year.



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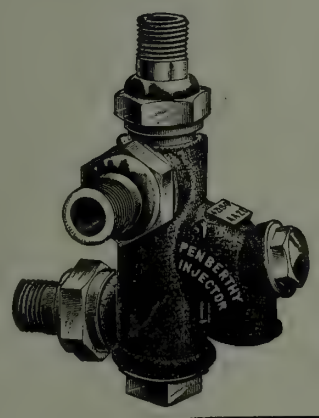

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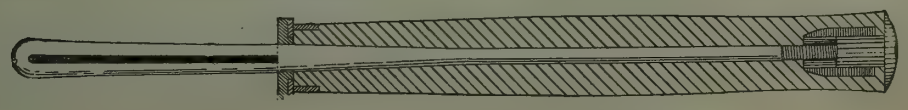

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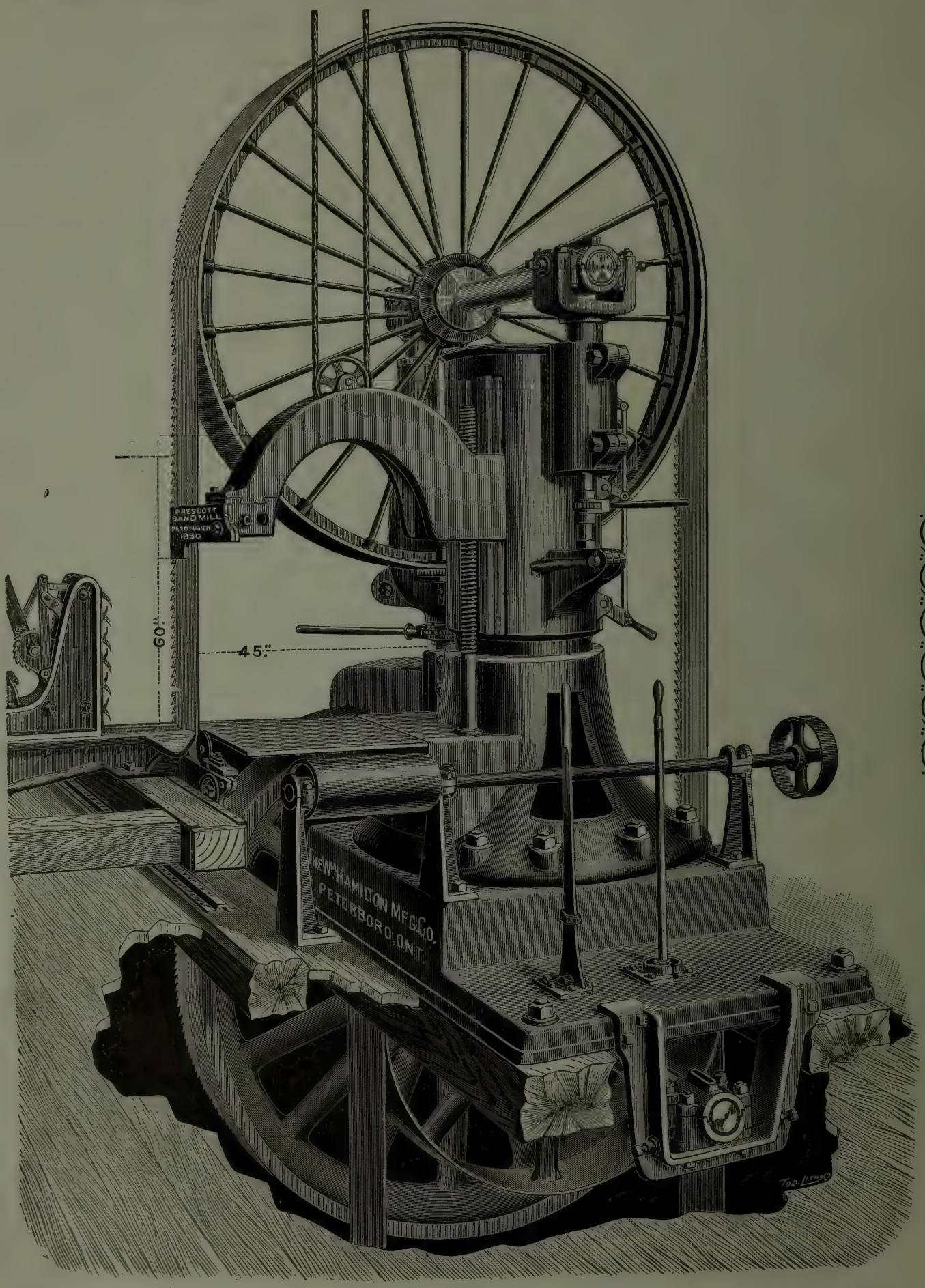

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THE CANADA LUMBERMAN

VOLUME XVII. NUMBER 10. | TORONTO, ONT., OCTOBER, 1896 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

BY THE WAY.

DR. NANSEN made his recent Arctic expedition in a vessel built of Douglas fir, which he is said to have chosen in preference to all other woods. The logs from which his ship was built were cut from the forests of Washington. During the voyage the ship was subjected to great hazard from ice floes, as is shown by the following dispatch to the London Chronicle: "We were regularly exposed to violent pressures, caused by the changing spring tide. The "Fram" was once or twice lifted from six to nine feet. The bottom became visible and rested on the ice. So little effect did this have on the ship's timbers that the men continued their slumberings undisturbed."

* * *

IN the West Coast and Puget Sound Lumberman we find the following remarks relating to a former Ontario lumberman: "Mr. T. H. DeCew, who is now the owner and operator of the Ainslie mill at Ainslie, was in Tacoma last week superintending the loading of 200,000 feet of lumber, which he is furnishing as a part of the cargo of the "Aida," for China. The timbers are 24′ × 24″, 40 to 100 feet. Mr. DeCew is well pleased with his plant. It has a capacity of 100,000 feet per day, but his average cut now is about 50,000 ft. daily. He has 100,000,000 feet of timber accessible to his plant, and when that is exhausted he may remove the plant to his tract of 3,700 acres of timber land near Albany, Ore. His eldest son is conducting the business which they are closing up at Essex, Canada, and will also remove to Washington at an early date. Mr. DeCew has been shipping most of his output thus far by sea, loading at Kalama. Last month he shipped a cargo of 300,000 feet to South America."

* * *

CANADIAN spruce is rapidly becoming in favor in many of the foreign markets of the world. Within the past fortnight Messrs. W. H. Crossman & Bro., of New York, have shipped two cargoes from St. John, N. B., to South America. This firm ships annually millions of feet of lumber to that market, their vessels loading at Portland and Philadelphia. Should the recent shipments from New Brunswick prove satisfactory, however, they will no doubt be followed by others. Mr. Tordoff, inspector for Messrs. Crossman & Bro., made the following statement regarding the quality of the shipment: "I am agreeably surprised at the quality of the lumber being sent to the vessel by Cushing & Co. I have in my time inspected cargoes of spruce and pine at almost all the important shipping ports in Canada and the United States. The pine lumber cut on the Ottawa has always enjoyed the reputation of being the finest lumber taken out anywhere. This is hardly to be wondered at, because pine being a softer wood, is much more easily prepared for market. But the spruce lumber which Cushing & Co. are supplying for this cargo is the equal in appearance and quality of any lumber I have ever seen. It is fully as good in point of manufacture as the best Ottawa pine it has ever been my duty to inspect, and I have handled some of the choicest cargoes ever loaded. This is a general cargo as far as sizes go, and I can safely say that no fault can be found with a single piece of it. I am satisfied Messrs. Crossman will soon take a place among the largest shippers of lumber from St. John to the River Platte. The demand for spruce lumber out there is ever on the increase."

OPENING OF THE FOREST CAMPAIGN.

"Make we here our camp of winter,
And through sleet and snow,
Pitchy knot and beechen timber
On our hearth shall glow.
Strike then comrades—trade is waiting;
On, our rugged toil,
Far ships waiting for the freighting
Of our woodland spoil."—WHITTIER.

FELLING A TREE.

FELLING a tree is an art. All woodmen agree that there is a "knack" or "sleight" about it. The man who leaves a "fox-eared" stump is a hacker and not a chopper. Usually there is very little that is commendable in the ways of woodmen. When they are careful, however, they should have the credit of it. It is quite the custom in the pine woods of Southern New Jersey to leave seed trees, and, what is still more commendable, they leave the smooth bark (Pinus echinata) and not the rough bark pine (Pinus rigida). This is practising forestry in a very crude way. A few choppers burn the limbs after them—that is, they fell a strip of trees to the left, then the neighboring strip to the right, so that the tops and limbs form a windrow. If the wind is right they burn it, and in that way reduce the danger from fire in summer, and destroy what may become a breeding place for pestiferous insects. A good chopper leaves the proper kind of stump. If it is pine there is no difference, since pine produces no coppice growth of value, and the stump soon decays. If it is oak or chestnut it is an important matter. A good chopper cuts a tree close to the ground and leaves a clean sloping top to the stump. If the bark is not split and the cut is clean it will not rot, and the coppice growth which follows will be healthier and in ten or fifteen years fit for fuel. There is no reason for using such large fire-wood. Although more tedious to cut in the woods, there is more of it in the same bulk, it is more easily handled, easier to cut and split on the wood-pile, dries quicker and makes a quicker and a hotter fire.—The Forester.

The British Columbia Mills, Timber & Trading Co., of Vancouver, B. C., will put in four new planers in the near future.

Several specimens of railway ties made from British Columbia fir have been sent to China for inspection by the Chinese Government, there being a strong possibility that they will be adopted in the construction of new railroads.

CORRESPONDENCE

Letters are invited from our readers on matters of practical and timely interest to the lumber trades. To secure insertion all communications must be accompanied with name and address of writer, not necessarily for publication. The publisher will not hold himself responsible for opinions of correspondents.

THE CULTIVATION OF FOREIGN MARKETS.

OTTAWA, Sept. 11th, 1896.

To the Editor of the CANADA LUMBERMAN:

DEAR SIR:—I have noticed, with great pleasure, the active interest that you have been taking through your paper towards opening up new fields for the consumption of our Canadian wood products, and I am sure that some of your remarks cannot help but bear fruit. Although I am rather averse to needless speculation, I must admit that I think that the majority of the Canadian lumber dealers are inclined to be a little too conservative as regards sending their wood goods into a market that is not thoroughly conversant with our trade. Of course, there are evils to contend against before a new market can be opened up, but on the other hand, once the trade is understood and a satisfactory arrangement can be arrived at, then you have the satisfaction of knowing that the business is not so over run that you have to sell your goods at a most unsatisfactory figure or else retire in favor of some hawker who is able to place some job lots at a sufficiently low figure to fill the requirements of a glutted market. One has not to look back very far to remember the time when there was little or no Canadian woods sent to the European trade, other than square timber; then as trade developed we saw the introduction of three inch deals, and now even these are to a certain extent being replaced by smaller sizes, such as 1, 1¼, 1½ and 2 inch. How have these changes been brought about? It was by the introduction of these lines into the different markets on a small scale; then as the success of the venture was proven, larger consignments were sent forward, until we have not only shown the superiority of our goods and our manufacture, but we have tended very largely to cause quite a reformation in that trade. Of course we cannot take all the credit to ourselves, for had it not been for the foresight and push of some of the large English dealers this movement would have been greatly retarded. Now that we have met with such success with our pine, why should we stop there. One has only to take up one of the European import returns to find the large quantity of hardwoods which they receive from the United States and other countries, which to a very large extent should come from Canada. The hardwood lumber trade of Canada is just in its infancy, and it is very liable to remain so unless there is some effort made both on the part of the Canadian government and the manufacturers to improve the state of affairs. First of all, we want to find a market to enable us to take it out in paying quantities and to manufacture and handle it as the species and quality requires. At present you will see distributed all through the country small mills everywhere from six horse power up. To these the farmers draw a few logs, which are sawed in a very inferior manner and graded in any way to suit the convenience of the "manufacturer." These men find the name of someone who purchases hardwoods, and write offering their firsts and seconds, which may be principally culls, at an absurdly low figure. They get their order to ship, and when the lumber arrives at its destination, of course there is a huge kick and a corresponding reduction by consignee, who even then finds the article unsuitable and injurious to his trade.

You will admit that this is not the way to advertise our goods, which if done in the proper way, would hold their own with any in the world. While in New York some months ago I met a large dealer from Germany who told me that he had come over to the States to purchase some hardwoods. He informed me of a mill in the state of New York where he had purchased a large quantity of ash and maple. I asked him why he did not try Canada for these woods, but he said that he had once tried a small shipment and found the quality of the wood and the sawing was not in any way equal to that grown and manufactured in the States. A short time after this I had occasion to visit the mill in question, and was surprised to hear that all the hardwood logs which they were manufacturing had been shipped to them from Canada, and that the States were getting the credit for producing an article which rightly belonged to Canada. This is only one instance of many that might be recorded in which other countries are obtaining the cudos which we should use every effort to retain ourselves.

Although the pine industry is likely to remain the chief wood trade of Canada for years to come, still these is no reason why such a valuable factor as our hardwood trade should be kept in the background, and I trust that through the good influence of your paper, the proper authorities will be induced to use every effort to further the interests of an industry that would give employment to large numbers and place a value on thousands of miles of timber territory which are now considered valuable only as a means of supplying fuel.

Yours very truly,

E. C. GRANT.

MARITIME NOTES.

[Correspondence of the CANADA LUMBERMAN.]

AFTER a couple of months of compulsory vacation consequent on a too close attachment of your correspondent's principal writing fingers with the janiter knives of a clapboard machine in a mill he was visiting—in which the fingers came off a very poor second—it will be in order to again take up the broken thread and begin again.

Mr. Kilgour Shives, Campbellton, N. B., has a fine steam power saw and shingle mill, containing gang, patent edger, slab slasher, trimmer and resaw machine, for the manufacture of long lumber. In the shingle mill he has nine machines, eight Dunbar and one made in Ontario, large circular saws for cutting the logs in lengths required for shingles, and a saw splitting machine used to divide the large bolts into sizes suitable for the machines without waste, as is the case where winding or twisted bolts are split with an axe. The shingle bolts, after being prepared—sapped and quartered—are thrown into a sluice that lays on the floor a little behind the operators, in which runs an endless chain, one man thus being able to take the bolts from the sluice and place them within reach of the men operating the machines. There is a large amount of refuse, such as bark, heart, sawdust, etc., from cedar—which is used for shingles—which would entail a great amount of labor to get clear of, but Mr. Shives, with his characteristic enterprise, erected a large brick furnace two years ago, into which a large endless chain sluice dumps all the refuse of both the shingle and saw mills. Small sluices lead from the different machines to the main sluice; there is also a sluice leading to the fire room. Mr. Shives being located in the growing town of Campbellton, finds it more profitable to cut his slabs and edgings into fire wood than to make laths, and finds ready sale in the town for all he can make. In long lumber he cuts deals for the English market, but takes advantage of his logs as to lengths and size for the American and South American markets. The higher grades of shingles are shipped to Boston and other points in the Eastern States, the lower grades going to Prince Edward Island and Nova Scotia. Mr. Shives operated his mill day and night this season, and has a very nice electric plant for supplying light to the mill, yard and pond, also to his store and machine shop. The capacity of the gang mill is about 50,000 feet and 15,000 shingles each machine, per day of ten hours. The logs to supply the mills at Campbellton come down the Restigouche river, the boom and rafting grounds being at Flatlands, some five miles above the town. Large vessels take half their cargo at the wharves and the remainder of their cargo is lightered to them. Norwegian vessels have been doing the principal foreign lumber trade from all northern New Brunswick and Quebec ports along Bay Chaleur, but steamers are finding their way there and will no doubt make their presence felt.

A. E. Alexander, Mayor of Campbellton, has the largest and one of the most complete shingle mills on the north shore of New Brunswick. It is equipped with thirteen Dunbar shingle machines, with circular and drag cut-off saws, saw splitting machine for large bolts, sluice with delivery chain for supplying bolts to the different machines, refuse and fire house endless chain sluices, suitable to the conditions, which enables him to get rid of the refuse at very little expense. The cedar logs are cut on the Restigouche and Metapedia rivers. Mr. Alexander ships largely to the United States markets by rail, having a siding run into the mill yard. The mill has been run day time only, as Mr. Alexander runs some small mills in the woods in the winter and takes the output of some other mills, which gives him a sufficient stock to supply his requirements. Besides milling Mr. Alexander is the largest general merchant in northern New Brunswick, and in both his mill and stores one can see a general air of prosperity which such an enterprising man richly deserves.

W. P. Gray has a four machine shingle mill in the town and does a very nice business. He has the advantage of most shingle mill owners, in that he has come up from the ranks—as the saying is—and has the practical knowledge necessary to enable him to take a hand at any part of the work in a shingle mill. Mr. Gray runs one of the two machines all winter.

W. W. Doherty has a steam power gang and circular saw mill, with patent edger and lath machine. This is a new mill built to replace one burned last year. Mr. Doherty saws for David Richards, principally deals for the English market. The capacity of the mill is about 70,000 feet per day. He has also been mayor of the town, and is a genial, whole-souled man whom it is a pleasure to meet, as are all the mill-owners in Campbellton.

About one mile below town David Richards has built a very fine mill, in which at present he has three Dunbar shingle machines and two clapboard machines, with all the necessary machinery for doing the work intended to the best advantage. The mill was built with a view of adding either a gang, circular or band when conditions warrant an increased output. Mr. Richards is a large lumber operator, as besides supplying stock for his own mill, he stocks several other mills, both on the New Brunswick and Quebec sides of the river. He also takes charge of the logs coming down the river to the booms, where he rafts and tows to the several mills as needed. Mr. Richards has built up quite a village near his mill, and shows good taste in the pretty houses he has built and their neat surroundings. He is the pioneer in the clapboard business on the North Shore. Knowing what was required he had the machines built to suit the conditions, with the result that they do the work required of them without any hitch or trouble. The logs suitable for clapboards are sorted at the boom, so that the very best stock only is used in their manufacture; they are taken from the saw and properly air dried, then planed and jointed by a machine made specially for that work, sorted into the respective grades, 1st, 2nd, 3rd and 4th, then either put into the warehouse or car for shipment, the Eastern States and Quebec being the principal market for them.

Across the river from Campbellton, at Oak Bay, Que., J. D. Sowerby has a gang mill with circular, patent edger, resaw and four shingle machines, which are fully employed during the sawing season. Mr. Sowerby has another mill which he runs in the winter. The power at Oak Bay is a combination of steam and water, and has, it is said, the second largest water wheel in existence, being 52 feet in diameter and about seven feet wide. It looms away above the top of the mill and reminds one of the ferris wheel as it slowly revolves. The power was not sufficient, so steam was added and now does good work. Mr. Sowerby had the misfortune to have his dwelling and store burned some two or three years ago, but now has rebuilt and dispenses a welcome cordiality to the wayfarer in need of refreshment, without money and without price, in his beautiful home. May his shadow never grow less.

W. J. P.

AN UP-TO-DATE JOURNAL.

MESSRS. John Piggott & Sons, Chatham, Ont., in remitting the amount of their subscription to the CANADA LUMBERMAN, write: "We find a good deal of information in its columns, and think the parties from one of our neighboring towns, who wrote you some time ago forbidding it in their office, are not up-to-date lumbermen."

THE LUMBERMAN'S BEST GUIDE.

MR. E. Errett, of Merrickville, in asking that the LUMBERMAN be discontinued for the reason that he is going out of the lumber business, says: "I may just say that in closing my connection with the CANADA LUMBERMAN I am parting with the best guide extant to every man engaged in the lumber trade."

According to the report of the Forest Warden of Minnesota, there still remains in that state 10,890,000 acres of forest land, covered with 19,000,000,000 feet of white Norway pine. The annual destruction amounts to 1,800,000,000 feet.

OBITUARY.

THE LATE JOHN WILSON.

Towards the close of July there died in the city of New Westminster, B. C., Mr. John Wilson, manager of the Brunette Saw Mill Company. For some years past Mr. Wilson had not enjoyed good health, and had taken several vacations in the hope of regaining his strength. A visit to San Francisco was not attended with beneficial results, and latterly he found it necessary to entirely abandon the cares of business. He returned from a trip to Plumper's Pass only a few days before his death.

Deceased was a native of Ontario, having been born at Appleton, county of Lanark, on April 20th, 1846. He had been connected with the lumbering business for many years, and previous to going west was in the employ of Mr. J. R. Booth, of Ottawa. He entered the employ of Mr. Booth in the year 1868, when the business was in its infancy, and was the first shipper. He introduced the

The Late John Wilson.

system of shipping by car and boats now in use, which has given every satisfaction to Mr. Booth's patrons. He was Mr. Booth's first agent to inspect the logs and timber produced at his shanties, which duties Mr. Booth performed himself in the early years of the business. He also inspected a great many limits, which Mr. Booth purchased on his report of same. His relations with the men under him were of the most friendly nature, and it was a matter of regret to them when he severed his connection with Mr. Booth in the year 1890, and removed to British Columbia. In the following year he assumed the management of the Brunette Saw Mill Company at New Westminster, which is composed largely of Ontario stockholders. Mr. Wilson at once set to work to extend the trade, and had exceeded admirably when in July, 1895, the large mill of the company was completely consumed by fire. The disaster somewhat disorganized the company, and it seemed doubtful for a time whether any action would be taken towards rebuilding the mill. But after Mr. Wilson had conferred with the leading eastern stockholders, its reconstruction was decided upon, and renewed efforts were put forth to re-establish the trade of the company. The very onerous duties this involved, however, proved too great for his vitality, and he was finally compelled to resign his position.

As a business man the late Mr. Wilson was widely known and highly esteemed, and during his short residence in New Westminster he accomplished much towards the advancement of the commercial interests of the city. He held the position of president of the Board of Trade for two years, and at the time of his death was vice-president of that organization. Of a kind disposition and urbane manner, his loss will be keenly felt by the vicinity in which he lived. He was an attendant of St. Andrew's Presbyterian church, and took an active interest in its affairs. He leaves a widow and daughter. Mr. Robert Wilson, of the Ottawa, Arnprior and Parry Sound Railway, Ottawa, is a brother of deceased.

THE LATE C. H. DAVISON.

By the death of Mr. Charles Henry Davison, which occurred on the 27th of August, the village of Bridgewater, N. S., loses one of its most enterprising and esteemed citizens. After a severe and extended illness, he passed away at the age of 57 years. Deceased was the eldest son of the late E. D. Davison and was born at Mill Village, Queens Co. He received his education at Mt. Allison, Sackville, N. B. About the year 1865, in conjunction with his father, he started the widely known firm of E. D. Davison & Sons, at Bridgewater, which has since been changed to the E. D. Davison & Sons Co., Ltd., and of which he was president.

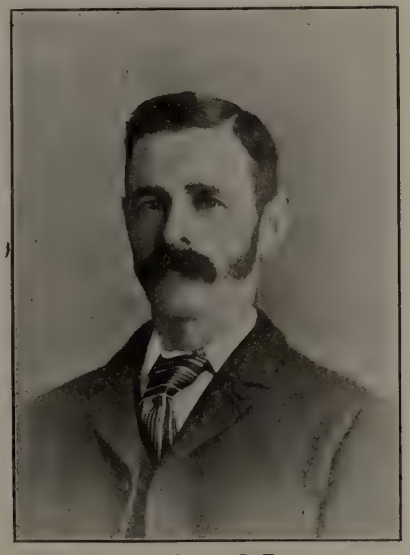
His thorough knowledge of the lumbering business, his excellent judgment and upright business methods were elements which aided his success in business. Notwithstanding the demands of business he allowed himself to be elected to the local legislature of the province when Hon. M. B. Desbrisay, the member, was appointed to a judgeship. Mr. Davidson only sat two sessions, but during that time was able to do signal service for his country in connection with the then new railroad enterprise. He was a staunch Liberal.

In private life Mr. Davison was of retiring disposition. He was married in 1874 to Miss Annie F. Foster, and leaves a family of three children.

THE LATE WALTER S. TENNANT.

In lumber circles throughout Ontario few persons were better known than the late Walter S. Tennant, who for the past ten years had been connected with that industry. His death, which took place at Toronto on the 11th of August, was learned with profound regret. He was a successful and energetic salesman, and to his customers was a welcome visitor. It is said of him that he never allowed his anger to rise under any provocation whatever.

The late Mr. Tennant was born in November, 1854, in the township of Blenheim, Oxford county, Ontario, of Scotch parentage. He was educated at the public schools in his native township until 14 years of age, after which he spent two years under the tuition of Mr. A. S. Cruikshank, of Hamilton, who fitted him for a teacher. His next two years were spent in teaching school, but not liking the profession, he next learned telegraphy, and was for many years in responsible positions on the Great Western Railroad. Leaving that service in 1880, he was for six years express and ticket agent at Paris, Ont. In 1886 he came to Toronto to enter the lumber business, for a time being in the employ of Messrs. F. N. Tennant and Christie, Kerr & Co. In 1889 he formed a partnership



The Late Walter S. Tennant.

with his brother, Mr. James Tennant, as wholesale lumber dealers, the firm being known as James Tennant & Co., and continued in this connection until the time of his death, which resulted from typhoid fever, after an illness of ten days. In 1882 he married Janet, daughter of John McKimmie, of Niagara-on-the-Lake, who survives him. He leaves six children.

One of the timber slides on the Lake St. John Railway, which cost the government about $50,000, was abolished in 1894. The slidemaster, however, has been drawing $45 per month ever since as superanuation. The Minister of Justice has now decided that when the office is abolished the superanuation is abolished along with it.

It is estimated that 45 per cent. of the lumber produced in the United States is used up in the manufacture of packing cases of one kind and other. In the shipment of eggs to market $500,000 worth of cases are used annually. It is also stated that 12,600,000 feet of lumber is consnmed in the manufacture of canned corn cases alone. In the shipment of canned tomatoes 25,000,000 feet of lumber is required in the shape of boxes.

THE LEARY RAFT.

Capt. Wm. B. Hiller, of New York, states that on July 1 last he discovered, some 500 miles off the coast of Labrador, the celebrated Leary raft, which was lost some years ago. It was headed south-west, he says, but was not making much more headway than a foundry. The raft is larger than any ocean liner, and it would be an ugly customer to meet under the condition of a 20-knot gait and a dark night. Other mariners and the Collector of New York laugh at him and declare the raft has broken up long ago.

James D. Leary, of St. John dock fame, who first conceived the plan of transporting lumber at sea by means of a raft, was recently interviewed. "I think Capt. Hiller's story to be very probable. I was employed personally in the construction of this raft and I know that it was constructed as strong—if not stronger—than many ocean steamers. Its general compactness and solidity made it almost as inseparable as one great massive log.

"This raft was the largest by some 300 feet of any ever shipped by sea. In fact it was too large. Nothing like it is now attempted. It was constructed on an improvised dry dock at Two Rivers, Nova Scotia, in the fall of 1890, and launched on the plan of an Atlantic liner's launching. The largest rafts we now undertake are 300 feet long and weigh about 4,000 tons. The one we lost was 600 feet in length—longer than any liner. It weighed 10,000 tons.

"When completed the structure contained 25,000 sticks of spruce and pine timber, from 35 feet to 95 feet in length and a good quantity of beech, birch and maple, making a total of 4,500,000 feet of timber. The diameters of the logs ran from 12 to 35 inches at the butts, and from six to ten inches at the tips. At the time it was launched and ready to be towed the raft had cost us about $32,000 and the contract price for towing it to our Long Island yards was $3,500."

HINTS FOR THE SAW MILL.

Clean and oil leather belts without taking them off their pulleys. If taken off they will shrink; then a piece must be put into them and removed after the belt has run a few days.

Look well to the bearings of your shaftings, engine and machines. Sometimes twenty-five, thirty, forty, and even fifty per cent. of your power is consumed through lack of good oil.

Set an engine upon three or four movable points, as upon three cannon balls. Connect with steam and exhaust by means of rubber hose. If the engine will run up to speed without moving itself back and forth, then that engine will run a long time without repair. If it shakes itself around the room then buy another engine.

Safely moving a tall mill chimney has been accomplished several times. Chimneys which have been caused to lean slightly through settling of the foundation may be straightened up again by sawing out the mortar between courses of brick at the base. A chimney 100 ft. high and 12 ft. square at the base will be varied over 8 in. at the top by the removal of 1 in. at the base.

For leading steam joints, mix the red lead or litharge with common commercial glycerine instead of linseed oil.

When you begin to fix up the mill for cold weather, don't forget to put a steam trap in each and every steam pipe, which can be opened into the atmosphere for heating purposes.

In tubular boilers the hand holes should be often opened and all collections removed from over the fire. When boilers are fed in front and are blown off through the same pipe, the collections of mud or sediment in the rear end should be often removed.

Nearly all smoke may be consumed without special apparatus by attending with a little common sense to a few simple rules. Suppose we have a battery of boilers and "soft coal" is the fuel. Go to the first boiler, shut the damper nearly up and fire up one half of the furnace, close the door, open damper, and go to the next boiler and repeat the firing. By this method nearly, if not quite, all the smoke will be consumed.

A coiled spring inserted between engine and machinery is highly beneficial where extreme regularity of power is required. It is well known that a steam engine, in order to govern itself, must run too fast and too slow in order to close or open its valves, hence an irregularity of power is unavoidable.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

MONTHLY AND WEEKLY EDITIONS

C. H. MORTIMER
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ADVERTISING RATES FURNISHED ON APPLICATION

THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the tr[illegible] Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

TO VISITING LUMBERMEN.

Lumbermen visiting Toronto are invited to use the office of the CANADA LUMBERMAN as their own. We shall take pleasure in supplying them with every convenience for receiving and answering their correspondence, and hold ourselves at their service in any other way they may desire.

SPECIAL NUMBER OF "THE LUMBERMAN."

THE November number of THE CANADA LUMBERMAN will be a "Special Number" as regards appearance, size, contents, and the number of copies to be printed. It will be attractive in appearance, large in size, and will be in an unusual sense representative of the lumber and wood-working interests of every part of the Dominion. It is the intention to place a copy of this issue of THE CANADA LUMBERMAN in the hands of every person in Canada who is known to be connected with the lumber and wood-working industry. Several hundred copies will also be mailed to buyers in foreign markets. Advertisers desirous of reaching the above mentioned constituency should write the publisher at once regarding space in this number. The opportunity to thoroughly cover the field at a reasonable cost is one which no wide-a-wake advertiser should miss.

OUR HARDWOOD SUPPLY.

THERE is evidence of the fact that under the direction of Mr. Southworth, the Department of Forestry in connection with the Ontario Crown Lands Department will do a more valuable work in the future than in the past. Systematic methods of collecting and compiling information relating to the timber resources of the province are being adopted and put in operation, from which in the near future good results are likely to be seen.

One direction in which the Department might expend useful effort, would be in locating the districts in which hardwoods grow, and in collecting data regarding the extent of the available supply of each particular variety of hardwood. There exists at present an ill-defined idea that the province has a considerable supply of hardwood. Just where it is to be found, and where to look for a particular variety, are matters of the greatest uncertainty to lumber buyers both at home and abroad. Information on these points would be of the highest value, and will, we trust, be made available by the Forestry Department before many years shall have passed.

Hardwoods are becoming increasingly valuable, and if the extent and character of our resources were known, we should be in a position to estimate their present and future value.

METHOD OF LOADING LUMBER ON CARS.

MUCH ignorance and carelessness may frequently be observed in the manner in which lumber is loaded on cars. From this results loss and annoyance to both shippers and the railway companies. Thirty thousand pounds is the minimum weight fixed by the railways for a car of lumber. If the shipper permits his men to guess at the weight instead of arriving at it by some exact process, the cars will often be underloaded, and a percentage of the money paid as freight charges will be thrown away. In the event of cars being subjected to an overload, as frequently happens where guesswork methods are employed, the stakes are liable to give way, causing damage and delay both to shipper and carrier.

With the object of lessening the annoyance and loss arising from ignorant and careless loading, the Master Car Builders' Association of the United States has formulated certain rules for loading, including tables showing the maximum height for loading different kinds of green lumber, based on the ordinary width of cars between stakes, of 8 feet 6 inches. Following is a digest of the general instructions as to loading :—

1. When two or more cars have to be used to carry a lading, the consignee and destination of all the material must be the same. When more than one car is used the lading must always be kept clear from the floors of the cars, whether a carrying car or an idler. Both cars carrying the load must be considered for the same capacity as the one of lesser capacity. Flat cars must always be used for loading lumber too long for one car. On single cars or the extremes of a group of cars, the lading must not extend beyond the end sills.

2. If the lading consists of piles or telegraph poles or other round timber, they must rest on bearing pieces not less than 10 × 10 inches in section and be loaded with the butts and tops alternating, and if the lading occupies two or more cars, each tier must be separated by strips over the bearing pieces and must be well wrapped with wire around the middle and both ends to prevent the shifting, and in all cases there must be two pairs of stakes at each end of lading, and securely fastened.

3. Where the lading projects so as to necessitate the use of an idler, and there is sufficient material in one consignment, another car may be loaded in reverse order and one idler serve for both cars, and the space between projecting ends may be utilized to load the idler with short lumber; but in all cases there must be at least two feet between the ends of such ladings. The lading of the idler must not exceed two-thirds its marked capacity.

4. Where the dimensions of bearing pieces are not otherwise specified, they must not be less than 8 × 8 inches in section, and extend the full width of car. They must never be placed between the bolster and the end of the car, but either between the bolsters or directly above them. When there is but one bearing piece it should not be less than 22 inches from the centre of bolster.

5. Where maximum weights are not specified in these instructions, the usual excess will be allowed.

6. All stakes must be sound, straight-grained lumber, free from knots (hardwood preferred), and of full size to fit stake pockets. Care must be taken to keep the stakes from spreading at top while cars are being loaded, and in no case must the load exceed the width of the car.

7. Opposite stakes must always be fastened together. In cases where the lumber is confined to one car and does not project beyond the end, the stakes should be secured at the tops, either with wire or boards. In cases where the load projects beyond the end of a car or is carried in two or more cars, the stakes must be secured at the tops with wire, but if the load exceeds three feet in height, the stakes must be secured at the middle with wire and at the tops with either wire or boards. The wire used should be equal to six strands or three wrappings of No. 8 telegraph wire, and the stakes must be notched to prevent the wire from slipping. When boards are used there must be two to each pair of stakes 1 × 4 inches in section, securely nailed to each side of the stakes with not less than two 10-penny nails on each side and end. When stakes are wired at the middle there should be a bearing piece across the lading of such size as to keep the material apart sufficiently to protect from injury by these wires.

8. All cars must be loaded so as to leave not less than 18 inches between ends of lumber and brake shaft, so that brakes will be operative—one brake for one or two cars and two brakes for three or five cars.

THE RELATION OF THE CANADIAN LUMBER MANUFACTURER TO THE CANADIAN WHOLESALER.

THERE has been a tendency of late, on the part of Canadian manufacturers of lumber and American buyers, to deal direct with each other, passing by altogether the Canadian wholesale dealers. This tendency is naturally viewed with dissatisfaction by Canadian wholesale merchants, who claim that not only does it deprive them of business, but that no advantage results from it to the manufacturers. Canadian wholesalers advance a number of arguments to show that the manufacturer would better serve his own interest by disposing of his product through wholesale dealers in the home market.

It is pointed out that the small manufacturer especially has but limited opportunity of finding out the character of the foreign buyer and of satisfying himself of his integrity and financial responsibility, and that consequently there is great danger that he may fall into the hands of unscrupulous and irresponsible men whose object it is to get possession of stock which they have no intention of paying for. The columns of the LUMBERMAN for several years past bear witness to the fact that this argument is not without foundation, as not a few of our lumber manufacturers have learned to their cost. This much may be said without the inference being drawn that all or even the majority of foreign buyers are men of this description. The difficulty is to steer clear of the "sharks."

The Canadian wholesaler reminds us also of the fact that there is great diversity in the methods of classification of lumber as between Canada and the United States, and also as between one market and another in the United States, and that stock shipped without a very distinct understanding is liable to be culled to an extent which will greatly depreciate its value. In case of misunderstanding, as to grading, the manufacturer is likely to be put to a great deal of trouble, and stands to lose a considerable proportion of the profit which he had counted on making on his consignment.

The Canadian wholesaler argues that in view of

all these disadvantages and uncertainties, it would be to the interest of the smaller Canadian manufacturers of lumber, at least, to sell to the home buyer, whose responsibility they can easily ascertain, and who takes off their shoulders all responsibility as regards inspection, payment, etc.

There is another point which should be mentioned in this connection, which is, that Canadian wholesale dealers are constantly endeavoring to find openings in foreign markets for the sale of Canadian lumber, and if they are passed over and thus forced out of business, the advantage to the manufacturer of their efforts in this direction will cease.

EDITORIAL NOTES.

The brisk demand in Great Britain for American lumber has developed a singular feature in connection with the spruce trade of the east. While some of the mills are engaged in sawing lumber for the New England and New York markets, United States mills on the Penobscot river have recently contracted to supply several million feet of spruce deals for the west coast of England, thus crossing on their way to Europe the shipments from Nova Scotia to United States markets.

A question which is said to be under consideration by the Dominion government is a reduction in the official staff of lumber cullers at the port of Quebec. It is held by some, who claim economy as their motive, that it is not necessary to employ more than two or three cullers. On the other hand, a reduction of the staff would, it is claimed, result unsatisfactorily, inasmuch as purchasers of rafts or other stocks would be unable at times to obtain the services of official cullers, and would of necessity call in cullers of their own. The lumbermen naturally protest that their interests are safer under the present arrangement, and it is to be hoped that such influence will be brought to bear upon the government as will remove any probability of a change.

From information which has reached this office we are led to infer that the prices of lumber as published in the Weekly Lumberman are not fully understood by some manufacturers, who claim that the quotations are too high. This matter has already been referred to, but a further explanation may assist the manufacturer to a clearer understanding. It should be borne in mind that the prices quoted are the wholesale selling prices at the points named, and the manufacturer, in estimating the figure he should receive for his stock, must deduct from the wholesale selling price as quoted the cost of freight from his mill to the wholesale market, together with the commission which the wholesale dealer is entitled to receive. Thus it will be observed that some manufacturers are more advantageously situated than others to supply certain markets, owing to the difference in freight charges, and will consequently receive more for their stock at the mill. It would be impossible to publish anything like correct selling prices of lumber at the mills, consequently the only course is to furnish the mill man with the wholesale prices, and he must make his estimates accordingly. Further, the prices quoted are given as an average. It is not contended that lumber cannot be purchased in wholesale lots below the figures named, neither would it be impossible to secure a higher price for a special grade. In the case of mill run this is strikingly manifest, especially at a time like the present when stocks at the mills are heavy. One manufacturer may be willing to dispose of his cut at a figure below ruling quotations, while another, whose stock is perhaps above the average, will hold out for an advance. A case was recently brought to our notice, where a dealer claimed he could secure the output of several mills at $9, and asserted that our prices were too high. Notwithstanding this, we claim that the average price paid for mill run is from $11 to $12. Taken as a whole, the prices are as nearly correct as it is possible to make them.

The city of Montreal has announced its purpose to hold an International Exhibition in 1897 or the year following. Toronto also gives notice of its intention to hold a Dominion Exhibition next year. Toronto claims it was first in the field, and says it doesn't want to undertake an International Exhibition, and asks Montreal to defer the larger enterprise for a year or two. Montreal replies that the holding of a Dominion Exhibition in Toronto next year would seriously impair the chances of an International Exhibition a year or two later. Both cities have applied to the Dominion and Provincial governments for aid. Both have admitted that without such aid they cannot hope to make their scheme a success. Therefore, the decision as to which of the enterprises shall go forward at the present time would appear to rest with the government, unless, as we trust will be the case, a satisfactory arrangement can be reached between the representatives of the two cities.

The past month has witnessed the destruction by fire of one of the largest and best equipped saw mills in Ontario, that of J. W. Howry & Sons, of Fenelon Falls. The fire occurred during the afternoon, when the men were at work in the mill, but owing to a heavy gale their efforts to save the building were fruitless. The box and shingle factory and planing mill were saved, together with the stock of lumber on hand. About three years ago the company leased the old R. S. Smith property at Fenelon Falls, and rebuilt the saw mill, placing therein the latest and most improved machinery. Since that time they have employed constantly from 200 to 250 hands, besides from 800 to 1,000 men every winter in the woods. On June 19th last over 12,000,000 feet of lumber were destroyed by fire, but the loss was largely covered by insurance. The destruction of their mills, however, is particularly unfortunate, as a contract had recently been closed with an American firm for about thirty million feet of lumber, on which they were cutting. We have not yet learned their intention regarding rebuilding, but it is stated they may remove to another locality.

The annual statement of the trade of the United Kingdom with foreign countries and British possessions during the year 1895 shows that Canada exported a considerable quantity of various classes of wood goods. The imports of hewn fir were 2,008,206 loads, of which 70,517 loads were from British possessions, Canada supplying 69,927 loads. France, Sweden, Russia, Norway, United States, Spain and Denmark contributed in the order enumerated. Other hewn wood and timber from the British possessions were imported to the amount of 39,492 loads, and 45,089 loads from elsewhere. Imports of hewn oak were 90,232 loads from foreign countries, and 18,276 loads from Canada. Sweden supplied the largest quantity of sawn fir, the amount being 1,534,267 loads, followed by Russia, with 1,467,445 loads, and Canada, with 1,112,028 loads. The imports of sawn timber other than above named consisted of 135,560 loads, 38,626 loads being from Canada. A very small trade in staves from British North America is shown, being only 2,221 loads, while the total imports for the year from British possessions were 142,530 loads. Canada supplied 3,822 tons of furniture woods and hardwoods, while the total from the British possessions were 38,587 tons. A third of the supply of house frames, fittings and cabinet work was furnished by the United States.

LUMBER MEASUREMENT IN GREAT BRITAIN.

We give below an explanation of some of the terms used in measuring lumber in Great Britain, which may prove useful to our readers :

Retailers usually sell boards, battens, etc., by the square foot. Log timber is usually sold by the cubic foot, while the wholesale trade usually sells boards, deals, etc., by the St. Petersburg standard. The standard deal contains six feet of 3 x 11, and 120 standard deals make one standard, which is equal to 165 cubic feet, or 1,980 feet of American inch board measure. The British standard thus lacks only twenty feet, or one per cent., of being equal to 2,000 feet, 1,000 feet being the unit of value in all American and Canadian transactions.

There is also what is called the Irish standard, which contains 3,240 feet, and this standard is sometimes used. Exporters should make a note of this, as under certain circumstances disputes might arise in shipping to certain ports, although it is not understood that the Irish standard is especially used in Ireland.

The term "load" is often found in English lumber market reports. A load equals fifty cubic feet, or 600 feet inch board measure. Mahogany is sold by Liverpool, or broker's sale measure, which allows a tare of from 25 to 33 per cent. The London rule does not allow quite so much tare. Mahogany is sold by the square foot, one inch thick.

There are a lot of other things about the measurement of lumber in the English market it would be well for exporters to learn, before making shipments, unless they sell by American measurement, at so much per thousand feet in American money, at the mill or port of shipment.

During the past ten or twelve years the planing machine has been greatly improved, and other important machines also have been pushed along the road to perfection. In all the standard machines the defects have been weeded out gradually. The improvement can be best appreciated when one compares the wood-working machines of 1896 with those of 1886, and, still better, with those of 1876. The workmen of 1866, could they return to the shops of 1896, would find many machines and devices utterly strange to them.

THE SCALER.

HIS WOES AND TRIBULATIONS RELATED BY ONE OF THEM.

All our readers who are in the lumber or logging business scarcely need an introduction to the scaler. Like the poor, he is always with them, albeit it may be that even to them his merits are unknown; though his sins of omission and commission are constantly in evidence; so much so, in fact, that they have come to regard the poor rule-bearer as a necessary evil, and not what he really is—an absolutely indispensable adjunct of the logging business. If our readers, in taking their walks abroad in the summer, happen to take in any of the great saw mills, they will notice a lonely looking individual promenading over the logs in the boom, stooping every now and then to measure the ends of them with an instrument like unto a vastly magnified shoemaker's foot-rule, and occasionally recording the result of his manipulations in a small book. The individual in question is the scaler. But "on the boom" he is enjoying an "otium cum dignitate," so to speak. In the woods his real work is done, and he appears in all his glory—and, as his traducers say, does all his devilment. For in the scaler's case is exemplified the truth of the Good Book's words anent the impossibility of escaping calumny. He is generally regarded as a clever rogue suborned by the "big companies"—who are generally unaware of his existence—to "do up" the guileless hauler of logs. It makes not the slightest difference that the log hauler aforesaid keeps the scaler "guessing" all the time to prevent him from "doing up" somebody else; he is firmly persuaded that the scaler only exists to work him woe, and he will doubtless continue in that frame of mind while the log hauling lasts.

But the general slight esteem in which the scaler is held in the woods does not prevent his being treated with a fine outward show of respect, probably on the principle that certain savage tribes worship the evil spirit, as well as the good, to propitiate him; that is, to the end that he may do them as little harm as his malevolent nature will permit. The "lumber jack," that incarnation of the glorious spirit of American independence, who refers to and addresses the heads of the Weyerhauser syndicate and the great Day Lumber Company as "Fritz" and "Wes.," and as a general thing has no reverence for anything human or divine, invariably addresses the scaler as Mister. That is to say, to his face he does. Behind his back he generally mentions the unhappy subordinate of Surveyor General Brown as "the worst ———— on the river," or in some of the equally strong terms of endearment with which his vocabulary is so lavishly endowed. So much for the esteem in which the scaler is held by those his work brings him in contact with. Now let's glance at the work in question and see how he goes about doing it. In brief and in simple, the scaler's work consists in applying a Scribner's log rule to the small end of every log landed—that is, hauled upon the ice—on his "route," recording in his tally book the amount of lumber the rule allows for each log, minus such deduction as his experience shows him should be made for rot, crook, or other imperfection, entering each log under its proper bark-mark and stamp, or end mark; keeping an accurate account of all logs so scaled, for the foregoing is a perfect description of the operation known as "scaling," and rendering such accurate account of them to the parties interested and to the surveyor-general of logs and lumber of the district. Also, he is required to see that all logs are properly bark-marked and stamped, refusing to scale all such as are not, and that every man hauling logs in his bailiwick gets due credit for all he hauls and no more or less. In short, he is required to do equal justice to all without fear or favor, to the best of his ability. To the average reader the foregoing does not look like an appallingly hard job, does it? However, let him who thinketh it a "snap" cast his eye over the artist's work shown in the picture appearing herewith.

A High Landing.

That conglomerated mass of confusion, gentle reader, is a "landing." It ought to be called a dumping of logs. The woe-begone looking man at the top there is a scaler. Naturally you would like to know why his classic features wear an expression so much akin to that of "the little boy that God made," and I'll tell you. In that heap of logs of all lengths he must work all day, scaling each one according to its length, keeping the Norway separate from the white pine logs, doing his "level best" to get an accurate count of the number of logs in the mass. That last he must do at all hazards, for his instructions positively forbid his taking the count kept by the hauler of the logs; long experience having proven that the hauler's count, as a general thing, is not at all akin to Cæsar's wife, and he is well aware that when he goes into the camp at night and gives a scale bill, that is to say, an account of the number of logs and amount of feet of lumber that this mess contains, to the foreman, he is sure to have "a growl" with that worthy and to be forced to listen with what patience he may, to divers invidious reflections upon his capability and integrity, and sundry heart-felt devotings of himself to the infernal gods. He is also thoroughly well aware that the foreman will confront him with a count of the logs in the pile before him far in excess of the number he will be able to account for, strive as he may. He also knows that all the defective logs will be well at the bottom of the pile, where he can't see them, and yet he is under oath to do even and exact justice without fear or favor between buyer and seller. And how does he manage to do it? Do it he certainly does, or at least a remarkably close approximation to it. If he did not he would not hold his job very long; but how he does it is a secret between him and his Maker, which secret, having acquired it with infinite pains and labor, I shall not divulge. He works as long as he can see the figures on his rule and then takes himself to the camp, certain of food and shelter, and too well used to the inevitable row awaiting him to dread it. Arrived at the camp, he is wise enough to get his dinner before he foots up his day's work, and thus postpones the inevitable "chewing of the rag" as long as possible. When it can no longer be avoided, he does his share of the masticatory process as good-humoredly as possible, but when crowded too much he simply asserts his dignity as the great "I Am" of the woods, informs all and sundry that his decision is final; that right or wrong, it "goes," and that fact having been established, he is generally able to dwell in what may be termed armed neutrality for the rest of the winter.

It sometimes happens, however, that the scaler, most peaceful of mortals though he naturally is, is forced to maintain his dignity "viet armis," and in that case thrice lucky is he if in addition to "having his quarrel just," he can manage to also "get his blow in fust." It was once the fortune of the present scribe to incur the wrath of a herculean foreman, who modestly referred to himself as "the best man on the river," and who swore that "if the next scale didn't suit him he would break the scaler in two." As the wrathy gentleman in question had already broken one man's jaw, bitten off the nose of another, and otherwise mutilated several others, it was a fair presumption that he would at least attempt to keep his word in my case. But the danger had to be faced, be the outcome what might; so taking my courage in my hand and a Smith & Wesson "38" in the side pocket of my coat, I went to meet it. My prospective breaker was at the landing waiting for me, and wearing an appearance of mingled joy and ferocity, as if he scented the battle anear and exulted in its certain outcome. To my polite inquiries as to the state of his health he condescended to growl out the alarming information "that it was a d—— sight better'n mine was goin' to be if I robbed him this time;" and that "the quicker I got to work the sooner I'd find out all about it." Well, I made up my mind to cow that man or kill him, one or the other, and went to work on his logs, scaling them as fairly

as I knew how, and yet as closely as justice would allow. When I finished the work and footed up the result, I called him to me and asked him if he still intended "to break me in two," if the result of my work displeased him, to which question he promptly returned a prompt and profane answer in the affirmative. I then proceeded to make out a scale bill for him. Now the manner of a scale bill as used in the woods is this :

Feb. 9,'95.

John Jawbreaker's Logs.

	Logs	Feet.
X—'X.....	1,470	147,810

C. C. Cutemhard,
Deputy.

This bill I wrote out on a "scratch block," such as all scalers are provided with, and as my belligerent friend advanced to take it I tore the leaf off with one hand, whipped out my "gun" with the other, rolled the bill into a spill, thrust it into the barrell of the "gun," and holding the latter six inches from his countenance asked him how it suited him. You never saw a man so well pleased with a scale in your life. And I never had any more "kicking" from him. Urbanity as a general thing pays in the woods, as elsewhere, but there are occasions when a little abruptness has a great deal of saving grace about it.

But if a foreman can't bulldoze the scaler he has still at his command a beautifully efficient means of "getting even," so to speak, with that unfortunate dispenser of justice. A lumber camp is the one perfect democracy of earth, and if the White Czar or Czar Reed, for that matter, passed the night in one, he'd be compelled to sleep with some lumber jack or other, according to the assignment made by the foreman, or his executive officer, the "cookee." Now a deep-rooted prejudice exists in every well regulated lumber camp against sleeping with the scaler, and truth to tell, more can be said in its favor than in that of most prejudices. As it was tersely put by my good friend Fred Bonness, the dislike to the scaler's nocturnal comradeship is this :

"You see," said Fred, "the dashed blank tramp has to work every day, and Sunday, too, and of course he has no time to boil his clothes, so as a matter of course, he's lousier than a pet coon, and no white man wants to sleep with him."

Such being the case—and candor compels me to own that Fred's remarks contain more truth than poetry—the scaler is invariably assigned to sleep with some gentleman noted for lack of personal cleanliness, and success in the raising of the product known to science as "pediculus humanus." It will readily be seen that the scaler, having to sleep in a different camp every night, is certain to carry away from each one more than he brought to it, and to become a walking terror to himself and to everyone else before spring puts an end to his woodland miseries. But his work is not at all like the prize puzzle shown in the picture of the high landing. Occasionally he strikes an oasis in the desert.

A scaler has no Sundays ; he must work every day or his work will "get ahead of him" to such an extent that he can never catch up. He must bear with the abuse, covert or open, of everyone he has to deal with, and "turn the other cheek," as long as flesh and blood can stand doing so. He must be constantly on the watch for every possible scheme to beat him. He must be absolutely bribe proof, perfectly unscarable and as "sandy" as a bull dog. He must be able to work all day, and every day, regardless of the weather, and if he is, as he is generally called, "a crank," he is a crank which saves a vast amount of friction to the rest of the machinery of the logging world.

On the regular routes where logging is done by men who are regularly engaged in the business, and nothing else, the scaler's lot, like the policeman's, is there verse of happy. But on the "moss-back route," that is to say on a route where the logs are hauled by farmers, may God be good to him, for man's sympathy cuts no figure. To say that the average farmer holds the average scaler a thief is stating the case very mildly indeed. I would like to put on record the average scaler's opinion of the farmer—considered as a log hauler—but the English language won't do it. In the first place the farmer will never do to-day what he can put off till to-morrow, and per consequence never gets his logs stamped till the scaler has been forced to make at least three vain visits to his landing. And the guileless agriculturalist—particularly if engaged in making mistakes in the matter of section-lines—is extremely suspicious, and will seldom direct the scaler to the landings in his neighborhood, unless he is personally acquainted with the scaler, and knows he is a scaler, and not that nemisis of the woods commonly called a "cruiser." Hence it follows that a new man on the moss-back route has the pleasure of always discovering that he has left several landings behind him, on every trip he makes over it. And there is always the extreme friction existing between the farmer and the scaler as to the number of logs the former has landed ; as to the proper number of feet the logs contain, there never was, and never will be, an agreement, the granger always "knowing that the scaler has beat him out of at least fifty," and perfectly certain that he (the scaler) has been paid for doing so.

Give him his own count and he won't be satisfied, as witness one I had the pleasure of "foregathering" with last winter. That gentleman told me he had something more than 800 logs on the ice, that if I did not believe him (I knew perfectly well he was lying), that he would swear to it, and that he wanted them all scaled, or there would be trouble. I went to work on the landing, and before I was one quarter through, I saw plainly that there would be but little more than 700. So I made up my mind to give the farmer all he claimed, and see what the result would be. So I began "splitting" logs, that is, putting down the amount contained in each log, as two logs, as for instance, one 80 ft. log as two 40 ft. logs, and when I had scaled the whole lot I had record of 807, or 7 logs more than he claimed. And still he was not happy. He had tried to cheat me on the count, had apparently succeeded, and yet he had gotten the worst of the deal, and he don't know to this day how it came about, but he never fails to refer to me as "the slickest thief he ever saw." Add to the other miseries of the moss-back route, the fact that the landings are always 3 or 4 miles from any house, and that the unfortunate condemned to expiate his sins by travelling it must regard eating, sleeping and resting as to be indulged in on the instalment plan, if at all ; that the inhabitants look on him as an agent of the "lumber ring," sent out for the sole purpose of their spoilation, and that all of them are in league to "beat," mislead, bully if possible, and abuse in any event, the poor devil whose only crime is that he stands between them and the great log-buyers, seeing that they are paid for all they haul—but also seeing that they haul all they are paid for—and in sober truth is the best friend they have. He would have to be more, or less than human, did he not return the affection of the inhabitants of his bailiwack, with interest. Taking the scaler's winter life altogether, it may be said that on a regular route it is tough, but so is the scaler, and he can stand it. On the "Moss-back" route, well, I don't know any better description of that than "Jimmy" Monroe's :

"It's pure hell," said "Jimmy," and he'd been there often, (over the moss-back route, I mean.) The scaler who works it, and asks for another chance, would out-tough Joey Bagstock, of immortal memory, but as yet has not been discovered, and if he ever is Charlie Sinclair will have him framed.—C. C. Kelly, in Mississippi Valley Lumberman.

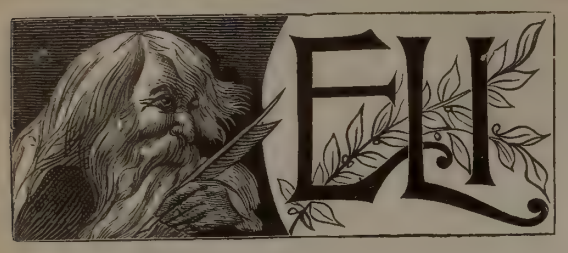
THE MILTON PULP COMPANY.

Two and one-half miles from Milton proper, but still in the parish of Milton, and five miles from Liverpool, N. S., are the mills of the Milton Pulp Company, the principal owners of which are A. G. Jones & Co., of Halifax, and the manager of which is Mr. Hughes, formerly of that city. In the manufacture of the pulp spruce is exclusively used and there is an unlimited supply. The logs are rafted down the stream and pass through an artificial canal several hundred yards to a slide that takes them right into the mill. Here they are sawed in lengths of about two feet, the bark peeled thoroughly and then placed in large cylinders, where they are ground into pulp by stone grinders. The next process is straining, and then the pulp goes to the presses, where it comes out in great sheets. These are torn off in strips of about 20 pounds, folded in squares of about 18 inches and sent in piles to an hydraulic press, where the water is squeezed out ; then it is packed in bales of 200 pounds each and is ready for shipment. In the mill about 40 men are employed and about 40 tons of pulp are turned out every day. The motive power is water and the power 1,500 horse. Everything about the mill is modern ; the hydraulic press is new and of tremendous strength.

The pulp is carted to Milton Landing and Liverpool and shipped to Boston and New York by vessel. Here it brings $25 a ton, and is soon converted into printing paper for the great metropolitan dailies. It used to realize $60 a ton, but with the expansion of the industry the price rapidly came down.

The construction of an electric road from Liverpool through Milton to the mills is just being commenced. It will do away with the five mile haul from the works to the seaboard, and will also be a great convenience for ordinary and passenger traffic. The pulp manufacrory means a good deal to Liverpool, Milton and the surrounding country.

The French River Boom Company have finished the season's work at French River, Ont.



"I OBSERVE that you act as Canadian correspondent to the Chicago Timberman," remarked a gentlemen to me the other day. I assured him that such was not the case, and enquired how he had arrived at such a conclusion. "Why," said he, "I have noticed that the Canadian correspondence in the Timberman consists almost entirely of matter which has previously appeared in THE CANADA LUMBERMAN." In the light of the above conversation, it does not require the aid of a microscope to discover the source from which our Chicago contemporary's Canadian correspondent draws his inspiration.

* * *

DOWN in Haliburton county there grows tamarack and balsam in abundance. The owner of some of this timber dropped in on me during fair week, and asked if there was any demand for the product of such timber, and why it wasn't quoted in THE LUMBERMAN'S prices current. The tamarack, he said, would produce lumber from 10 to 20 inches wide, equal in strength to hemlock, of better color, and capable of better finish. The balsam, which was of less diameter, but of great length, should cut up satisfactorily into scantlings. My answer was that balsam and tamarack are only to be found in certain localities, and while abundant in a few places, the quantity generally available was probably too small to warrant dealers in handling the material. This opinion seemed to be borne out by a remark which my enquirer let fall during the conversation, viz., that although brought up on a bush farm, he had never seen a balsam tree prior to going to the county of Haliburton. He believes, however, that as pine and hemlock become more scarce, there will arise a demand for such woods as tamarack and balsam as substitutes, which opinion I doubt not is well founded.

* * *

THE worthy representative of Nipissing district in the Dominion parliament is Mr. James B. Klock, who, with his brother, Robert A., comprise the lumber firm of R. H. Klock & Co., with head office at Klock's Mills. A visit to Toronto a few days ago afforded "Eli" an opportunity of meeting Mr. Klock, who was en route to Montreal and Quebec. He informs me that while the United States market was never, perhaps, more depressed, the export trade from Canada, some of which is done through United States houses, is steadily improving. His firm are taking out a little square timber, and he thinks as a whole the quantity of square timber taken out this winter will probably be greater than last year, owing to the fact that the weak demand for lumber is causing some operators to turn their attention to timber. The change, however, is not a wise one, as it may result in over-stocking the British market. Regarding the extent of the season's operations in the woods, Mr. Klock is of the opinion that they may be slightly curtailed, but this will not result in a reduction in the lumber output should the market improve, as many manufacturers in the Ottawa valley have a number of logs left over from this season.

* * *

FROM surveys made from time to time by the Geological Survey at Ottawa, the statement has been made by Dr. Bell and others that there are to be found in the northern part of Ontario and Quebec large tracks of heavily timbered land, spruce predominating to a large extent. These reports have been questioned by some, who, probably, have given the matter little or no attention. When in the office of the Clerk of Forestry at Toronto the other day, I was shown two samples of timber which had been brought from the head of Lake Temiscamingue, one of cedar and the other of spruce. The diameter of the cedar was over two feet and of the spruce about eighteen inches. Heretofore it has been generally believed that about six or seven inches was the extent of the growth of the trees in that district, but this theory is now shown to be an erroneous one. No doubt it will be similarly shown that much unexplored country in the northern part of Ontario and Quebec possesses valuable timber, which, if properly conserved, will prove a perpetual source of revenue to the government. As the use of the logging railway becomes more general, with the consequent cheapening in the cost of construction thereof, sections of country which hitherto have remained unexplored will be under tribute to the lumberman. The system of floating logs down streams has already been abandoned in some sections in favor of the logging railway.

* * *

ALTHOUGH Algonquin Park was set apart by the Ontario government as a reserve, and contains upwards of one million acres, little is as yet known of its character by the general public. Mr. Thomas Southworth, Clerk of Forestry, returned from a visit to the park early last month. He informs me that lumbering operations are being actively carried on, and one of the largest manufacturers is reported to have contracted for his entire cut of deals next season. The operations in the woods this winter, he thinks, will be on an extensive scale. "One who has not visited the park," said Mr. Southworth, "has little idea of its magnitude and forest wealth. The density of its forests is remarkable, and the only means of travel is by the numerous lakes and rivers. To attempt to travel through the woods is useless, and even in the winter time, when the snow is deep, the axe has to be brought into use before a toboggan can be taken through. It is estimated that 25 per cent. of the total area is water. All the licenses except one, which was granted many years ago, are for cutting the pine only, but there is considerable hardwood which will require to be cut at an early date. In my opinion it is a waste of wealth to allow timber to stand for years after maturity. The Ottawa, Arnprior and Parry Sound Railway is now completed to park headquarters, and affords splendlid facilities for lumbermen." In speaking of the question of reforestation, Mr. Southworth remarked that the belief that the clearance of pine was always followed by a growth of other varieties was somewhat erroneous. On a tract of pine land in the park which had been burned over, the small pine were to be seen growing between the birch and poplar, which clearly indicated that the pine seeds had not been altogether destroyed. He believed that under a proper system of forest preservation, by which fires would be prohibited, that pine would be succeeded by pine. The fact that pine was followed by a growth of other varieties was due to the destruction of the pine seeds by fire. The light seeds of other timber, which may be carried long distances by the wind, naturally take their place. The growth of the pine tree during the first ten years is very slow, but after a time it gradually outgrows the other varieties.

* * *

A HALIFAX architect with whom I had a conversation recently informs me that it is no longer possible to obtain in Nova Scotia clear native pine for interior finish, the supply having become exhausted. Such pine as is now obtainable must be puttied and painted to make a presentable appearance. Such clear pine as is used is brought from Ontario, but owing to the distance it has to be carried, very little is imported. White wood, imported from the neighboring States, is chiefly employed as a substitute, but of course is not equal in quality. Most of the more pretentious buildings are now constructed of brick, and those of low cost of wood. The latter are shingled on the sides as well as the roof. The climate will not admit of the use of clap-boards. The moisture from the foggy atmosphere, followed by the heat of the sun's rays, causes the clap-boards to warp and split. The method was tried of boring out the centre of the log and sawing the boards diagonally to the centre, but even boards cut in this manner succumbed to the influence of the weather. Cedar shingles for roofing and siding are imported from Bangor, Maine, at a cost of from five to six dollars per thousand. The shingles are held in place by heavily galvanized nails, and when properly put on are said to have a life of about twenty-five years. It is not possible in this climate to use galvanized sheet iron for exterior cornices and ornamentation in the manner so common in Ontario. Stone, copper, and such like durable material, must be employed. While the cost of building is thus necessarily increased, there is less incentive to the dishonest use of materials.

TO MEND A CIRCULAR SAW.

Drill a one-fourth inch hole at the lower end of the crank, but do not countersink or rivet. Then drill a one-fourth inch hole one-half inch from the top through the crank, and countersink to center from both sides. Make a rivet that fits the sole slack, about twice as long as the saw is thick. File the ends true, then upset rivet by striking square on the end, holding the saw a little up from the face of the anvil. Then turn the saw over and upset from the other end. After upsetting so that it fills the hole plate out to fill countersink and finish smooth by filing or grinding. I have mended several in this way and never had any of them give away. One that I mended had a large piece broken out of it, afterwards spoiling the saw, but did not start tne old crack. When the saw wears down nearly to the rivet drive out the rivet and put another lower down.

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Weekly Lumberman, published every Wednesday. Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

Lumberman, Monthly. A 20-page journal, discussing fully and impartially subjects pertinent to the lumber and wood-working industries. Contains interviews with prominent members of the trade, and character sketches and portraits of leading lumbermen. Its special articles on technical and mechanical subjects are especially valuable to saw mill and planing mill men and manufacturers of lumber products.

☞ Subscription price for the two editions for one year, $1.00.

Lumbermen visiting Toronto are invited to call at the office of the CANADA LUMBERMAN. We shall have pleasure in giving them any information desired.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue.

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FOUR OR FIVE CARS 3-INCH DRY SPRUCE. THE WHALEY LUMBER CO., Huntsville, Ont.

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CEDAR SHINGLES, POSTS AND TIES. APply to HARRISON & HAWKE, Shallow Lake, Ont.

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ABOUT ONE MILLION WHITE PINE 16 IN. Shingles.
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ONE TO FIVE CARS OF 2½" COMMON AND No. 1 and 2 Soft Elm. Send list, with price delivered on cars at Buffalo. BUFFALO HARDWOOD LUMBER CO., 940 Elk St., Buffalo, N. Y.

FOR SALE.

A FIFTEEN YEARS' LEASE OF WATERpower saw mill, house and stable for sale or to rent by the year. For particulars apply to MRS. JANE STARK, Box 227, Owen Sound, Ont

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300,000 FT. DRY HEMLOCK LUMBER, 1 inch, 6 to 12 in. wide, 10 to 16 ft. long, also 2 inch, 4 to 10 in. wide, 10 to 20 ft. long, and a quantity of 4 ft. hard and soft wood slabs. Will sell in lump or by car lots. Apply to
J. JACKSON & SON,
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STEAM SAW MILL FOR SALE, WITH shingle and lath machinery, planer and chopping mill in connection; dwelling house, stables, and 10 acres of land. 100 acres heavily timbered land to be sold in connection with mill. Mill situated on good stream for driving. For full particulars apply to RICHARD LOCKHART, Riversdale P. O., Ont.

MORTGAGE SALE OF VALUABLE STOCK OF LUMBER

Tenders will be received by the undersigned up to Friday, October 2nd, 1896, for the purchase of ab ut 1,613,194 feet White Pine Lumber, and about 116,320 feet Red Pine Lumber, and 664,500 pieces Lath, at the Biscotasing mills, on the Canadian Pacific Railway, District of Algoma. This lumber is the cut of 1895, is well put up and in good shipping order; 75 per cent. is 16-ft. lumber, and is all cut good and p'ump, suitable for the American market, and guaranteed first-class. Offers will be received for the same in lots of 1,000 feet and over.

Apply for particulars to JOHN McDONALD, or to
G. H. HOPKINS,
Vendor's Solicitor,
Lindsay, Ont.

CURRENT TRADE CONDITIONS.

ONTARIO.

The volume of trade secured by lumber dealers during the month of September has not been large, yet it shows a satisfactory increase over the previous month, which was one of extreme quietness. Recovery from the inactivity of the summer months promises to be slow, burdened by the uncertainty of the result of the Presidential election in the United States and its consequent effect upon the national currency. The report comes from the western part of the province that mills have closed down owing to the inability of manufacturers to obtain payment for lumber shipped to the United States in anything but American money. They have resolved to remain inoperative until the election is over. The Ottawa valley mills will close down early in October, having sufficient lumber on hand to supply the demand for some time. A number of barges used in carrying lumber have gone into their winter quarters owing to the dullness in shipping. Prices of lumber remain unchanged, and manufacturers who are in a position to hold their stock are making no effort to effect sales at the present low values. Others are obliged to accept the figures in order to secure funds to conduct logging operations. The better grades of pine are in short supply, and values indicate an upward tendency. For the lower grades there is little or no demand. In hardwoods birch and oak are in fair request.

Indications point to very light operations in the woods this winter. It is probable that operations in the Ottawa valley will be about equal to those of last year, but in the Georgian Bay district a large curtailment promises to be made. A number of Ontario manufacturers will not operate at all, while several Michigan firms holding limits in Canada have a large quantity of logs on hand, and will do very little in the woods this winter. In the Spanish river district it is said that jobbers are being paid bonuses not to put in the amount contracted for.

QUEBEC AND NEW BRUNSWICK.

The demand in Great Britain for spruce lumber has been the salvation of the lumber trade in Quebec and New Brunswick. Local trade, as well as that of the United States, is devoid of activity, and the purchases therefor have but a slight bearing upon the market. For the British market the mills are cutting vigorously, many of them running day and night, and still being behind with orders. It is not expected that prices will weaken this season. On the other hand, if the election in the United States is favorable to sound money, an advance in mill prices will probably occur. Freight rates continue to rise, recent charters being made at a further advance. Owners of vessels are experiencing a demand for cotton and grain tonnage, which has made it difficult to secure steamers for lumber. The winter's operations in the woods promise to be on a large scale, and the input of logs will perhaps be in excess of that of last season. The low price of lumbermen's supplies is assisting in this direction.

BRITISH COLUMBIA AND MANITOBA.

The lumber trade of British Columbia continues to be of satisfactory volume, and most of the mills are working to their full capacity. The Royal City Mills, of New Westminster, shipped last week six carloads of bridge timbers to eastern markets, besides filling local orders, including lumber for the Delta dyke. The Brunette Saw Mill Company also shipped five single car-loads and two double loads to the eastern provinces. The salmon industry is consuming large quantities of boxes, while several orders have been received from the Northwest for butter and fish boxes. In Manitoba the movement of the new grain crop has created some demand for lumber, while retail dealers are purchasing lightly for stocking-up purposes.

UNITED STATES.

The developments of the past week have clearly indicated that trade is improving, although as yet it has not reached any volume. The fall demand has commenced, and as the date of the Presidential election draws nearer, confidence in the result is becoming more marked. Among the encouraging features to note are a greater movement of lumber at Minneapolis and Duluth, an increase in shipments from Chicago during September as compared with the previous month, and a stronger market in the east. It has now become recognized that prices have reached their lowest point, and as this belief becomes more general it is sure to result in purchases being made both for requirements and for speculative purposes. One cause which is restricting the development of the speculative trade is the position which the banks have assumed, it being almost impossible to obtain advances necessary to purchase any quantity of stock. A factor which is influencing the movement of lumber is the advances which have taken place in the prices of grain, which indicate a return of commercial prosperity. At northern pine centres the volume of trade has increased, while dealers are holding their stock with more firmness, and are not disposing of their lumber unless they secure the prices asked. The first of October has witnessed the shutting down of a large number of the mills, and the quantity manufactured until the close of the season will be very small. Little interest has been manifested in logging operations, and from nearly every point the report comes to hand that the input of logs will be greatly restricted. Manufacturers are apparently recognizing the fact that a reduction in the quantity of lumber placed upon the market is an important factor in improving the trade. At Buffalo and Tonawanda wholesale dealers are purchasing quite liberally, but are confining their trade to first-class stock, for which it is always possible to find ready sale. In New York money matters are a little easier, and spruce holds a satisfactory position. Plain red oak is the leader among the hardwoods, chestnut and poplar being also in some request. A better movement in maple is also announced.

FOREIGN.

The embarrassment of the large importing firm of Holme, Wainright & Co., Liverpool, Eng., has somewhat unsettled business at that port. It is the one subject of general conversation, as the firm were thought to be one of the strongest in the business. Notwithstanding the disturbance, however, the market keeps firm, and a fair business is reported. The greater portion of cargoes arriving are going direct into consumption, and the state of trade is considered most healthy. Imports at that port have not slackened off although they are not excessive. The spruce market continues to improve at most ports, in view of the advancing freight rates, which are restricting the quantity imported. While 37s. 6d. ruled early in the season, 55s. is now asked. The demand for pitch pine is one of the

chief features of the trade. There is no difficulty in disposing of the stock at good prices. Battens are also firmer, and as the season advances the supply becomes shorter. At Foy, Morgan & Co.'s sale at London, Eng., pine deals sold well, while Quebec spruce also brought a fair figure. Birch timber sold somewhat low, owing to a large supply on the market. During the past season the shippers have to a large extent controlled the market. This has been brought about by the fact that the largely increased consumption of wood goods in Europe has removed the likelihood of any overstock. Whether these conditions will prevail next season is a matter of conjecture, but those who are familiar with the trade venture the assertion that the spring trade will at least be characterized by a brisk movement. After a period of depression the South African market shows signs of improvement.

STOCKS AND PRICES.

CANADA.

S. A. Marks will take out 25,000 cords of pulp wood this winter near Thessalon, Ont.

J. R. Booth, of Ottawa, sent a large force of men to his Kippewa limits last week.

It is stated that the Ontario Lumber Co., of French river, Ont., will not operate in the woods this winter.

The stranded portion of the corporation drive, consisting of 4,000,000 feet, has reached Fredericton, N. B.

The Blind River Lumber Co., of Blind River, Ont., report the sale of their cut of birch and pine, log run, at $13 and $12.50 respectively.

The bark City of Adelaide sailed from the Brunette Saw Mills, New Westminster, B. C., last week, with 690,000 cubic feet of lumber. She is bound for Melbourne, Australia.

The bark Glenafton has finished loading lumber at Weymouth, N. S., for Buenos Ayres. The bark Argentina will shortly sail for the same port with a cargo of lumber.

The lumber operators on the Miramichi river, N. B., are completing their camps for the woods. It is estimated that this winter's cut will be about the same as last year. Some fifteen or sixteen million logs cut last year are still hung up.

Wm. Long, lumber operator, of Lincoln, Minnesota, is said to have made a deal with Hughes & Co., of Brandon, Man., to handle two and a half million feet of his lumber. Mr. Long states that monetary matters are so unsettled on the other side that they do not want to let their capital out till the political atmosphere is cleared, and hence the entry of his lumber into Manitoba.

FOREIGN.

McArthur & Co., of Cheboygan, Mich., have sold 400,000 feet of white pine lumber to the Eastern Lumber Co., of Tonawanda.

A raft of 4,500,000 feet, belonging to S. K. Eddy & Sons, Saginaw, Mich., went ashore off Au Sable, but the logs were nearly all recovered.

Cedar shingles have advanced ten cents a thousand in Michigan. The stock of cedar is short, and manufacturers anticipate an advance of 50 cents before the close of the season.

The shipments from Alpena, Mich., so far this season have been as follows: Lumber, 61,344,650 ft.; shingles, 4,320,000; lath, 2,290,000 pieces; cedar, 612,721 pieces.

A correspondent of the Northwestern Lumberman estimates that the quantity of logs taken out this winter in the Georgian Bay district by Michigan operators will be 300,000,000 feet less than the output last winter.

The season of log rafting has closed. Nearly 100,000,000 feet of Canadian logs intended for Michigan mills have been held back in Canadian waters, while a large quantity are stored in Michigan until next season.

The Holland & Emery Lumber Company last week sent 10,000,000 feet of lumber from East Tawas to Tonawanda, where it will be piled conveniently for shipping should trade improve. The Wisconsin Lumber Co. are also piling 12,000,000 feet at the same place.

At the last auction sale of Foy, Morgan & Co., London, Eng., Canadian goods sold as follows: Per steamer "Merrimac," from Quebec—12x3x7/9 1st pine, £15. Per steamer "Montezuma," from Quebec—12/16x3x11 and up 1st pine, £21 5s.; 12/16x3x7/10 1st pine, £15 15s.; 12/16x3x4/6 1st pine, £12; 9/11x3x7/18 1st pine, £16 15s.; 9/11x3x4/6 1st pine, £12; 12/13x3x12/18 2nd pine, £15; 12/16x3x11 2nd pine, £15 5s. Per steamer "Ausgar," from Metis—14x3x11 spruce, £6; 14x3x11 spruce, £6; 12/13x3x11 spruce, £5 7s. 6d.; 10x3x11 spruce, £6.

A LIVERPOOL FAILURE.

In our last issue brief mention was made of the reported financial embarrassment of Holme, Wainwright & Co., timber importers, Liverpool, Eng. This report has since been confirmed. The firm were, perhaps, the largest importers of wood goods in Liverpool, and handled a large quantity of Canadian goods. They were generally believed to be financially strong, consequently the news of their troubles was received with surprise both in England and Canada. It is reported that the present difficulties have been brought about by the action of Mr. Holme in investing heavily in cotton. A statement of the liabilities shows that a Quebec firm is the heaviest creditor, being interested to the extent of £55,000. It is believed, however, that the creditors will be able to sustain their losses. A statement of the liabilities is as follows:

W. & J Sharples & Co., Quebec	£55,000
Farnworth & Jardine, Liverpool	30,000
R. Coltart & Co., Liverpool	10,000
Price & Pierce, London	10,000
King Bros, Quebec	8,000
J. Smith & Bro., Liverpool	5,000
R. R. Dobell & Co., Quebec	5,000
Price & Pierce, London	5,000
A. F. & D. Mackay, Liverpool	4,500
A. Dobell & Co., Liverpool	2,500
Duncan, Ewing & Co., Liverpool	2,400
D Roberts, Son & Co., Ltd., Liverpool	600
Lumley, Lloyd & Co., Liverpool	500
Foy, Morgan & Co., London	180

At a meeting of creditors a few days ago, an offer of settlement of 12s. 6d. was made, which was accepted by a majority of the creditors present.

LUMBERMAN'S INSPECTION BOOK.

Send four 3-cent Canadian postage stamps for a copy of the LUMBERMAN'S VEST-POCKET INSPECTION BOOK, containing rules for the inspection of Pine and Hardwood Lumber in the leading markets of Canada and the United States.

COOPERAGE CONDITIONS.

There has been a rise in price of both staves, hoops and heading, and stock is advancing all the time, and is likely to go much higher. The flour barrel trade is also picking up, and in the Northwest for the month of August the sales increased 8,000 barrels.

Coopers are now beginning to inquire for stock and are purchasing freely, both for flour, cement, apples and, in fact, all lines. It would be very difficult, indeed, to say what the advance has been on each article, but we may say that for prompt shipment coopers are willing to pay any reasonable price for apple barrel stock that is asked by the manufacturers. The flour barrel coopers are also beginning to awaken to the fact that stock is going to be very much higher, and are now laying in stocks of dry flour barrel staves while they can get a chance.

The following are about the current quotations, f.o.b. cars: No. 1 28½ or 30-inch jointed elm staves, $6 to $6.25 per net M.; No. 1 28½-inch jointed apple barrel staves, $5.50 to $5.75 per net M.; No. 2 28½-inch jointed elm staves, $4.75 to $5 per net M.; No. 1 5½-feet patent coiled hoops, $6.25 to $6.50 per net M.; No. 1 6-feet patent coiled hoops, $6.75 to $7 per net M.; mill run 17-inch kiln-dried basswood heading, 4¼ to 4½ cents per set; No. 1 17⅛-inch kiln-dried basswood heading, 4½ to 4¾ cents per set.

AS TO ADVERTISING.

A man does not have to get his head very far above the sea of mediocrity to command attention. Nine cases in ten, when a man says that advertising does not pay, he has arrived at this conclusion because he has expected the newspaper to do it all. If he were to neglect his show window and his store front as he neglects his advertising space, he would have still other complaints to make about business in general. If the windows were never washed and the display of goods never changed, he would not expect many people to stop and lose themselves in an ecstacy of admiration; and yet he does seem to expect just this sort of thing for an old, moss-covered advertisement.—C. A. Bates.

BUSINESS NOTES.

A. L. Wells & Co., Balmoral, Man., have gone out of business.

Blue & Fisher, Greenwood City, B. C., have been succeeded by the Boundary Creek Milling and Lumber Co.

T. B. Tait's shingle mill at Burk's Falls, Ont., was destroyed by fire on the 23rd inst. The loss is about $4,000, partially covered by insurance.

It is announced that H. H. Spicer & Co., shingle manufacturers, Vancouver, B. C., have failed to secure an extension of time, and a receiver has been placed in charge. The assets, it is claimed, will show a surplus of $15,000 over liabilities.

SHIPPING MATTERS.

Shipping from Duluth to Buffalo is quite active. The rate for lumber is $1.40.

The following lumber charters are reported: Barque Barbadian, Mobile to Rosario, lumber, $12 net; Louise, Runcorn, St. John to w. c. England, deals, 40s.; Actacon, Runcorn to U. K., deals, 43s. 9d.; Stranger, Bridgewater to Buenos Ayres, lumber, p. t.

LUMBER FREIGHT RATES.

Lumber freight rates on the Canada Atlantic Railway are as follows: Ottawa to Toronto, 10 cents per 100 lbs.; Ottawa to Oswego, $1.90 per M ft., (3,000 lbs. and under per M ft.); Ottava to Montreal, $1.00 per M ft., (3,000 lbs. and under per M ft.); Arnprior to Montreal, $1.50 per M ft., (3,000 lbs and under per M ft.); Ottawa to Buffalo, 12 cents per 100 lbs.; Ottawa to Port Huron and Detroit, 14 cents per 100 lbs. Ottawa to New York, water delivery, lots of 50 M feet and over, $2.50 per M ft; under 50 M feet, $3.25 per M ft. (subject to extra towage) 3,000 lbs. and under per M ft. Arnprior to New York, lots of 50 M feet and over, $3.00 per M ft.; under 50 M feet, $3.75 per M ft. (subject to extra towage) 3,000 lbs and under per M ft. Ottawa to Boston, Portland and common points, local 15 cents; exports 13c. per 100 lbs.; Arnprior to Boston; Portland and common points, local 17 cents; export 15 cents per 100 lbs.; Ottawa to Burlington, 6 cents per 100 lbs.; Ottawa to Albany, 10 cents per 100 lbs. Arnprior to Albany, 12 cents per 100 lbs.; Ottawa to St. John, N. B. and common points, 20 cents per 100 lbs.; Ottawa to Halifax, N. S. and common points, 22½ cents per 100 lbs Minimum carload weight for shipment of lumber, lath, shingles, etc., is 30,000 lbs., and rates quoted above are in cents per 100 lbs., except when quoted per M ft. the minimum carload charged is 10 M ft., lumber not exceeding 3,000 lbs. to the M feet. Ottawa rates apply on shipments from Rockland and Hawkesbury.

Lumber freight rates for pine on the Grand Trunk Railway have been made a fixture, as below. Of any intended change due notice will be given lumbermen.

General instructions in shipping by Grand Trunk are embodied in these words in the tariff schedule: On lumber in carloads, minimum weight, 30,000 lbs. per car, unless the marked capacity of the car be less, in which case the marked capacity (but not less than 24,000 lbs.) will be charged, and must not be exceeded. Should it be impracticable to load certain descriptions of light lumber up to 30,000 lbs. to the car, then the actual weight only will be charged for, but not less than 24,000 lbs. The rates on lumber in the tariff will not be higher from an intermediate point on the straight run than from the first named point beyond, to the same destination. For instance, the rates from Tara or Hepworth to Guelph, Brampton, Weston or Toronto, would not be higher than the specific rates named from Wiarton to the same points. The rates from Cargill and Southampton to points east of Listowel and south and west of Stratford will be the same as from Kincardine, but in no case are higher rates to be charged than as per mileage table published on page 9 of tariff.

Rates from leading lumber points on pine and other softwood lumber, shingles, etc., are as follows: From Glencairn, Creemore, Aurora, Barrie and other points in group B to Toronto, 6½c.; Collingwood, Penetang, Coldwater, Waubaushene, Sturgeon Bay, Victoria Harbor, Midland, Fenelon Falls, Longford, Gravenhurst and other points in group C, to Toronto, 6½c.; Brace, bridge to Toronto 7c.; Utterson, Huntsville, Navor-Emsdale, Katrine to Toronto, 7½c.; Burk's Falls, Berriedale and Sundridge, to Toronto, 8c.; South River, Powassen and Callender to Toronto, 9c.; Nipissing Junction and North Bay, 10c. Rate from Goderich, Kincardine and Wiarton to Toronto, 6½c. These rates are per 100 lbs. Rates from Toronto east to Belleville are 7½c. per 100 lbs.; to Deseronto, 9c.; to Brockville and Prescott, 10c.; to Montreal and Ottawa, 11c. The rates on hardwoods average about from 1c. to 2c. per 100 lbs. higher than on softwoods. For rates on railway ties, mahogany, rosewood, walnut, cherry, and other valuable woods, application must be made to the district freight agent.

On the Canadian Pacific the rates on pine and soft woods may be illustrated as follows: Cache Bay, North Bay, Sturgeon Falls and Warren, to Toronto, 9c; Algoma, Cook's Mills, Massey, Spanish River and Whitefish to Toronto, 12c.; Ottawa to Toronto, 10c From Ottawa, Hull, Aylmer and Duchesne Mills to station on the Lake Erie and Detroit River, Erie and Huron, Toronto, Hamilton and Buffalo, and Michigan Central Railways, the rate is 14½c. per 100 lbs. Regulations apply as to minimum size of carload of 30,000 lbs., and an advanced rate is charged for hardwoods.

MODIFICATION OF HARDWOOD RATES.

THE Grand Trunk Railway and Canadian Pacific have made the rates on hardwoods from certain points to Toronto and Hamilton as follows. The regulations are over the signature of Mr. John Earls, W.D.F.A., of the G. T. R., and given in reply to a letter from Toronto hardwood men:

"After careful consideration we have come to the conclusion that, on and after Jan. 1st, 1895, a modification will be made in the present arrangements for hardwood lumber, to the effect that the rate will be 7½c. per 100 lbs from our Northern and Northwestern branches to Toronto and Hamilton. This rate, however, will not apply from main line points and the straight run between Toronto, Sarnia and Windsor; also that so far as rates on common lumber to points like Guelph, Galt London, Woodstock, Ingersoll, etc., from all lumber shipping stations the rate will be the same on hardwood as on pine." On the old principle, we suppose, that half the loaf is better than none, hardwood men have something, possibly, to be thankful for, though there is no good reason why the rates generally on hardwood should not be as low as on pine. It is understood that the C. P. R. rate will be made uniform at 7½c from same points.

Telephone 5332 Established 1851

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BILL LUMBER a Specialty

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MILLS

Having Brown Ash 12, 14 and 16 ft. firsts and seconds, inch Bass firsts and seconds 12 feet, or any other Hardwood Lumber, can sell same for cash by addressing

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Inspection at mill.

Do You Use Mahogany?

If so don't buy until you have seen or inquired about our now famous . .

TABASCO MAHOGANY

Finest figured wood on the market; is hard and takes elegant finish. Brings highest prices in Europe, but we sell here about same prices as ordinary mahogany. Specially adapted for fine cabinet and interior finish . . . . . .

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WANTED 1in. No. 1 and No. 2 Red Oak

BOSTON LUMBER CO.

No. 27 Kilby St. - BOSTON, MASS.

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CONNECTION—Canadian Pacific Railway; Rome, Watertown & Ogdensburgh; New York Central & H. R. Rd. Ronan Line.

HUDSON RIVER LUMBER TRANSPORTATION. Water Connection from Albany with lumber points in Canada via Canadian Pacific Railway to New York Harbor, Long Island Sound and inland waters of New Jersey. . . .

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MILLMEN—Send us list of dry hardwoods.

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—: HUNTSVILLE, ONT. :—

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WE are open to cut White Pine and Hemlock Bill Stuff. Have for Sale a Quantity of Dry Mill Stocks and Sidings, also 16 in. Pine Shingles and 4 ft. Lath 1½ in. wide.

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THE PEMBROKE LUMBER CO. LTD.

MANUFACTURERS AND WHOLESALE DEALERS IN

DIMENSION TIMBER OF ALL SIZES AND KINDS, JOISTS, CAR DECKING, CAR SILLS, SHIP DECKING, AND ALL KINDS OF ROUGH AND DRESSED LUMBER.

Write us for Quotations on all Bills — PEMBROKE, ONT

FOR SALE

Red Pine Dimension Logs, can be any length up to 50 feet to suit purchaser, and would contract for two to three million for next summer delivery at Spanish River. Special long lengths could be loaded on cars at Rayside, C. P. R. Will have five to six million feet of WHITE PINE, first cut on limit at Spanish River. And have about five million feet at mouth French River which could be delivered at opening of navigation . . . . . .

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We have the largest and best equipped Dimension Saw Mill in Eastern Canada. All our machinery is of the latest and most improved pattern, and we are prepared to quote prices on and supply at the shortest notice any orders that may be submitted to us.

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Contractors for Railway Supplies
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State Lowest Price f. o. b. Cars or Delivered in Toronto for whole r part.

THE REID CO., OF TORONTO, Ltd. Office, Cor. King and Berkeley Sts. Dock, Foot of Berkeley St.

McAULIFFE and CAMERON

WHOLESALE

PINE and HARDWOOD LUMBER

OTTAWA - CANADA

YES, Everything Sold but Mill Culls of all thicknesses; Shorts of all thicknesses; Shingles in four grades (Made from Live Timber) and Lath in two grades. We are also prepared to make close quotations on Box Shooks, delivered at all points in Canada.

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The CANADA LUMBERMAN, Toronto, Ont.

KILN-DRIED BIRCH FLOORING SHEETING .. and .. CEILING **$20.00** SAMPLES BY MAIL **KNIGHT BROS.** Burk's Falls, Ont.

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A PARTICULAR LOT OF LUMBER
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SECOND-HAND MACHINERY

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Will secure for you a Buyer or Seller, as the case may be. Address,

The Canada Lumberman
Toronto, Canada.

Write us if you have any . . . .

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SCATCHERD & SON - 1053 Seneca Street, BUFFALO, N. Y.

WANTED 1", 1¼", 1½", 2", 3" and 4" 1sts and 2nds Grey Elm. Also 1⅛" Rock Elm, Log Run.

Please quote prices delivered Black Rock, Buffalo, N. Y

T. SULLIVAN & CO. ◎ Buffalo, N. Y.

BUFFALO HARDWOOD LUMBER COMPANY

940 Elk St., BUFFALO, N. Y.

50,000 ft. of 2½" No. 1 and 2 and common Soft Elm. { **DETNAW** } *100,000 ft. of 1¼" No. 1 and 2 and common Red Oak.*

Are also in the market as CASH BUYERS for other kinds of Hardwoods. CORRESPONDENCE SOLICITED.

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Ottawa, Arnprior & Parry Sound Ry.

- - operating - -

OTTAWA & NEW YORK LUMBER LINE
OTTAWA & BOSTON LUMBER LINE
CANADA ATLANTIC FAST FREIGHT LINE

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◎ **Ottawa & New York Lumber Line** ◎

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CANADA ATLANTIC RAILWAY.
DELAWARE & HUDSON CANAL CO.
WILLIAMS' LINE.
} J. H. Williams Agent {
15 Lumber District, ALBANY, N.Y.
NEW YORK OFFICE, 93 Wall Street
Telephone 531 Broad.

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In the Monthly Edition of "The Canada Lumberman."

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WHOLESALE PRICES CURRENT.

TORONTO, ONT.

TORONTO, September 30, 1896.

CAR OR CARGO LOTS.

1¼, 1½ and 2 inch cut up and better	33 00	36 00
2 inch picks and uppers	35 00	37 50
1x12 dressing and better, 60% 16 ft	24 00	26 00
1x10 fine dressing and better	23 00	25 00
1x10 and 12 Canadian dressing and better	20 00	22 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 1-4 in. cut up and better	33 00	36 00
1x10 and 12 mill run	16 00	18 00
1x10 and 12 common	13 00	15 00
1x10 and 12 mill culls	9 00	10 00
1 inch clear and picks	28 00	32 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	11 00	12 00
1 inch siding ship culls	10 50	11 50
1 inch siding mill culls	8 50	9 00
Cull scantling	8 00	9 00
1 inch strips 4 in. to 8 in. mill run	13 00	14 00
1 inch strips, common	11 00	12 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX pine shingles, 16 inch		2 25
XX pine shingles 16inch		1 40
Lath, No. 1		1 60
Lath No. 2		1 30

HARDWOODS—PER M. FEET CAR LOTS.

Quality, 1s and 2s unless otherwise specified.

Ash, white, 1 to 2 in.	$26 00	$28 00	Cherry 1 to 1½	$50 00	$60 00
" " 2½ to 4	30 00	32 00	" 2 " 4	60 00	65 00
Ash, black, 1sts and 2nds, 1 to 1½ in	17 00	19 00	Elm, soft 1 " 1½	14 00	15 00
Ash, black, 1sts and 2nds, 2 to 4 in	19 00	21 00	" " 2 " 3	15 00	16 00
Ash, M. R., 1 " 2	15 00	18 00	" rock 1 " 1¼	16 00	18 00
Birch, 1 " 2	20 00	22 00	" " 1½ " 3	20 00	22 00
" 1½ " 2	22 00	24 00	Hickory 1½ " 2	28 00	30 00
" sqrs. 4x4 " 8 x8	24 00	26 00	Maple 1 " 1½	16 00	17 00
Basswood 1 " 1¼	16 00	18 00	" 2 " 4	17 00	18 00
" 1½ " 2	19 00	20 00	Oak, red, p'n 1 " 1½	28 00	30 00
" m. r. 1 " 1¼	14 00	16 00	" " 2 " 4	30 00	32 00
Butternut 1 " 1½	23 00	25 00	" white " 1 " 1½	28 00	30 00
" 2 " 3	25 00	28 00	" " " 2 " 4	30 00	35 00
Chestnut 1 " 2	24 00	26 00	" quart'd 1 " 2	46 00	50 00
			Walnut 1 " 3	85 00	100 00
			Whitewood 1 " 2	32 00	36 00

OTTAWA, ONT.

OTTAWA, September 30, 1896.

Pine, good sidings, per M feet, b.m	$29 00	35 00
Pine, good strips, " " "	24 00	30 00
Pine, good shorts, " " "	18 00	25 00
Pine, No. 1 dressing sidings, per M feet, b.m	17 00	20 00
Pine, " " strips, " " "	15 00	18 00
Pine, " " shorts, " " "	13 00	14 00
Pine, 10 s.c. and better stock, " " "	13 00	15 00
Pine, 8 s.c. " " "	11 50	13 00
Pine, " sidings " " "	13 00	15 00
Pine, " strips " " "	9 00	12 00
Pine, " shorts " " "	7 00	9 00
Pine, box culls " " "	9 00	11 00
Pine mill culls " " "	7 00	10 00
Lath per M No. 1	90	1 25
Lath per M No.	80	1 15
1x10 No. 1 barn	18	20
1x10 No. 2 "	16	18
1x8 & 9 No. 1 "	16	18
1x8 & 9 No. 2 "	15	17

QUEBEC, QUE.

QUEBEC, September 30, 1896.

WHITE PINE—IN THE RAFT.

	cts.	cts.
Common and railroad, for interior and ordinary according to average, quality, etc., measured off	20 @	22
For 40 to 45 feet average, measured off	24	26
For good and good fair average, measured off	28	32
First class " "	34	36
In shipping order " "	36	42
First class Ottawa waney, 18 inch average	36	38
" " " 19 to 21 inch average	40	42
First class Michigan waney board, 18 inch average	40	42
" " " " 19 to 21 inch average	42	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	22	26
In shipping order, 35 to 45 feet " "	38	40

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	47	49

ELM.

By the dram, according to average and quality, 45 to 50 feet	28	30
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average an quality	22	30
To average 16 inch	28	30

BIRCH.

14 inch average		18
16 " "		21
18 " "	24	25

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

DEALS.

Bright spruce, according to mill specification, $42 to $44 for 1st, $28 to $30 for 2nd, $25 to $27 for 3rd, and $21 to $23 for 4th quality. F.O.B. batteau

SAGINAW, MICH.

SAGINAW, Mich., September 30, 1896.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$45 00	Selects, 1in., 8in. and up wide	$40 00
1¼, 1½ and 2 in.	45 00	1¼, 1½ and 2 in.	41 00
2½ and 3 in.	53 00	2½ and 3 in.	47 00
4 in.	56 00	4 in.	50 00

FINE COMMON.

1 in., 8 in. and up wide	33 50	2½ and 3in., 8in. and up wide	42 00
1¼, 1½ and 2 in.	35 00	4 in.	45 00

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	23 50	2½ and 3in., 7in. and up wide	37 00
1¼, 1½ and 2 in.	31 00	4 in.	40 00

STRIPS. A AND B (CLEAR AND SELECTS).

1¼ in., 4, 5 and 7 in. wide	34 00	1 in., 4, 5 and 7 in. wide	32 00
6 in. wide	36 00	6 in. wide	36 00

FINE COMMON OR C.

1¼ in., 4, 5, 6 in. wide	30 00	1 in., 6 in. wide	30 00
1 in., 4, 5 in. wide	25 00		

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24 00	1 in., 4, 5, 6 in. wide	22 00

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in	16 00	1¼ in., 4, 5 and 7 in.	15 00
1 in., 6 in.	17 00	1¼ in., 6 in.	17 00

NO. 2 FENCING OR NO. 4 FLOORING.

1 in., 4, 5 and 7 inch	13 50	1¼ in., 4 to 7 inch	14 00
1 in., 6 inch	14 00	No. 3 Fencing, 1 in., 6 inch	12 00

SHELVING.

No. 1, 1 in., 10 in. stocks	25 00	No. 2, 1 in., 7 and 8in. stocks	19 00
1 in, 10 in. and up wide	26 00	1 in., 10 in. stocks	21 00
1 in., 12 in. stocks	29 00	1 in., 12 in. stocks	24 00
1 in., 12 in. and up wide	30 00	1 in., 10 in. and up wide	22 00
1¼ in. 1½ and 2in., 8in. and up wide	29 00	1 in., 13 in. and up wide	25 00

BARN BOARDS OR STOCKS.

No. 1, 12 in.	21 00	No. 2, 9 in.	13 50
10 in.	16 50	8 and 7 in.	13 50
9 in.	16 00	No. 3, 12 in.	12 50
8 and 7 in.	16 00	10 in.	11 00
No. 2, 12 in.	16 00	9 in.	11 00
10 in.	14 00	8 in.	11 00

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$8 50	1 in., 13 in. and up wide	$11 00
1 in., 6 in. wide	9 50	1¼, 1½ and 2 in., 7 in. and up wide	10 50
1 in., 7 in. wide and up	9 50		

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9in. wide	17 00	1 in., 10 in. and up wide	18 00
1 in., 6 in. wide	18 00	1¼, 1½ and 2 in., 8in. and up wide	20 00

COFFIN BOARDS.

No. 1, 1 in., 13in. and up	20 00	No. 1, mill culls	8 00
No. 2	17 00	No. 2, or red horse	6 50

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23 00	No. 2	18 00
No. 1 (nearly clear)	21 50	No. 3	14 00

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16ft.	$8 50	Hemlock, 2x4 to 10, 12 to 16 feet	8 00
18 ft.	10 50	2x12	8 50
20 ft.	11 50	Add $1 to each additional 2ft. in length.	
22 and 24 ft	12 50		

SHINGLES, 18-IN.

Fancy brands, XXXX	3 00	Standard brands, river made, XXXX	2 75
Clear Butts	1 90	Clear Butts	1 75

WHITE PINE LATH.

No. 1	1 50	No. 2	1 00
		Hemlock	1 00

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N. Y., September 30, 1896.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in.	$46 00	47 00	No. 3, 1¼ to 2 in.	17 00	1 00
2½ and 3 in.	50 00	54 00	Shelving, No. 1, 13 in and up, 1 in.	30 00@33 00
4 in.	55 00	57 00	Dressing 1¼ in.	24 00	26 00
Selects, 1 in.	38 00	40 00	1¼x10 and 12		26 00
1¼ to 2 in.	40 00	42 00	1½ in.	24 00	25 00
2½ and 3 in.	47 00	50 00	2 in.	26 00	28 00
4 in.		52 00	Mold st'ps, 1 to 2 in.	32 00	34 00
Fine common, 1 in.	35 00	37 00	Barn, No. 1, 10 and 12 in.	18 00	21 00
1¼ and 1½ in.	35 00	38 00	6 and 8 in.	17 00	21 00
2 in.	34 00	36 00	No. 2, 10 and 12 in.	16 00	17 00
3 in.		45 00	No. 3, 10 and 12 in.	13 00	14 00
4 in.		45 00	6 and 8 in.	12 50	13 50
Cut'g up, No. 1, 1 in.	26 00	27 00	Common, 1 in.	16 00	18 00
1¼ to 2 in.	32 00	33 00	1¼ and 1½ in.	18 00	20 00
No. 2, 1 in.	16 00	17 00	2 in.	18 00	20 00
No. 2, 1¼ to 2 in.	22 00	23 00			

WHITE ASH.

1st & 2nd, 1 inch,	33 00	33 00	2½ to 4 in.	36 00	40 00
1¼ to 2 in.	33 00	35 00	Strips	17 00	18 00
			Culls	9 00	10 00

BLACK AND BROWN ASH.

1st & 2nd, 8 inch up,	20 00	22 00	Com. & good culls	10 00	12 00

BIRCH.

1st & 2nd, 6 inch & up, red	28 00	30 00	1st & 2nd, white, 6 in. & up,	18 00	
			Com & good culls	10 00	12 00

ELM.

1st & 2d, rock, 8in. & up,	18 00	22 00	1st & 2d, soft, 8 in. & up,	16 00	18 00

MAPLE.

1st & 2d, hard, 6in. & up	18 00	20 00	1st & 2d, soft, 6in. & up,	17 00	19 00

WHITE OAK.

1st & 2nd, plain, 8 in. & up	26 00	28 00	Clear squares, 5x5 to 8x8		35 00
Good common	15 00	17 00	1st & 2nd quartered, 6 in. up	45 00	50 00
Good culls	10 00	12 00	Common quartered	25 00	30 00

RED OAK.

1st & 2nd	25 00	27 00	Quartered 1st & 2nd	42 00	44 00
Common	14 00	16 00	Common	22 00	26 00
Cull	9 00	10 00			

NEW YORK CITY.

NEW YORK, N. Y., September 30, 1896.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$28 00 @ 40 00	Building orders	$27 00 @ 37 00
Decking	44 00 50 00		

SPRUCE.

6 to 9 in.	14 00 14 50	10 to 12 in.	16 25 17 00
6 to 12 in.	14 50 15 75	Lath	1 85 1 95
9 to 12 in.	15 75 16 25		

HARDWOOD.

4/4 and thicker, No. 1 and 2			Black Ash, 10 to 16		23 00
" " "			Soft Elm, "		17 00
" " "			Hard Maple, "		21 00
" " "			Basswood, "		20 00
" " "			Birch, "		23 00
" "	Black Ash, Com. and Shipping Cull, M.C.O.				14 00
" "	Soft Elm,	"	" "		12 00
" "	Hard Maple,	"	" "		14 00
" "	Basswood,	"	" "		12 00
" "	Birch,	"	" "		14 00

ALBANY, N.Y.

ALBANY, N. Y., September 30, 1896.

PINE.

Uppers, 3 in. up	$50	$52	Dressing boards, narrow	$19	$21
2½ in.	50	52	West India shipping boards	16	17
1 to 2 in.	45	48	Box boards	12	10
4 inch uppers	50	52	10-in. dressing and better	26	34
Selects, 2½ in. up	42	44	10-in. common	14	15
1 to 2 in.	38	42	12-in. dressing and better	26	32
Fine common, 2½ in. and up	40	42	Common, 1x12	14	16
1 to 2 in.	36	40	No. 1 barn, 1x12		20
No. 1 cut, 1 to 2 inch	25	35	1x10	18	21
No. 2	18	25	1x8	16	18
No. 3	17	20	No. 2 barn, 1x12	17	19
No. 1 molding, 1 to 2 in.	33	36	1x10	17	19
No. 2 molding, 1 to 2 in.	25	28	1x8	17	19
Stained saps		20	Shaky or star clear, 1 to 2 in.	19	21
Bracket plank	30	35	Dressing	16	18
Shelving boards, 12-in. up	30	32	Common	11	15

LATH.

Pine	$2 25	Spruce	$2 00

SHINGLES.

Sawed Pine, ex. XXXX	$4 25	$4 30	Bound butts, 6x18	$6 00	$6 15
Clear butts	3 25	3 35	Hemlock	2 15	2 30
Smooth, 6x18	5 40	5 50	Spruce	2 20	2 30

OSWEGO, N.Y.

OSWEGO, N. Y., September 30, 1896.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch				$45 00	@46 00
Pickings, " "				37 00	38 00
No. 1, cutting up, " "				32 00	34 00
No. 2, cutting up, " "				23 00	25 00
In strips, 4 to 8 wide, selected for moulding trips, 12 to 16 ft.				30 00	32 00

SIDING

1in siding, cutting up picks and uppers	32 00	@39 00	1¼ in selected	37 00	@40 00
1in dressing	19 00	21 00	1¼ in dressing	20 00	22 00
1in No. 1 culls	12 00	14 00	1¼ in No. 1 culls	13 00	15 00
1in No. 2 culls	11 50	13 00	1¼ in No. 2 culls	12 00	13 00
			1 in. No 3 culls	9 00	10 00

1X12 INCH.

12 and 16 feet, mill run				20 00	23 00
12 and 16 feet, No. 1 and 2, barn boards				18 00	19 00
12 and 16 feet, dressing and better				25 00	30 00
12 and 16 feet, No. 2 culls				13 00	14 00

1¼X10 INCHES.

Mill run, mill culls out	$19 00	@21 00	No. 1 culls	16 00	17 00
Dressing and better	24 00	28 00	No. 2 culls	13 00	14 00

1X4 INCHES.

Mill run, mill culls out	16 00	20 00	No. 1 culls	13 00	14 00
Dressing and better	23 00	29 00	No. 2 culls	11 00	12 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	17 00	23 00	6, 7 or 8, No. 1 culls	14 00	15 00
			6, 7 or 8, No. 2 culls	12 00	13 00
6, 7 or 8, drsg and better	21 00	27 00			

BOSTON, MASS.

BOSTON, September 30, 1896.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$11 50	12 00	¾ inch	$ 9 25	9 50
Coarse No. 5	15 00	15 50	11-16 inch	8 50	8 75
Refuse	13 00	13 25	⅝ inch	8 00	8 25
Outs		9 00	Clapboards, sap ext.	45 00	48 00
Boxboards, 1 inch	10 00	10 50	Sap clear	41 00	43 00
⅞ inch	9 00	9 50	Sap, 2nd clear	32 00	35 00
			No. 1	23 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in.	$50 00	@52 00	Fine com., 3 and 4 in	46 00	52 00
1¼, 1½ and 2 in.	52 00	53 00	No. 2, 1 in. Fine com.	29 00	31 00
3 and 4 in.	58 00	62 00	1¼, 1½ and 2 in.	30 00	32 00
Selects, 1 in.	44 00	45 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in.	45 00	47 00	No. 2	36 00	39 00
3 and 4 in.	52 00	55 00	No. 3	28 00	30 00
Moulding boards, 8 to 11 in. clear	37 00	39 00	Cut ups, 1 in.	20 00	32 00
60 per cent. clear	32 00	34 00	Cut ups, 1¼ to 2 in.	24 00	38 00
Fine common, 1 in.	40 00	41 00	Coffin boards	19 00	22 00
1¼, 1½ and 2 in.	40 00	42 00	Common all widths	22 00	26 00
			Shipping culls, 1 in.	14 50	15 50
			do 1¼ in.	15 50	16 50

SHINGLES.

Spruce	1 30	1 50	Second Clear	1 75	1 90
Cedar, extra	2 65	2 90	Extra No. 1	1 25	1 50
Clear	2 25	2 40			

HEMLOCK.

Boards, rough	11 00	@11 50	No. 2	9 00	@ 10 50
Planed	11 75	12 00			

LATH.

Spruce			By cargo	1 30	@ 1 9
By car	1 80	@ 2 00			

OTTAWA LETTER.

[Regular Correspondence of the Canada Lumberman.]

So far as can be learned the season in the woods in the Ottawa valley district will be a quiet one. While several firms have sent men to the woods, the number is smaller in most cases than that sent last season. Buell, Hurdman & Co., Bronson & Weston and J. R. Booth are among the firms mentioned as likely to curtail operations. Gilmour & Hughson will operate on about the same scale as last winter. They have already dispatched their crews to the woods.

The city has been visited by a large number of men seeking work in the woods. Unfortunately for them, many have been unable to obtain employment, and some who have worked in the bush for years have been obliged to return to their homes. As is always the case when the labor market is over-supplied, a considerable reduction has taken place in the wages of the woodsman. At the beginning of the season log cutters were being engaged at $20 per month, but at the time of writing from $12 to $18 is the current wage.

The sawing season being near a close, I endeavored to obtain some idea of the cut of the various firms. As far as could be learned, there has been a slight curtailment by one or two firms, but the total cut will compare favorably with that of last year. The shipments to the British market show a decided increase, however, which advantage has been offset by the stagnation in the United States trade.

During the past summer only four rafts of square timber were floated down the Ottawa river. Thus it is seen that the square timber business is gradually being abandoned, as at one time upwards of two hundred rafts found their way to Quebec en route to the British market. It is probable, nevertheless, that during the season of 1896-97 some renewed activity may characterize this business. There is yet to be found in the Ottawa valley an abundance of logs suitable for square timber.

INDIFFERENT LENGTHS.

Mr. Garvock, foreman of the Edwards' planing mills, is at present enjoying a six weeks' tour through the United States.

Mr. James Locknan, head culler for the Shepherd & Morse Lumber Co., left a fortnight ago with a large gang of men for the Upper Ottawa limits.

Mr. J. R. Booth, with his characteristic generosity, has offered to give $10,000 towards the erection of a sanitorium in Algonquin Park, near Canoe Lake.

Improvements have been made at the Edwards mills in New Edinburgh. An office has been erected containing five large compartments, also a drying shed, 165 feet long by 48 feet wide. This occupies the full length of the yard.

Ottawa, Ont., Sept. 25, 1896.

NEW BRUNSWICK LETTER.

[Regular Correspondence of the Canada Lumberman.]

The operations in the woods during the coming winter promise to be fully equal to those of last season. Up to the present a large number of camps have been started, and everything points to a successful season. The cost of all kinds of lumbermen's supplies is lower than for many years. On the Miramichi James Robinson, M. P., Richards, Lynch, and Mahone have crews at work, and R. A. Estey is commencing on the Tobique, having sent 25 men and a car-load of horses from Fredericton on the 21st ultimo. His cut will be about twenty-five million feet. H. R. McLellan is conducting operations back of Devil's Back Creek, Greenwich.

The shipments of spruce lumber from St. John to transatlantic ports up to August 31st show a considerable increase as compared with the same period last year, the figures being 99,963,334 feet in 1895 and 125,758,667 feet in 1896. The shippers were: W. M. Mackay, 78,803,060 feet; Alex. Gibson & Sons, 38,423,461; George McKean, 3,521,013; other shippers, 5,011,133. Of birch timber, 8,785 tons went this year, compared with 6,856 for the same period last year. Of pine timber there was only shipped one ton, compared with 324 tons last year. From other ports in New Brunswick and Nova Scotia Mr. Mackay shipped 109,790,494 feet, against 91,111,741 feet in 1895. The quantity sent to the United States shows a falling off.

The largest cargo of lumber that has been shipped out of St. John this year went recently to Cardiff per steamer Treasury. The lumber was furnished by W. M. Mackay and consisted of 1,400¼ standards.

Two shingle machines have been placed in the Aberdeen mill, Fredericton, by Donald Fraser & Sons, which, it is understood, will be run at night along with the clapboard machine and planer until the close of the season. The rotary will be closed down at night, while the usual work will continue during the day.

BITS OF LUMBER.

Lack of logs necessitated the temporary closing down of Adams & Burns' mill at Bathurst.

Messrs. Cushing & Co. have found it necessary to further enlarge their mill at Union Point.

Gibson's mills on the Nashwaak are running full blast now, the recent rains having assisted in bringing the logs down.

John Kilburn has returned from Quebec, where he has been looking after his lumbering interests. He has 80 men and ten horses at work, and intends augmenting this force.

The shingle mill of Charles McMilkin, at Marble Cove, which was recently burned, was built 16 years ago, and employed 20 men. The loss is only partially covered by insurance.

Forest fires have been raging in the vicinity of Doaktown, and for several days the mills were shut down, the men being employed in trying to save the timber. The fires have now been subdued.

D. & J. Ritchie, whose mill at Newcastle was burned recently, will erect a mill modern in every respect. They have arranged with T. W. Flett, just across the river at Nelson, to cut for them, and that mill is now rushing their logs through. About 85 men were thrown out of employment by the fire.

St. John, N.B., Sept. 24, 1896.

MICHIGAN LETTER.

[Regular Correspondence of the Canada Lumberman.

The depression which has characterized the lumber trade in general would seem to have fallen with unaccountable force upon the Michigan operators. At every point the report is heard that business is at its lowest ebb. No doubt the recent financial disasters have been an important factor in disturbing the trade of the state, while political questions are also engaging the attention of capitalists. At Saginaw nearly all the mills have closed down until some of the lumber which is piled upon the docks is removed. Manufacturers have wearied of cutting lumber to augment the already large supply, while there is little or no demand.

Preparations for the woods are being made upon a very limited scale, and it is doubtful whether the quantity of logs taken out this winter will reach one-fourth of the the usual output. Bay City manufacturers will operate very lightly, while the Saginaw manufacturers who obtain their supply from the Georgian Bay district will also curtail. Should the Presidential election be followed by increased trade, however, most of the mills will be in a position to make an average cut, as there are large quantities of logs being held over. It is estimated that fully 70,000,000 feet of Canadian logs will be held over until next season to save the cost of labor in sawing them.

The great Menominee river log drive has been completed for this year. The total amount of logs driven down was 330,000,000 feet, about 35,000,000 feet less than last year. It is estimated that next year's drive will be proportionately less. The drive this year has been remarkable. The main river drive was completed in fifty-two days, while last year, with 35,000,000 feet more, it took seventy-one days to finish it and then some logs were hung up.

SELECTS.

Close estimates of the amount of lumber piled in the different mill yards along the Menominee river give it as 204,483,000 feet.

The Holland & Emery Lumber Company's mill at East Tawas, which was closed down for six weeks, has just started up with 150 hands.

Alger, Smith & Co. have dispatched their last raft for the season, of 1,800,000 feet, from Georgian Bay to Cheboygan. The concern has 5,000,000 feet of logs still back in Canadian waters.

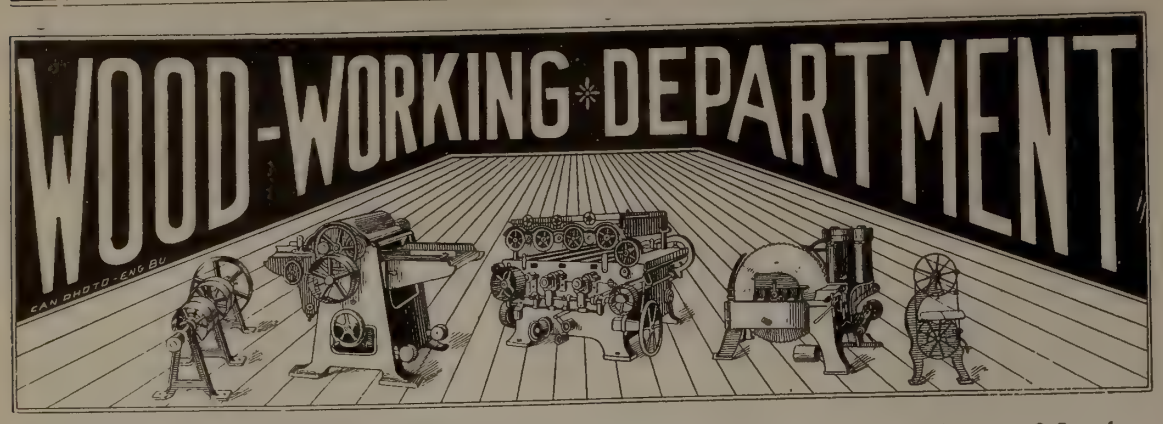
The importation of Canadian logs into the Saginaw Valley fell off over one-half during the month of August as compared with July, while the shipments of lumber were the lightest in years. The entries were 348,775 feet of lumber and 274,846 pine saw logs, containing 16,654,100 feet, board measure, and valued at $132,295.

Preliminary negotiations are under way for the removal of the lumbering business of the Diamond Match Co. to a site on Portage Lake, near Houghton. The company has 130,000,000 feet of logs already cut in the streams, which will suffice for two years' work, and could easily raft its remaining standing pine in Ontonagon county, when cut, to the mills there.

Saginaw, Mich., Sept. 26, 1896.

WOOD PULP.

The utilization of saw mill waste in the production of wood pulp is a subject which will bear the closest investigation by the promoters of important saw mill enterprises. When this industry was in its infancy it was supposed that the solid log sawed to an exact and unvarying length was an absolute necessity if success was to attend the operation of the pulp mill. But there are saw mills to-day in Maine holding contracts with the pulp mills to absorb all of their mill waste, and at a price which causes the lumberman to rub his hands with glee, as he recalls the old refuse burner or slab-piles to which so important a percentage of his mill product was formerly consigned. As the use of wood pulp extends from one class of goods to another, the industry itself assumes proportions which places it well toward the top of the list among the giant industries of the country. Of course, the waste product of our saw mills, if it were diverted exclusively to the pulp grinders, would supply but a very small percentage of the total amount of wood so consumed, and the manufacturers realize that their supply must come in the log direct from the forest. Spruce, by reason of its peculiar texture and fibre, is the great staple for use in the pulp mill. The bulk of the supply today comes from the Adirondacks, Northern New England and Canada. The pulp men are buying available timber tracts wherever found in order to secure an adequate supply for the future. When purchasing timber tracts or stumpage they acquire it at the market price, but in recent years they have very frequently outbid the saw mill men in their scramble for the possession of logs at the sorting boom. It is evident that West Virginia must soon be invaded on a large scale by the pulp makers, and when they come to realize the vast spruce timber resources of that state pulp factories will spring up like mushrooms on every line of railroad. Much of the timber land of West Virginia has been cut over for its poplar, oak and other hardwoods, the spruce being left for future generations to utilize. Readers who have followed our able and critical letters from West Virginia have learned that vast forests stripped of everything but the spruce are now found in many sections of that state, offering a fertile field for pulp operations. Several mills in that state are now cutting spruce exclusively, turning out something like 300,000 feet of lumber per day, and the mill waste produced in these plants would furnish the nucleus for substantial pulp operations. It is a growing industry, for, in addition to the former uses of pulp, it is now being extensively employed in the manufacture of mouldings, paper tiles for roofing purposes, and an enthusiastic advocate has recently declared its great value as a substitute for brick and stone as a building material.—Lumberman's Review.



ELECTRICAL TESTS OF POWER REQUIRED BY WOOD-WORKING MACHINERY.

PROF. O. G. Dodge reports the following tests of power required by the woodworking machinery at the Washington Navy Yard: The mechanical h.p. delivered by the motor was determined by tests made under the same conditions as the previous power tests. This was necessary, as in many cases long leads were run to the motor and the drop was large. In other cases it was necessary to use a rheostat in series with the armature to obtain the required speed. Under these conditions the efficiency of the motor was a very variable factor, and a separate test was made in each case to determine the output of the motor. The column of mechanical output is therefore the proper one to use in determining the motor required, and the electrical h.p. to be delivered by the generator.

The work done is the heaviest that will be required of these particular machines:

Circular rip saw, 28″ diameter; speed, 1,200 revolutions per minute, or 8,800 lineal feet per minute. Arbor pulley 5¼″ diameter by 8½″ face; hand feed; motor belted to saw shaft: Motor and saw, idle, 3.4 e.h.p.; ripping seasoned heart oak, 7⅝″ thick; feed, 10 feet per minute, 19.3 e.h.p.

Circular rip saw, 24″ diameter; speed 1,500 revolutions per minute, or 9,429 lineal feet per minute; hand feed; motor belt direct to 7″ pulley on saw shaft: Motor driving saw, idle, 3.2 e.h.p.; ripping seasoned heart oak, 6″ thick, 10 feet per minute, 12.8 e.h.p.; ripping seasoned white pine, 6½″ thick, 15 feet per minute, 9.4 e.h.p.; ripping seasoned yellow pine, 2″ thick, 45 feet per minute, 10.7 e.h.p.

Circular rip saw, 14″ diameter; speed 2,200 revolutions per minute, or 8,067 lineal feet per minute; Arbor pulley, 3″ diameter, 5″ face; hand feed; motor belted to saw shaft: Motor, idle, .96 e.h.p.; motor and saw, idle, 2.7 e.h.p.; ripping seasoned heart oak, 3½″ thick, 12 feet per minute, 6.3 e.h.p.

Circular rip saw, 12″ diameter; speed, 2,200 revolutions per minute, or 6,914 lineal feet per minute; hand feed; belt pulley 3½″ diameter and 3″ face; motor belted direct to 3½″ pulley on saw shaft; saw set to wabble for cutting grooves: Motor, idle, .96 e.h.p.; driving saw, idle, 2.2 e.h.p.; cutting groove in seasoned walnut, ⅜ × ⅞, 12 feet per minute, 3.6 e.h.p.

Band saw pulleys 72″ diameters; speed, 160 revolutions per minute, or 3,017 lineal feet per minute; belt pulley 30″ diameter, 8″ face, power feed; motor belted to saw shaft: Motor and saw, idle, 12.1 e.h.p.; ripping seasoned ash, 10¾″ thick, feed 6 feet per minute, 16.1 e.h.p.; ripping seasoned white pine, 16½″ thick, feed 10 feet per minute, 16.1 e.h.p.; ripping yellow pine, 12″ thick, 20 feet per minute, 18.8 e.h.p.

Band saw, pulleys 42″ diameter; speed, 350 revolutions per minute, or 3,850 lineal feet per minute; belt pulley 16″ diameter, 5″ face; hand feed; motor belted to saw shaft: Motor, idle, .96 e.h.p.: Motor and saw, idle, 2.9 e.h.p.; ripping seasoned oak, 12″ thick, feed 3 feet per minute, 5.7 e.h.p.; cross-cutting seasoned oak, 8″ thick, feed 5 feet per minute, 5.7 e.h.p.; ripping live oak, 10″ thick, feed 3.2 feet per minute, 5.7 e.h.p.

Band saw pulleys, 28″ diameter; speed, 480 revolutions per minute, or 3,520 lineal feet per minute; belt pulley 12″ diameter, 3½″ face; hand feed; motor belted to saw shaft: Motor, idle, .96 e.h.p.; motor and saw, idle, 1.7 e.h.p.; ripping seasoned oak, 3″ thick, feed 2½ feet per minute, 2.3 e.h.p.; ripping seasoned pine, 3″ thick, feed 4 feet per minute, 2.3 e.h.p.; cross-cut seasoned oak, 3¼″ thick, feed 4 feet per minute, 2.3 e.h.p.

Daniel's planer, machine bed 2 feet 5 in. by 21 feet 6 in.; belt pulley 13 in. diameter by 5¼ in. face; speed 350 revolutions per minute; speed of cutting edges of tool 10,400 feet per minute; power feed 12 feet per minute; motor belted to countershaft: Motor, idle, .96 e.h.p.; driving machine, idle, 3.9 e.h.p.: planing seasoned oak, cut 3/16 in. deep by 20 in. wide, 12 feet per minute, 6.2 e.h.p.

Hand cylinder planer or jointer, size of machine 24 in.; belt pnlley 4 in. diameter, 5 in. face; speed 3,200 revolutions per minute; speed of cutting edge of tool 4,000 feet per minute; hand feed; motor belted to shaft of tool: Motor, idle, .96 e.h.p.; driving machine, idle, 2.40 e.h.p.; planing white pine, cut 11/100 in. deep by 18 in. wide, 25 feet per minute, 4.80 e.h.p.

Cylinder planer, size of machine 24 in.; belt pulley 5 in. diameter, 5 in. face; 2,250 revolutions per minute; speed of cutting edges of tool 3,105 feet per minute; power feed; motor belted to shaft of tool: Motor, idle, .96 e.h.p.; driving machine, idle, 2.40 e.h.p.; planing pine, cut 1/16 in. deep, 18 in. wide, 11 feet per minute, 3.6 e.h.p.; planing oak, cut 1/16 in. deep, 6½ in. wide, 11 feet per minute, 3.6 e.h.p.

Boring machine, speed of bit 375 revolutions per minute; hand feed; motor belted to bit shaft: Motor, idle, .96 e.h.p.; driving machine, idle, 1.7 e.h.p.; boring, 4 inch hole in seasoned oak, 9.35 feet per minute, 2.3 e.h.p.

Boring machine, belt pulley 8 in. diameter, 3 in. face; speed 750 revolutions per minute; hand feed; motor belted to machine shaft: Motor, idle, .96 e.h.p.; driving machine, idle, 1.9 e.h.p.; boring 1 in. hole in oak, feed 3¾ in. in 5 seconds, 2.2 e.h.p.; boring 1⅝ in. hole in oak, feed 1 in. in 7 seconds, 2.2 e.h.p.

A POPULAR DRY KILN.

THE illustrations herewith presented show the operation of a cheap dry kiln which is extensively used on the Pacific coast, and which is claimed to possess considerable merit. The essence of success in drying lumber lies in the circulation of the air. Figure 1 shows the interior of the kiln. The air shaft, with damper to regulate the down pressure of the air, is situated between the outside door and a false door. The false door does not reach the floor of the kiln, consequently the hot moist air current does not come in contact with the cold air from the air shaft, but passes under the door. For a small distance into the kiln (enough to take in a car of lumber) the floor is solid; that is, there are no steam pipes underneath. The reason for this is to give the lumber a gradual heat. In other words, when one car is taken out the one nearest the false door is moved forward into a hot temperature. At the dry end of the kiln, and underneath the floor, is a

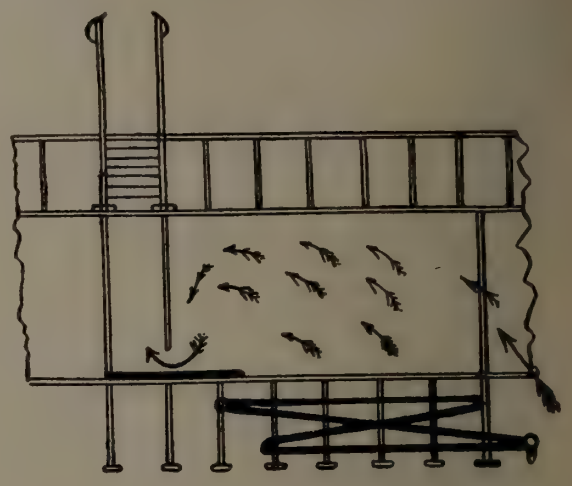


FIG. 1.

cold air duct, extending nearly the width of the structure and about four inches in diameter. The cold air forces the hot air to the top of the kiln and through the lumber and down at the other end through the opening under the false door. The passage of the hot air through the lumber makes the air damp and passes so fast that it prevents any sweating of the sides of the kiln or in any part of the lumber. The principle of this is that rapid

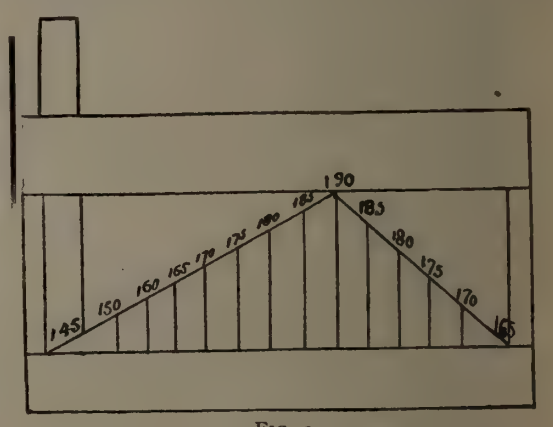


FIG. 2.

nd strong circulation takes up the small particles of dampness as soon as they leave the lumber. In this way the damp hot air will start the water from the centre of the board through the cells or pores, thus drying the centre first, preventing checking, warping and twisting. So strong is the circulation that shavings are blown away at the wet end.

The pipes underneath the kiln are placed on an incline in order to carry off condensation of steam. At the first joint of the pipe, at the wet end, is a header. A bleeder carries the condensation through an independent pipe to the second header, which is at the cold air inlet. Here is another bleeder which carries the condensation to the outside.

Figure 2 gives an idea of the temperature, and is self-explanatory. From it can be seen that the area of very hot temperature is at about one-third the length of the kiln from the hot air end.

Spruce, cedar and fir has been dried in fairly good shape in 36 hours, without checking. About 800 feet of pipe is used to every 100,000 shingles, and lumber requires less. About 365 degrees serves to dry lumber in four days and 185 degrees for shingles.

THE NEWS.

—Mr. Hamilton, of Cache Bay, has taken over the plant of the Imperial Lumber Co., of Warren, Ont.

—Gilley Bros., loggers, etc., New Westminster, B. C., have been succeeded by the Mainland Logging Co., Ltd.

—The St. Anthony Lumber Company are building a new dam at Whitney, Ont., across the Madawaska river.

—The second mill of the Sault Ste. Marie Pulp and Paper Co., at Sault Ste. Marie, Ont., is nearing completion.

—The gang saw in Mickle, Dyment & Sons' mill at Severn Bridge, Ont., closed down for the season a fortnight ago.

—W. E. Tatton, of Grand Manan, N. B., is refitting his mill there with a new 50 h. p. steam plant from the shops of E. Leonard & Sons.

—Messrs. McMillan & Haynes, saw manufacturers, St. Catharines, Ont., have been succeeded by the McMillan & Haynes Company, Ltd.

—Messrs. Price have closed down their saw mill at Sault au Cochon, Que. The late superintendent, Mr. G. W. Forrest, has removed to Waterloo.

—D. A. Nease, an American capitalist, has been in the Port Arthur district investigating the resources and advantages of that region for the pulp grinding industry.

—It is understood that a company is negotiating for the purchase of the mill property of John G. Rice, at Digby, N. S., with a view of converting it into a general woodworking factory.

—The news has reached the Ontario Crown Lands Department of extensive forest fires near the head waters of the Mississiquo river. It is estimated that 35,000,000 feet of lumber have been burned.

—Jean Dansereau, millwright, has taken an action for $1,999 against Hercule Dansereau on account of an accident which happened to him while working in the latter's saw mills at Vercheres, Que.

—Mr. S. Hayakawa, of Japan, who is Councillor of the Ministry of Finance, and Government Inspector of the Bank of Japan, states that there is an excellent market in that country for machinery of all kinds.

—The Cascapedia Pulp and Lumber Company has been incorporated, with a capital stock of $300,000. The promoters are: J. M. Fortier, James Stubbs and Thomas Harkness, of Montreal, and Alphonse Charlebois and C. H. J. Maguire, of Quebec.

—The Cant Bros.' Manufacturing Company, of Galt, Ont., have purchased the old Carbon Works building at Lancaster, N.Y., and are making arrangements to remove to that city. They are putting the building in shape to receive their machinery for manufacturing woodworking machines.

—A dispatch from Washington says: Acting-Secretary Hamlin has decided lumber may be shipped from Canada to Syracuse, N. Y., in bond, and entered for immediate transportation, Syracuse having been recently designated as a port of entry, with immediate transportation privileges.

—At a meeting of the members of the firm of E. D. Davison & Son, Limited, of Bridgewater, N. S., Francis Davison was chosen as president, to fill the vacancy caused by the death of the late Charles Henry Davison. Archie L. Davison was appointed secretary for the remainder of the present year.

—Mr. Thos. Callaghan, agent for the Rathbun Co. at Campbellton, who has recently returned from a trip through the north country, reports that the company's limits in the townships of Stanhope and McClintock have escaped damage by fire so far, although severe conflagrations have raged in the vicinity.

—The Port Arthur Pulp Timber Company, Limited, composed of R. A. Manning, Marquet, D. A. Nease, Philadelphia, R. A. Hazlewood, Jas. Whalen and Jas. Conmee, Port Arthur, are applying for incorporation, to manufacture and deal in all kinds of timber and pulp, etc. The head office is Port Arthur, Ont., and the capital stock $200,000.

—Mr. W. A. Howell, of Jarvis, Ont., has taken out a patent for the United Kingdom relating to a guide for band saws. The guide consists of a disc with grooves of different widths, into one of which the back of the band saw fits. The disc turns on centres in a fork which can be adjusted laterally by a screw being made to slide in the block. The block is fixed to a bracket, adjustable on a rod, which again is supported adjustably in the socket.

—The pulp factory in process of erection at Windsor Mills, Que., comprises two large buildings, each 172 × 32 feet, situated near the dam constructed last year. One of these is already finished and workmen are placing the machinery in it. They will have a capacity of sixteen tons of pulp a day, with 8,000 horse-power as a motor, and when finished will give employment to between 150 and 200 men.

CASUALITIES.

—Judson Broadway had one of his hands badly injured while running a jointer in Howry & Son's mills at Fenelon Falls, Ont.

—George Gavott was killed in C. Gates' chopping mill at Houghton Centre, Ont., while engaged in putting a belt on a pulley.

—Wallace McDonald, while putting a lath saw in place on a machine at McDonald's Corner, N. B., accidentally sawed his hand almost off.

—A. J. Hughes, lumber merchant of Souris, Man., fell over a precipice while prospecting in British Columbia, and was seriously injured.

—J. Marshall, son of the night-watchman at the Royal City Mills, New Westminster, B. C., was drowned by being drawn off the log he was guiding to the chute.

—While engaged in placing some lumber in position on a saw in Gilmour & Hughson's mill at Hull, Albert Bedard was instantly killed. The board flew back, striking him on the chest.

—Thomas Barry was severely injured in a saw mill at West Frampton, Que., by coming in contact with a circular saw. A wound sixteen inches in length and seven inches in depth was inflicted.

—A boiler exploded in Pettis Bros.' hoop and stave mill four miles from Comber, Ont., on the 16th inst., instantly killing Alfred Jacobs, night fireman. Deceased had put in a new pipe leading to the safety valve, and evidently neglected to open the valve before getting up steam.

—Elijah Wismer met his death in the saw mill of Chas. E. Nayloc, Essex, Ont., on the 15th inst. His work was to equalize the length of the bolts by running them between two saws, and it is supposed he placed his side against the log, and the saw passed through it unnoticed, cutting him terribly from the knee up to the armpit, and severing the ribs.

—What might have been a much more serious accident occurred to Mr. G. L. Parker, manager of Ross Bros. estate at Buckingham, Que. While walking over the ruins of the old mill, the debris gave way, and precipitated him about fifteen feet to the bottom of the mill. He was severely bruised and one of his hands dislocated.

PERSONAL.

Mr. William Gillies, of the lumber manufacturing firm of Gillies Bros., Braeside, Ont., left a fortnight ago on a two months' visit to British Columbia.

Mr. J. W. Todd and his son, of the firm of Watson & Todd, Liverpool, Eng., and Montreal, have arrived in Canada to look after their interests on this side of the Atlantic.

On the 22nd ultimo the death occurred in Toronto, after a lingering illness, of Senator John Ferguson, M.D. Deceased was at one time a prominent contractor, and established the first wood pulp mill at Sherbrooke, Que.

The Northeastern Lumberman says: "Political economists in Europe claim that growing timber and gold are the only articles which have not declined very greatly in value during the last decade. The yearly value of the timber consumed in Europe is estimated at $951,250,000." To this may be added two comments. First, for timber, like gold, there is an ever-growing use and demand. Secondly, timber, unlike gold, is decreasing in quantity. Those of our lumbermen who conserve their forest limits have an assured wealth to leave to all generations to come.

LARGE TIMBER RAFT.

The largest raft of logs ever floated into San Francisco bay, containing nearly 600,000 linear feet of piling, was towed down from the Columbia river by the Southern Pacific collier Mineola.

The raft was built at Stella, on the Columbia river, and is constructed on the cigar-shaped plan and forms a structure 500 feet in length, with about fifty feet beam and thirty feet depth. It will draw twenty-five feet of water and contain 560,000 linear feet of logs, and if the latter were laid out in a straight line, ends together, they would form a rail 217 miles in length, and be sufficient to build a pontoon bridge seven piles broad to the Farallones, if such an undertaking were possible.

Between fifty and sixty tons of chain have been used in the construction of the immense raft, and it is said to be stronger and better built than any other log raft ever launched in the world. The piles are principally of fir and spruce and have been carefully selected.

RED AND WHITE CEDAR SHINGLES.

A CORRESPONDENT of the New York Sun says: "There are in Michigan white cedar shingles now doing good service on roofs in that state that have been in full exposure and wear for over seventy-five years. It is thus seen that climate affects the durability of shingles, and the fact that white cedar is the natural product of Michigan and red cedar of the Pacific coast is held to be proof that the red cedar is naturally adapted for use on the Pacific coast and the white for use in such sections as the middle and north-western states, etc. A peculiar objection is brought against the red cedar by some, namely, that there exists in that wood an acid which is, in the climate of certain sections, so acted upon by water as to corrode rapidly the nails with which the shingles are fastened onto roofs, the rust extending to the wood around the nails, and soon causing a leaky roof—this action explaining the holes so often to be seen around the nails in red cedar roofs. Another point offered for consideration in this connection is the fact, as stated, that a shingle is ruined by kiln-drying, and that no kiln-dried lumber can be regarded as of equal value for outside work to that which is air-dried."

KEEP AT IT.

If you expect to conquer
In the battle of to-day,
You will have to blow your trumpet
In a firm and steady way.
If you toot your little whistle,
Then lay aside the horn,
There's not a soul will ever know
That such a man was born.

The man that owns his acres
Is the man that plows all day,
And the man that keeps a-humping
Is the man that's here to stay.
But the man who advertises
With a sort of sudden jerk
Is the man that blames the printer
Because it didn't work.

But the man that gets the business
Uses brainy printer's ink,
Not a clatter and a sputter,
But an ad. that makes you think;
And he plans his advertisements
As he plans his well-bought stock,
And the future of his business
Is as solid as a rock.

SOME HINTS ON SAWING.

I HAVE said something, some time or other, to the effect that all logs saw easiest and with less liability to pinch if sawed butt foremost. There are other considerations also in favor of this proposition; the slabs handle easier over the rollers, and if the log is tapering the boards can be handled best wide end foremost and can be edged to best advantage; the edgings will go out of the mill with less danger of catching in the machinery, and where there are edge pieces worth trimming to clips, they come handiest to the trimmer butt end first. But once and above all, the sawyer can see better from the butt how much good stock he is likely to get off the log before striking heart defects. Any way you can put it, a log will handle easiest from stump to lumber stock, butt end foremost.

There are hundreds of small mills throughout the country with only a single hand edger or none at all, the bulk or the whole of the edging being done on the big circular. Here is a chance for pretty nearly making or breaking the owner. In the majority of cases it rubs pretty close to the latter. It is impossible to edge with the big saw and do anything like justice to individual boards and get anything like a day's work done. There must be inevitable waste and making of poor grades. But if the sawyer knows anything about edging to advantage he can save a good deal. His first duty should be to saw everything so as to leave as little edging to be done as possible. No set of rules can be laid down to govern this part of the sawyer's work. It can only be a question of good judgment, to be varied with pretty much every log. There are sawyers who have good judgment in everything else, but who utterly fail in this work and waste much more than their wages every day. Such sawyers should be employed only where there is a gang edger and a skilled edgerman. It is poor economy to run a small portable without a gang edger, as the waste of stock and lowering of grades will pay for a pretty good one in a season's run.

Never crowd a saw so as to lower its speed if you want it to do uniformly good work. All saws are hammered, or should be, to stand up at a certain speed per minute, and if run below that it is not the fault of the saw if it makes wedge-shaped or snaky lumber. This does not apply to the old five and six-gauge boiler plates made for butchering wood with inserted teeth.

In all saw mill practice the sawyer and the setter should be in complete accord, and as a general rule the setter should be under the absolute direction of the sawyer. As has been stated in these papers, the sawyer ought to be a good practical lumber inspector, at least to the extent that he should know what kind of lumber each cut is going to make when he sees the surface presented to the saw. After the slab is once off he should know whether the next piece ought to be cut into graded stock, whether it should be run into inch or into something thicker, or, where lumber thinner than inch is being cut, whether it is good enough for that class of stock, or whether the log should be run through and through into something for dimension and gotten out of the way as quickly as possible. He should know whether a log is worth spending time over in order to get out lumber better than common. Where his experience teaches him that there is nothing better than the lower grades in the log, he should only spend time enough in turning the log to get all the sound common out of it that is possible. If the setter and sawyer can not agree fully, and the sawyer is granted the general direction of the work, provided he is capable, then the quicker a new setter is employed the better for the pocket of the owner. My experience has always been that in sawing ordinary stock lumber, beyond certain points which are clearly the setter's prerogative, the latter should be entirely subordinate to the sawyer. But on the other hand, no matter how good a mechanic the sawyer may be, how well he may handle his saw, if he does not know at a glance from the time the log is rolled on the carriage just how to place it for every turn and cut, he has no business there, for that part of the work can not be delegated to the setter with any certainty of economy, as he can not see the face of the log and make the necessary decisions without losing time. Of course there are some exceptions to this general rule, as in all others. In cutting bill stuff, especially to fractional sizes, and for special purposes, the setter may be allowed some degree of discretion, as he is supposed to know just exactly what the bill calls for, and to check it off as sawed; and he should be capable of judging whether a piece wholly or partly finished is up to the quality of the order, and should be checked off or turned back on the carriage to be run into stock. At the same time it is quite necessary in order that there be no waste, and no loss of time, that the sawyer should know fully as much about what is required for the given lot of bill stuff as does the setter. There are some pretty good sawyers engaged in the business who allow themselves to be practically run by the setter who happens to be a man of more force of character, and perhaps better knowledge of how the lumber should be sawed. —O. S. Whitmore, in The Wood-worker.

PEMBROKE, ONT.
OTTAWA ENG CO

LUMBERMEN'S CLOTHING
MANUFACTURERS OF THE
FAMOUS CARSS MACKINAW
In Jackets, Pants and Shirts
WOOL SOCKS and MITTS
VAN GOODS Specially for the Lumber Trade.
Write for Prices and Samples.
W. Carss & Co.
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CAMP SUPPLIES
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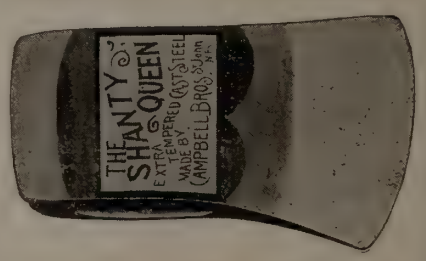

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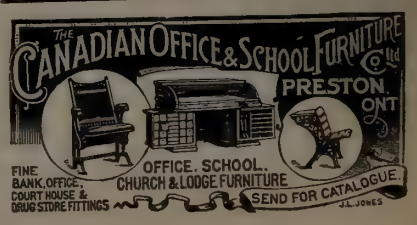

During July, this year, 83,661,000 feet of lumber was imported from Canada to the United States, valued at $892,414, as compared with 80,960,000 feet, valued at $890,446, during July, 1895. For the seven months ending with July the imports this year amounted to 407,788,000 feet, valued at $4,321,589, and for the same period last year the imports were 378,211,000 feet, valued at $4,148,079. The imports of wood pulp from Canada for July this year amounted to 3,850 tons, valued at $54,836, against 1,577 tons, valued at $24,746, for July last year. For the seven months ending with July this year 22,273 tons of wood pulp were imported from Canada, valued at $302,820, against 9,712 tons, valued at $174,482, for the seven months ending with July last year. Imports of log and round timber for July this year amounted to 96,836,000 feet, valued at $773,410, and for July last year 71,907,000 feet, valued at $575,407. For the seven months ending with July the imports of logs amounted to 213,475,000 feet this year, valued at $1,606,887, and 175,157,000 feet last year, valued at $1,373,493.

McNair Bros., of Vancouver, B. C., have rebuilt their burned shingle mill.

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To sound industries, which will bear investigation, substantial inducements will be given by many of the places on the lines of the Illinois Central R. R., which is the only road under one management running through from the North-Western States to the Gulf of Mexico. GEO. C. POWER, Industrial Commissioner I.C.R.R. Co., 506 Central Station, Chicago.

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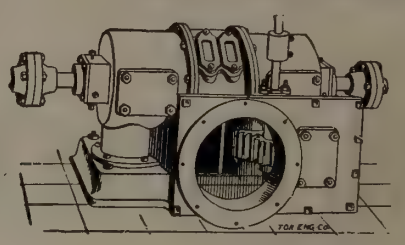

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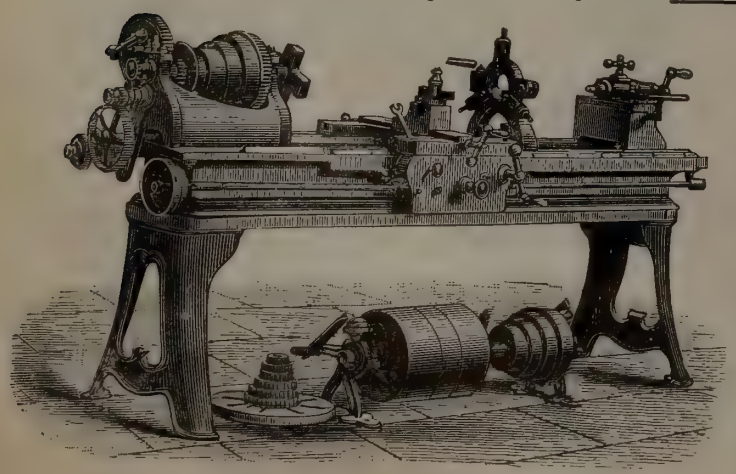

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SALE OF BURNT PINE

A quantity of standing pine timber upon unsold and unlicensed lands of the Crown, lying south and west of Biscotasing Station, on the main line of the Canadian Pacific Railway, estimated as follows :—

Block 1	4,000,000 feet	B. M.
" 2	15,000,000	"
" 3	12,000,000	"
" 4	14,000,000	"
" 5	16,000,000	"
Total.....	61,000,000	"

having been damaged by fire during the past summer, the undersigned hereby calls for tenders for the right to cut the damaged timber.

Tenders will be received up to and including the 20th day of October next, and may be for any block or for the whole, and must state the amount per thousand feet cubic, if made into square or waney board timber, and per thousand feet board measure, if made into sawlogs, which the parties making tender are willing to pay for the burnt timber, in addition to the Crown dues of $25.00 per thousand feet cubic for timber and $1.25 per thousand feet B M. for logs. Parties are at liberty to make, and the same will be considered, an alternative tender of a lump sum as bonus for the timber on each block, in addition to the Crown dues as above stated.

The above figures represent only the Department's estimate, and intending purchasers must satisfy themselves as to quantities and all other particulars. The Department does not bind itself to accept the highest or any tender.

For conditions, maps of the territory, and further particulars, applications should be made to the Crown Lands Department.

Tenders should be marked "Tender for Burnt Timber" and addressed to the Hon. Commissioner of Crown Lands.

Mr. A W. Belding, Forest Ranger under the Department, will be at Biscotasing Station on and after the 20th of September to give information to parties desirous of examining this timber.

J. M. GIBSON,
Commissioner of Crown Lands

Department of Crown Lands,
(Woods and Forests Branch),
Toronto, September 15th, 1896.

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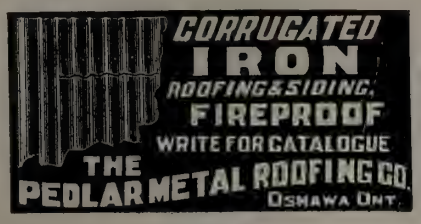

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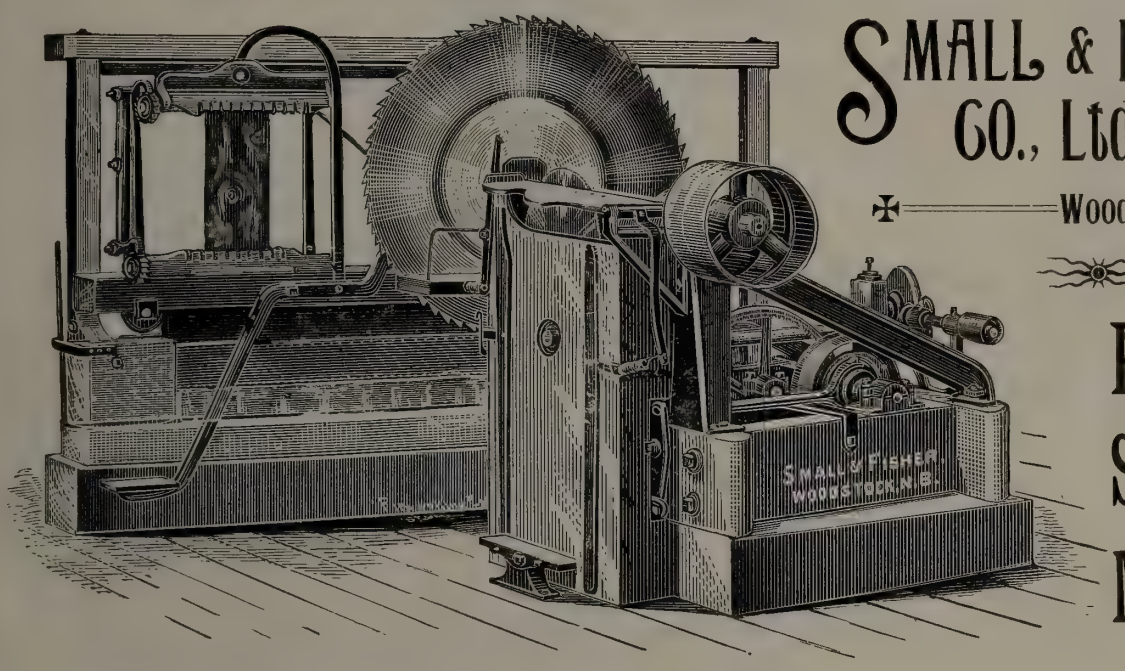

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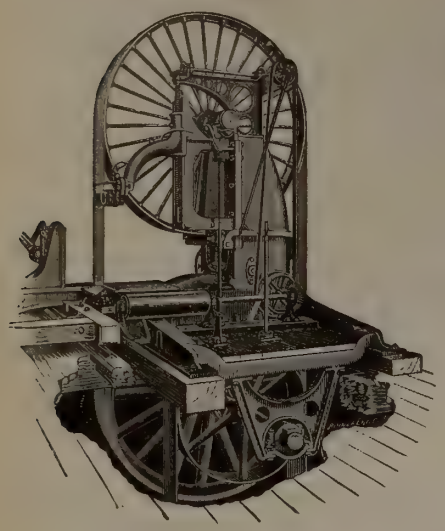

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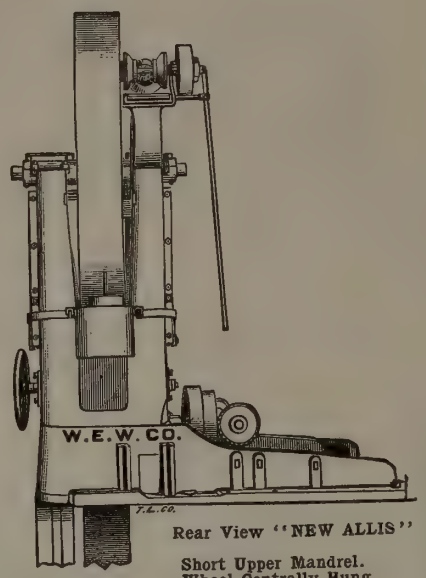

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NOTE ..... Short Upper Mandrel.
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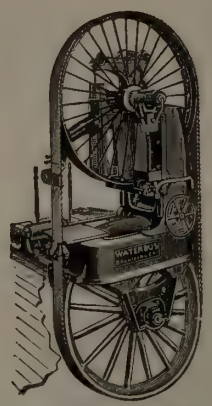

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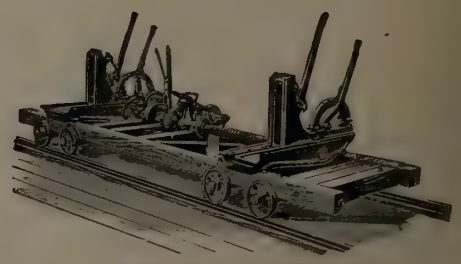

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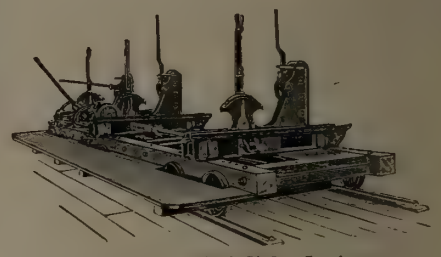

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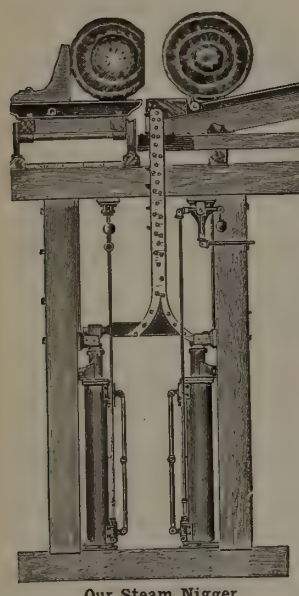

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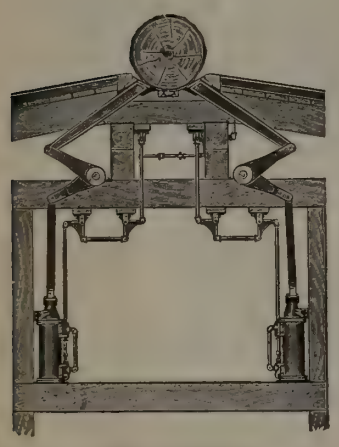

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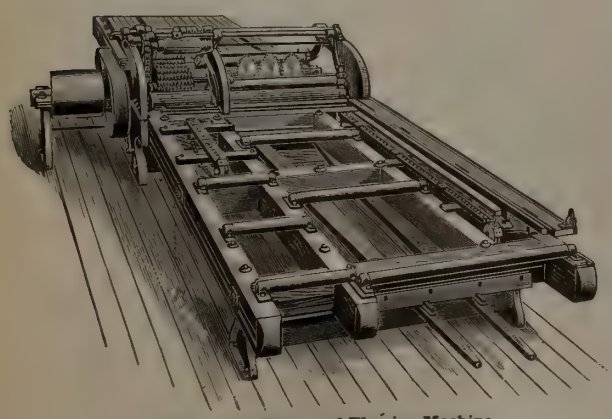

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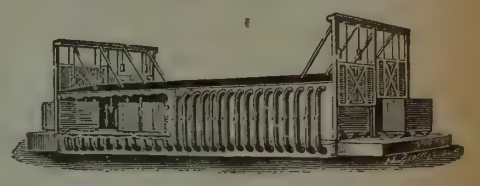
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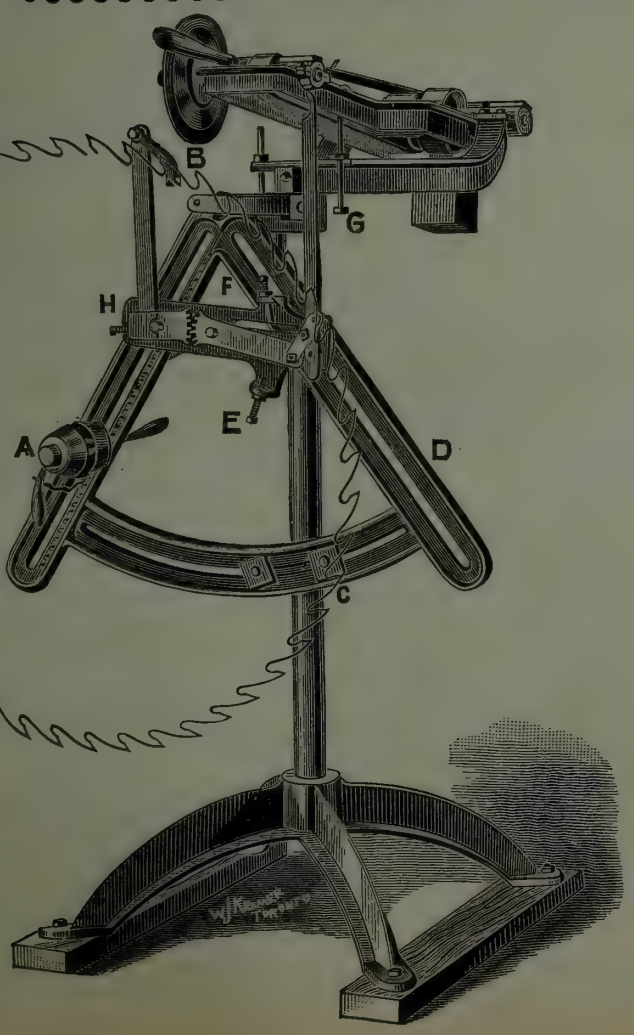

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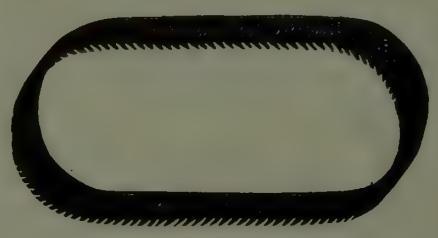
SIXTEEN REASONS, AND HOW TO AVOID THEM



Being instructions to filers on the care of large band saw blades used in the manufacture of lumber.

A book filled with valuable information on the care of band saws. Giving the reasons for breaking; analyzing each reason; giving instructions to dispense with the causes as laid down in each reason; and full details on filing and brazing. The proper styles of hammers to use are illustrated and described, and views of blades showing the blows of the different styles of hammers form an important part of the illustrations. Improper and unequal tension are then treated, and the manner o properly setting irregular teeth is described. In connection with the treatise is a history of the invention, manufacture and use of the saw from its origin to the present time. The work in whole makes an accumulation of information such as has never before been published.

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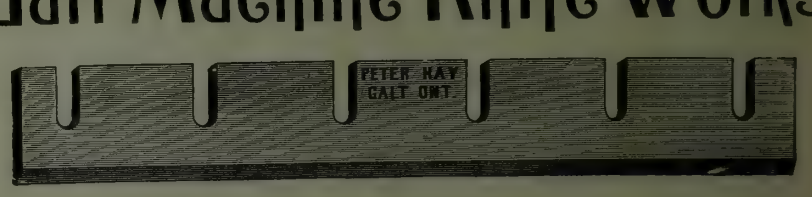

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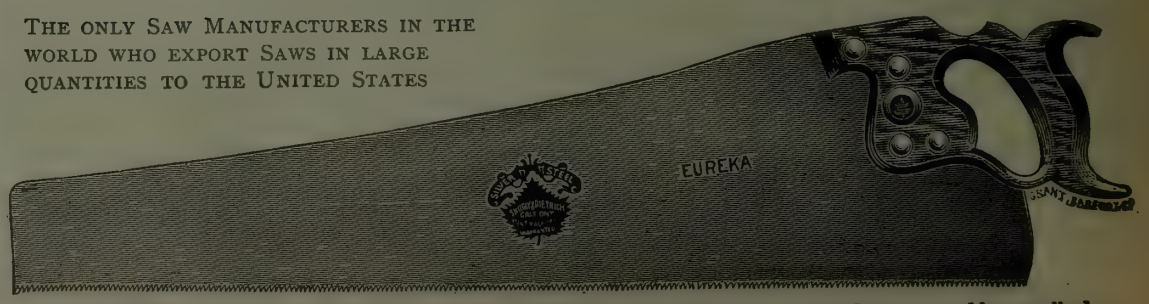

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SPECIAL NUMBER

CANADA LUMBERMAN.

TORONTO
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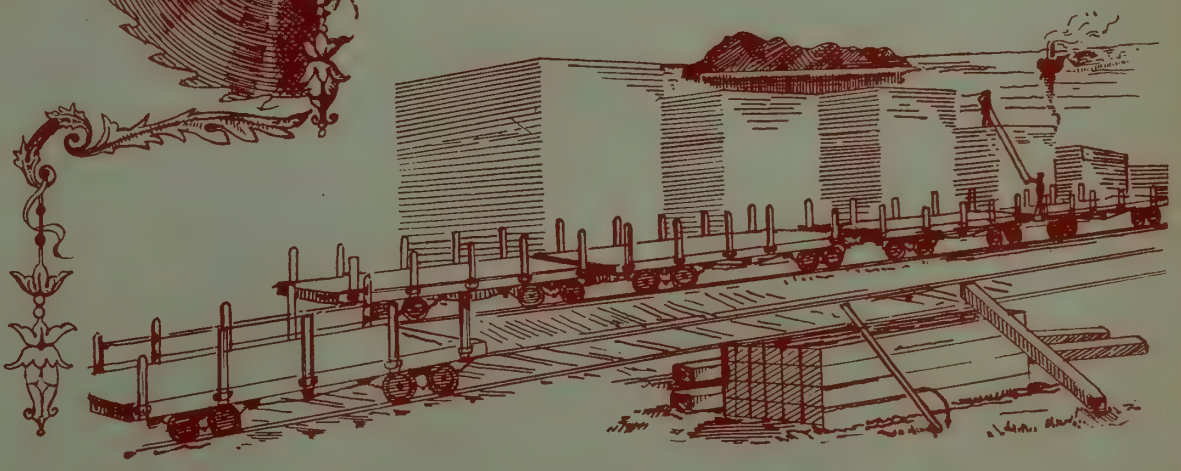

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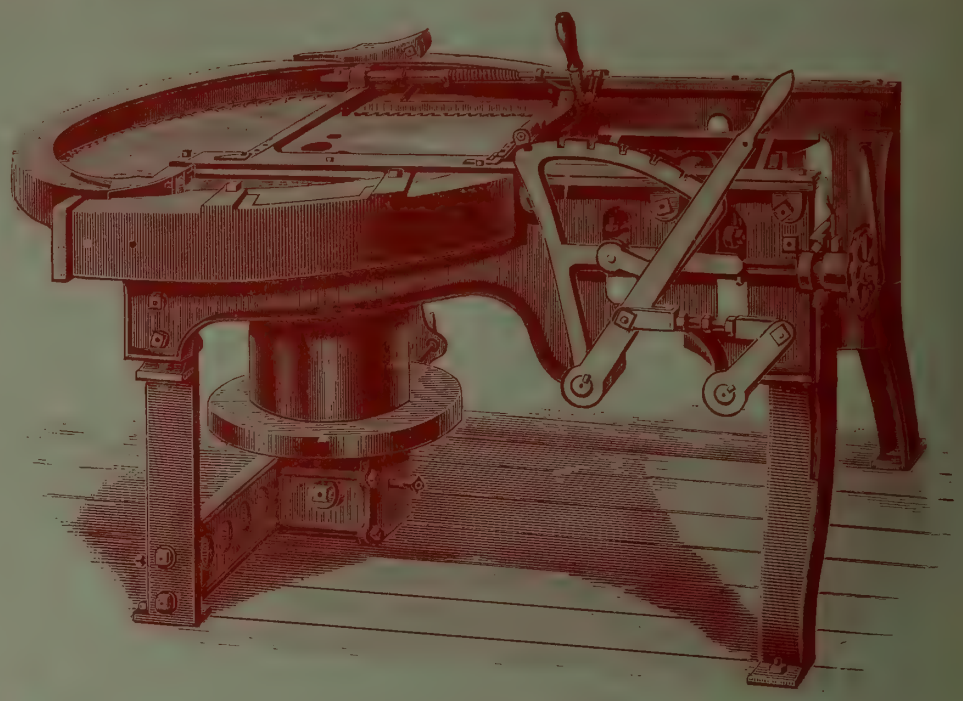

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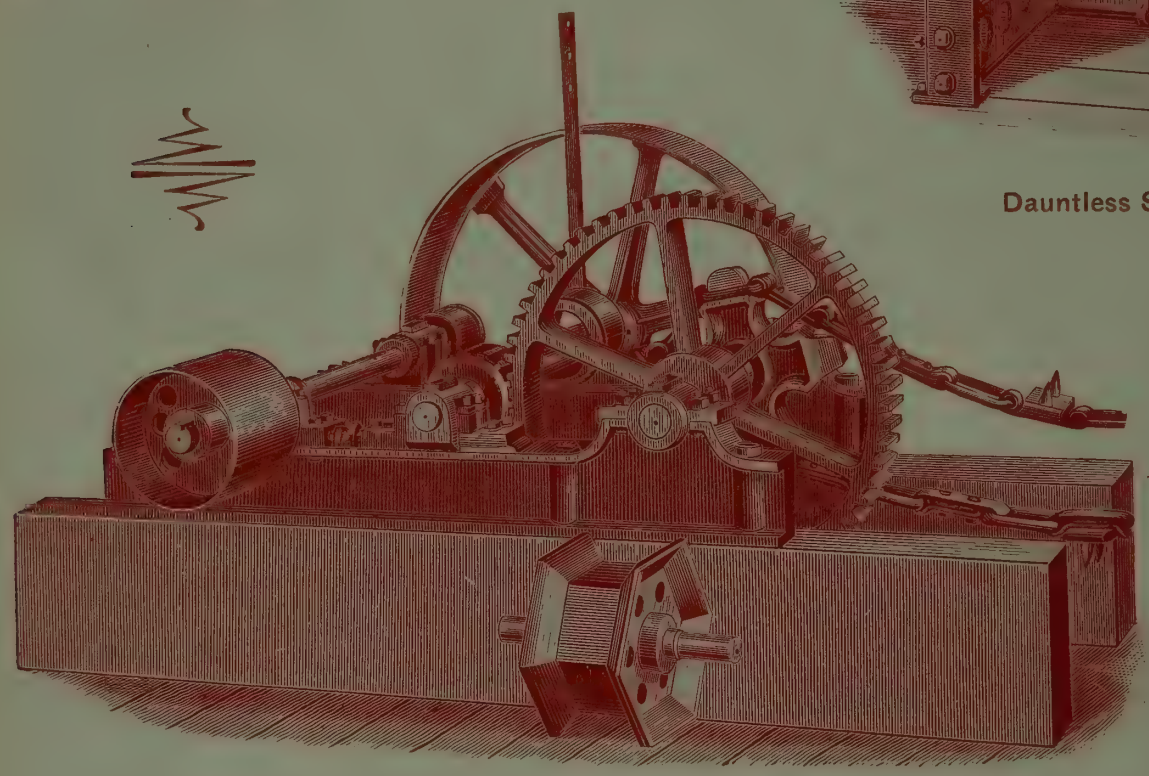

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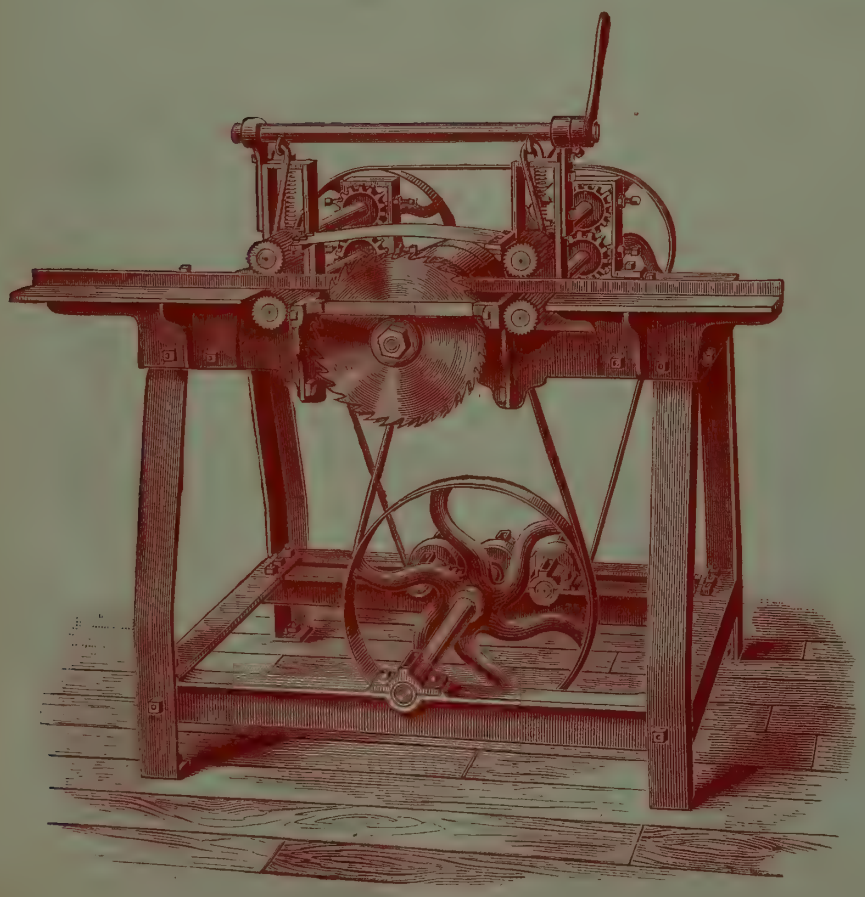

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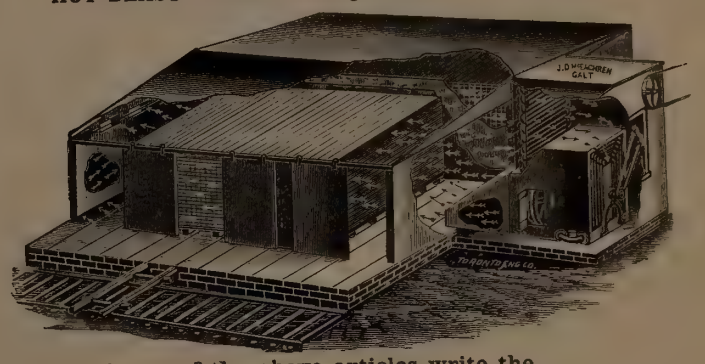

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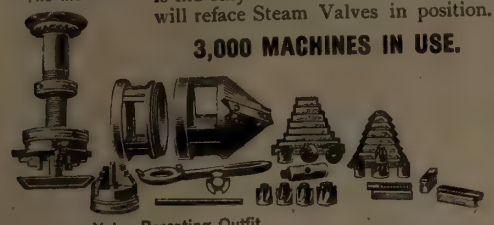

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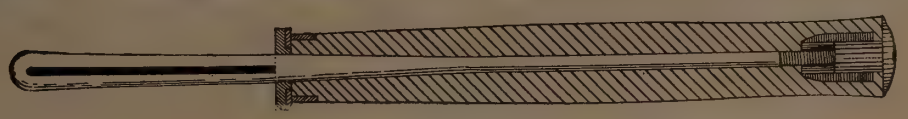

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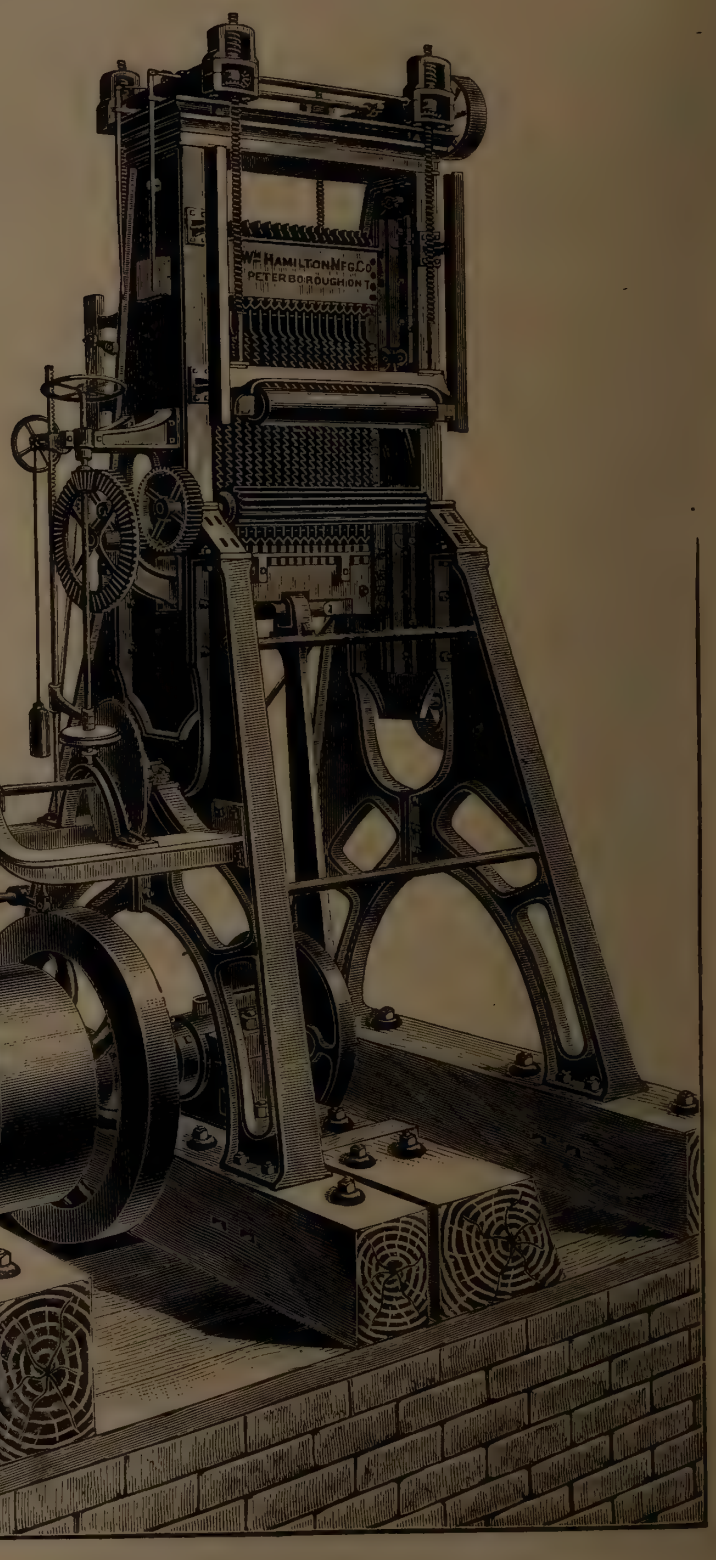

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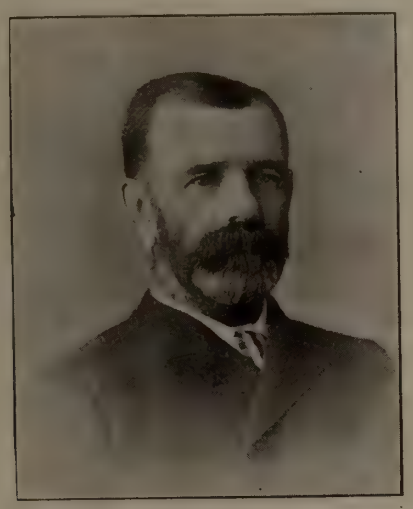

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CANADIAN WHOLESALE DEALERS AND EXPORTERS

CANADIAN LUMBERMEN.

By Met. L. Saley.

The Veteran American Lumber Journalist Indulges in a few Personal Reminiscences and Pays a Tribute to Canadian Character.

As a sort of prelude let me say that I like the Canadian lumbermen with whom I have come in contact, and am glad of this opportunity to shake hands with all of them at once through these columns. I like them because they are stout, vigorous, frank, and know their business. Mr. Eddy, who has figured so long and prominently in Canadian lumber affairs, was born in a New England state, and is consequently not a very stocky man, and like the majority of us yankees, may have the dyspepsia tucked onto him, but with this exception your lumbermen who have come directly under my observation look as though they might live long enough to see Canada annexed to the United States.

Mr. Little, whom I am glad to count among my friends, is not built like a Sampson, but he is wiry enough to make up for any deficiency in other directions. Permit me also to add that I am an admirer of Mr. Little, for he is doing a good work. Any man who battles for the trees is battling for humanity. Mr. Little and I have had some rather sharp tilts, but it was not because we were personal enemies. He was very radical one way in his estimate of the amount of standing timber, and I was very radical the other, hence we disagreed. Mr. Little, however, has seen the error of his way—so have I, and we have struck hands and are now working for a common cause. This is the gospel we dispense: No matter how much timber there is in Canada, or this side of the line, every stick of it should be most wisely conserved, for all too soon the demands of civilization will call for it. And when it is gone, what then? I will stop right here, for I don't like to think about it.

I started out to say a few words about the healthfulness of your lumbermen. They look as robust as some of the trees upon the sunny side of Georgian Bay. Let me instance Mr. Cook. He used to come in to see me, and his face would fairly beam with health and its resultants. It is a fad, these days, to use the word limitations—everybody with any "form" to his writings must somewhere in course of his article say limitations—so I will say that a man of that kind, a man who has had a good bring up and whose stomach and liver attend strictly to business, really has no limitation. When a man gets up in the morning with no bad taste in his mouth he can endure and accomplish to his own surprise, and to the downfall of his puny competitors. A sick man in business or professional life is like a sick hound in a pack—the healthy dogs are going to pick up the rabbits.

I have noticed that many of your lumbermen have come down from the Scotch and English, and, as a rule, they have not had far to come. To be a bit personal, I descended on one side from the French, and it is not improbable that my grandfather and the grandfather of some great, rich Canadian lumberman may have crossed swords on the field of Waterloo. Think of it! As it has been said, the world isn't so very big after all. But the great flat-iron of time smooths out many a wrinkle, and though our ancestors may have fought—though your grandfather gave it to my grandfather until he threw up the sponge—we, thank God, are friends. And in returning these thanks I want to divest the idea of any individual significance, and apply it to the great nations which we respectively represent. Time acts as a filter, and as we glide through it we become better, and purer, and less wild bull like.

There is a good deal of the rough-and-ready about the American lumbermen. They inherit it directly from Andrew Jackson. They do not mean anything bad, for their hearts are good and warm, but too many of them will spit on the floor, and keep their hats on when, according to Hoyle, they should remove them. I love my countrymen, but if a greater proportion of them had more of that true gentleness of manner so marked in the better class of foreigners, it wouldn't hurt them. I am beginning to believe that the manners of a good many of us are a little too abrupt. We have been taught to believe there is virility in this abruptness. We are inclined to look upon polished manners as removed from that common sense which should guide us in our every day life. This is false philosophy, however. Common sense and polished manners should go hand in hand for the very good reason that only those who possess common sense can appreciate such manners. Come to turn this subject over in detail in my mind I do not remember having met a Canadian lumberman, an English or German lumberman, whose manners would do violence to the most approved drawing-room etiquette. Is it to their credit? It certainly is if it is to the credit of men to round out as many sides of their nature as possible; and I believe that in time we will find out that is what we are here for.

The Canadian lumbermen are hospitable, too. When in Detroit the last time I ran over to Windsor on the ferry boat to see if I could find a few trinkets cheap which could be smuggled back, and seeing a lumber sign, stepped in. I had not been in the office a half hour when the proprietor asked me if I would accompany him up to Walker's. We boarded one of those funny little street cars, in which the seats face outward, and dashed away behind the frisking mule for Walker's. You lumbermen know the line of industry in which Walker is engaged. Of course you do. He makes Walker's club, you know. I will not say here what kind of a club it is. It may be a base ball "club." If I should say exactly the kind of club it is, my wife, who may have this article sent to her by somebody who wants to make trouble in the family, would be likely to remark that she pitied the men whose appetites were so all-absorbing that there was not enough in the Windsor saloons to satisfy them, and had to go clear up to Walker's. Ignorance is bliss, and if my lumbermen readers understand my meaning, I ask that it go no farther. First and last, as many Canadian lumbermen as I have fingers and toes have invited me over to see them, and to fish and hunt in the good Queen's domain, and while the spirit is as strong as a hundred-ton locomotive, and the flesh, I think, would stand it without fading, that pesky panic of '93 is still roosting on the necks of a good many of us, you see. Economy is the order of the day, hence while we drink water and wish it were wine, and eat oat-meal broth instead of terrapin soup, the bear and fish will have a chance to grow.

To be a trifle more serious, if possible: The timber supply is a vital question with Canadian lumbermen, as without logs there can be no lumber. On this subject of supply there is diversity of opinion among you. I once heard the question discussed by Mr. Aubrey White and Mr. Little, and they agreed like fire and water. You have a great deal of timber though; there is no question about that; and here's a thought that in connection with this subject comes to me incidentally, as it were, but it is thrown out privately and must never get back over the line. I am ignorant how much of a police force is kept way up in northern Canada, where nobody lives, to watch the timber, but there are American lumbermen who, if they could have a chance at that timber, and it was guarded by a smaller force than the entire British army, wouldn't leave a fish-pole standing. Over here we have some of the best men you ever saw who used to haul government timber to the streams all day and sleep all night with a conscience so clear that they would snore loud enough to shake the squirrels out of the trees. But I may as well drop this subject, for I do not suppose there is an operator in Canada who will understand what I am talking about. There is no sense in talking Greek to plain, every-day-business lumbermen.

This privilege of sitting down and having a quiet little visit with the lumbermen of the Dominion is enjoyable. I already feel much better acquainted with them. Somehow our relations are all the time being more closely knit together. For the first time we will this year eat turkey and say thanks on the same day. True as you live the St. Lawrence shouldn't roll between two nations. And if we should join hands you would have more political fun in a week than you do now in a life time. We are in the midst of the throes of that political fun over here right now, as you know. Orators are saving their country every afternoon and evening, and we common herd are trotting around behind brass bands and neglecting our corn husking. Cull lawyers, who wouldn't be given a job by a chicken thief, have mastered and are teaching the science of finance, and honest men are being instructed by dishonest politicia to vote so and so when on election day they shall enter the little Australian booth and stand in the presence of their conscience and their God. They do not inform us when we are out of the presence of our conscience and our God, but any such little slip in logic as that disconcerts them not in the least. The phrase is kept in stock and is freely used alike by cross-road haranguers, congressmen and a whole batch of ex-governors.

Another taking feature of the political rally is the horse-back procession, a considerable portion of which is not infrequently composed of women. Out on the prairies the young woman, this year, rides man fashion, a dainty foot dangling on either side of the horse, and the men with silvered locks who come from their city homes to post us on the 16 to 1 question, sit on the hotel balconies and smile on and applaud them as on their prancing steeds they go tittering by. And they wring from the young men who come in from their farms, wearing their sheep-skin overcoats, a wistful sigh. (There is so much poetry in the subject that unconsciously it trickles out of a fellow.)

This campaign is going to relegate the side-

saddle in the west to the scrap heap. Thus, the new woman who is mercilessly pursuing us is our peer in a field where we thought we had it all our own way. What may we look for next? we have the right to ask.

But by looking at the clock I see that I must cut this little talk right off at a time when I had just begun to get into the bowels of my subject. Hence, au revoir, as my progenitors were wont to exclaim, which means, I am told. Good luck to you till we meet the next time.

THE HARDWOOD SAW MILL.

By J. T. Schell.

The idea commonly entertained is that the saw mill owner invests his money, credit and time for the purpose of making a living, paying for the property, and with the hope that he may have something over for the days when he will not be able to jack a log or pile slabs. If any statement of mine, whether of experience or merely an opinion, may be of use to any of your readers in achieving the desire for profitable results in their business, it is the only excuse the author puts forth for writing in this connection.

A visit of inspection to fifty hardwood saw mills, as we find them in this country, taking an average lot, would probably make the inspector sure of one thing, that the mill owner was evidently "living," and earning it by hard enough work, but the hope for anything further would in many cases be a vain one.

A man going into the hardwood saw-milling without experience is at a disadvantage "from the stump to the factory," and if he makes a success of the venture he will some day be able to tell of the high price he paid for his whistle. But the conditions prevailing this year may convince many who have paid for their experience in better days, that there are some things lacking which only hard times and low prices would force them to seriously consider.

We have had occasion to look over many hardwood plants and stocks of lumber, and in many cases the query has been: "Where do you find sale for the low grades and rough stock?" and the answers have been various. In such cases, if the inquirer will go to the other end of the mill and inspect the logs, he will be liable to ask the proprietor if he buys logs like many he will see in the yard. Here is the place to take the first step towards making a profit, instead of simply working for the living he gets. Good logs will make good lumber with a profit. Poor logs will reduce his average stock to a common lot with little or no profit, and cull logs mean loss every time, even if the logs cost nothing. This is the place to start right.

We go into the mill and find an engine 10x12 pulling at a 60-inch saw and making poor lumber at a high cost, an old rickety edger and no trimmers, and we need not go to the piles to see the lumber.

If the logs are good the lumber will be no better than it should be. With a 5 ft. x 14 ft. good boiler, engine say 14-inch bore by 18-inch stroke, one circular, double edger, trimmer, slab re-saw and slab butting-saw can be run in good shape, do good work and enough more to easily pay the difference between it and a rig too light to do its work, and the lumber will be enough better in sawing, edging and appearance to be worth one dollar per 1,000 feet more than a large percentage of the hardwood lumber offered for sale.

Logs that will produce good lumber, a well equipped mill run by a man with experience and good judgment, should be a source of profit to the operator when he sells his lumber. In addition to his ordinary lumber there is, in many cases, where the slabs are not very valuable for wood, another profit too often let go to waste.

Ash slabs cut three and four feet long and re-sawed into 3 and 4 inches wide make a wainscotting difficult to equal from the lumber pile, as each piece is from the brightest of the timber and with the handsomest grain possible to get from the log. The same remarks apply to oak. Basswood furnishes drawer stock, and furniture cuttings and soft elm the same.

Maple is sometimes more difficult to place to advantage, though turning sticks for furniture makers is one outlet, and school desk makers can buy no such clean, bright, even colored stock in wide and long lumber as can be got from slabs—all bright, white and clear. I have realized from the slab pile, with the work of one man and a boy, and a forty dollar saw rig, enough to pay two-thirds the wages and expenses of running a mill cutting twelve thousand feet a day.

The ideas I would wish to convey to readers of this article I may condense into a few words: Buy good logs or none; do not accept cull logs as a gift; saw them in a good mill; have a good sawyer and engineer as captain and mate of your crew; work up cull pieces and slabs into money-producing shapes; never try to run culls into good lumber, hoping the good will sell the culls, for it will be the culls that will spoil the good; have proper machinery and keep it in order; keep the mill clean, trim all lumber—and if any money can be made by any one you will be that one.

Our markets is another matter of importance to the trade, and I think the most important to the manufacturer of lumber. Canada produces many times the quantity of lumber that she consumes, both in hard and soft woods, and consequently we are cutting export stock. We should realize this fact, though it is a matter that has not received that consideration from our hardwood mill men that it deserves. Many in the trade sell their export stock in the United States markets, feeling that it is the only export market we have, or could have. In this there is a great error. While the Eastern and New England States buy a large proportion of our shipping stock, these same states export to European markets probably more maple, beech, birch, ash, elm and oak, than they buy from Canada, while Canadian exports to Europe of sawn woods of these varieties is a very small item compared with the quantities shipped to the States.

Here is a condition that we should change materially. How can it be done? you may ask. There is one way by which to doi t, that is: to deal with Europeans direct. Our lengths and sizes are frequently not suited to the needs of the English, and especially the French buyers, and here is a difficulty. The writer in looking into this trade came upon an amusing case lately. For some years we had been supplying a Boston buyer with special lengths and sizes in hardwoods. This year we were asking for a trial order for maple stock from a British buyer, and were informed by the Britisher that, having once heard of a place called Canada and "The Maple Leaf," he inferred good maple might be obtained from Canada. He put his idea into effect by ordering a sample shipment from a Quebec shipper who handles pine timber and deals in a large way, and maple in a limited way indeed. The Quebec sample arrived, but was found: "To have an unevenness in formation not observed in maple before used by us, and supplied during the four past years by Messrs. G—— of Boston, United States. We found the Canadian maple too soft and uneven for our requirements, and not at all so suitable as that we obtained as above noted from Boston." Some Canuck evidently got an order for maple, and not being an experienced man with maple, was found with logs on hand in September probably, or later. He got the order for that Britisher and it was "soft and uneven," but I should judge not so uneven as the mill man, guilty of having maple logs uncut in the fall of the year. That Britisher swears by Boston maple yet, though it grows in Glengarry, and is cut in March and shipped in September, and he is pleased to pay $44.00 per 1000 feet for it at Liverpool.

In a former letter to The Lumberman I dealt with this matter, and claimed then that our common country should assist the hardwood trade to develop a larger market. I then referred the matter to the Ontario government, perhaps wrongly, but I have lately noticed that the lumber business is not of much account with politicians. If we sent a deputation of hardwood lumbermen down to Ottawa, and explained to the government that unless we were recognized as our importance seemed to us to warrant, every mothers' son in the country, interested in owning, sawing or selling hardwoods, would ever after "vote agin the guvermint," we would surprise ourselves to find we were "somebody." We would not ask for a few millions to be granted to us for smelting our logs into furniture or flooring, nor that our saw mill machinery should come in free of duty to help us pay dividends of 40 per cent. per month on our capital, nor sixty cents a thousand feet bonus for our old age, nor twenty dollars a thousand for fourteen dollar butter-nut lumber, nor that a travelling saw mill be "skidded" around the townships of the country, with a commissioner to tell us how to build logging camps and tote roads, nor would we even ask Sir Richard Cartwright to see to it right quickly that he establish the latest and best dry kilns in every part of the country, and the railroads to furnish us with ventilating hot chambered cars to get our stock to Montreal in good shape, and no rain to wet a sliver of it, even when it gets to the Liverpool docks. No, we would not even ask for an Institute lecturer to come around and tell us the best time of the moon to cut hemlock, hickory or swamp elm, or whether it is best to wear moccasins or go barefoot.

Our lack of advantages—constant contact with the butt end of hard times and store pay—has cultivated to perfection the desire in the heart of the hardwood mill man to pay his taxes for the good of humanity and the Australian commissioner, and to "say nothing, but saw wood." But if, as I started out to say, we sent some of our foremen down to tell Sir Richard we wanted him to send a "hand" over to "Yurip" to get his sizes and shapes and kinds and qualities and lengths before we started to cut and skid, we might expect to take out a better raft, have a better drive, hold a better average, and with less measured off, than to be going it "random" as we are now.

We do not doubt but that we are justly entitled to all we may claim, and if we decidedly decide that Jay Lark is "no good" to the camp, and get a good "hand" in his place, it won't cost the "company" any more, and will, maybe, get orders to keep the mill running steady all season. But, seriously, I feel satisfied, if a proper party was maintained on the continent for even a portion of one year, it would be a paying benefit to the country at large.

Above I mentioned beech as a marketable timber, and I would mention here a use for it locally and ask some of our mill men to try it, and that is—flooring. For mills, factories and even houses, I like it better than hard maple or birch, especially the red of the timber.

Would The Lumberman ask a Toronto architect to try a beech floor? I can assure him it would be no experiment. This wood has been considered fit for only cordwood, and not the best wood either.

THE LATE ARTHUR M. DODGE.

On the 16th of October last Mr. Arthur Murray Dodge, of New York, died at his country residence at Weatogue, Connecticut, at the age of 43 years. In July last he came to Canada feeling unwell, and after a few days was compelled to return home, where he remained until the time of his death.

Mr. Dodge was prominently connected with the lumber industry of Canada, where he had large financial interests, and was president of the Georgian Bay Lumber Company, of Toronto. He was the youngest son of the late Hon. William E. Dodge, of New York, who during his lifetime was head of the firm of Phelps, Dodge & Co., and was widely known for his philanthropy, as well as his business enterprise. With his father he became interested in the Georgian Bay Lumber Company, the Maganetawan Lumber Company and the Collingwood Lumber Company, all of which were amalgamated in the Georgian Bay Consolidated Lumber Company, which, owing to the death of his father, and the distribution of his father's estate, is now being wound up. Deceased was also the chief stockholder in the extensive business of the Dodge & Bliss Box Company, and other enterprises in New York and Jersey City, as well as A. M. Dodge & Co., of Tonawanda, and Tnokee & Co., of Wisconsin.

His brother at one time was a member of the Dominion parliament for North York, being made a British subject by special Act of Parliament.

A striking feature in his life was his characteristic enterprise, to which is largely due the commercial success which he attained. He was also widely known for his generosity. With his family and friends he has for many years spent the summer months on the Georgian Bay, where a few years ago he built a handsome residence on Dodge Island, opposite Midland. He was married to Miss Jewel, daughter of the late Hon. Marshall Jewel, who had been governor of the State of Connecticut and post-master general of the United States. Five sons survive him.

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ONTARIO

THE GREAT WHITE PINE CENTRE OF THE DOMINION.—AREA OF PINE LANDS UNDER LICENSE.—REPRESENTATIVE GEORGIAN BAY MILLS.—EXTENSIVE OPERATIONS OF THE RATHBUN COMPANY.—A REVIEW OF THE LUMBER INDUSTRY OF THE OTTAWA VALLEY.—THE SQUARE TIMBER BUSINESS.

ONTARIO, although possessing a greater variety of trees than any other province of the Dominion, is renowned for its extensive pine forests, which have been the chief source of lumbering operations for many years. Dense pineries are located in the Ottawa valley and the Georgian Bay district, and while the quantity has been reduced by forest fires and the lumberman's axe, much timber of excellent quality still remains. This wood is unrivalled for house finishing and many similar purposes. The hardwoods of Ontario are also of considerable variety and abundance, being distributed more widely throughout the whole province. Those of the greatest commercial importance are: oak, elm, maple, ash, birch, beech, hickory, basswood, cherry, etc. The forests of Ontario are controlled by the provincial government, and provide the principal source of revenue. It naturally follows that the policy of the government has given special attention to obtaining as complete data as possible touching on the pine forests of the province, while on the other hand little information is obtainable regarding the extent and location of hardwoods.

In northern Ontario, and extending into the unexplored regions, some fine varieties of spruce abound. In the past this wood has not been of much value commercially. Its increasing use for the manufacture of pulp, largely for export, now gives promise of creating a demand, and within the past few years several pulp mills have been established.

The timber regulations issued by the Crown state that all timber berths shall be subject to an annual ground rent of $3 per square mile, together with the following Crown dues, viz.:

	$	c.
Black Walnut and Oak, per cubic foot	0	03
Elm, Ash, Tamarac and Maple, per cubic foot	0	02
Birch, Basswood, Cedar, Buttonwood and Cottonwood, and all Boom Timber, per cubic foot	0	01¼
Red and White Pine Timber, per cubic foot	0	02
All other woods	0	01
Basswood, Buttonwood and Cottonwood Saw Logs, per standard of 200 feet board measure	0	15
Red and White Pine Saw Logs and Boom Timber, per standard of 200 feet board measure	0	20
Walnut, Oak and Maple Saw Logs, per standard of 200 feet board measure	0	25
Hemlock, Spruce and other Woods, per standard of 200 feet board measure	0	10

All unmeasured cull Saw Logs to be taken at the average of the lot, and to be charged for at the same rate.

Staves, Pipe, per mille	7	00
do. West Indian, per mille	2	25
Cordwood (hard) per cord	0	20
do. (soft) do.	0	12½
Hemlock, Tan Bark, per cord	0	30
Railway Timber, Knees, etc., to be charged 15 per cent. ad valorem.		

The dues on pine timber cut under authority of license, so far as relates to berths or limits in the Districts of Nipissing and Algoma, sold at the sale of October, 1892, are :—

Square Timber—$25 per 1,000 feet cubic.
Saw Logs—$1.25 per 1,000 feet board measure.

According to a return presented to the Legislature in 1893, there were about 21,000 square miles of pine lands under license, and 24,410 square miles of pine lands still unsold. In addition, there is an area of 89,000 square miles of territory upon which there is more or less pine, but which has not been taken into account by the Crown.

The receipts from woods and forests during 1895 were $853,179.86, which included $76,579.73 from bonuses and $61,493.49 from ground rents, the balance, $715,106.64, being the revenue from timber dues. The timber cut was as follows: Pine saw logs, 800,565,355 ft. B. M.; other saw logs, 12,917,017 ft. B. M.; boom and dimension timber, 34,024,047 ft. B.M.; square white pine, 873,304 cu. ft.; cedar, 336,995 lineal ft., besides minor products to the value of $1,096,934.42.

At the Government sale of timber limits in 1892, over 600 square miles were disposed of, the prices realized being largely in excess of any previous values. The highest price paid was $3,657.18 per mile.

The Georgian Bay district has for many years furnished a large portion of the supply of logs required by Michigan mills, several American manufacturers owning extensive Canadian limits. The repeal of the export duty on logs, exacted by the Canadian government a few years ago, greatly stimulated the rafting of logs across the lake to Michigan points. During the season now closing, however, it is believed statistics will show a considerable decrease, the depression in the lumber business consequent upon a Presidential election in the United States causing lumbermen to curtail operations.

Located throughout the province are a number of extensive and well equipped saw mills, descriptions of some of which appear below:

GEORGIAN BAY LUMBER COMPANY.

One of the oldest established lumber concerns of the Georgian Bay district is the Georgian Bay Lumber Company, Ltd., the history of which dates back to the year 1869, when Mr. A. G. P. Dodge purchased the mill property and limits of Messrs. William Hall, of Waubaushene, A. R. Christie, of Port Severn, and William Laramie, of Sturgeon Bay. Subsequently other lands and limits in the neighborhood were purchased, all of which were incorporated in a company called the Georgian Bay Lumber Company. The name was afterwards changed to the Georgian Bay Consolidated Lumber Company, when the mill property in Collingwood owned by Hotchkiss, Peckham & Co., and the properties at Byng Inlet owned by Mr. Dodge and White & Co., were purchased and incorporated therein. Mr. Anson Dodge subsequently retired, his father, the Hon. W. E. Dodge, of New York, with his son, the late Arthur M. Dodge, becoming the purchasers. The property at Byng Inlet, including the very extensive Maganetawan limits, were disposed of to Merrill, Ring & Co., of Saginaw, and the Collingwood mills were sold to Toner & Gregory, of that town.

SAW MILL OF THE GEORGIAN BAY LUMBER CO., WAUBAUSHENE.

In 1893 the present company, called the Georgian Bay Lumber Co., Ltd., was formed, at which time the Waubaushene and Port Severn properties, with the extensive limits connected therewith and other valuable limits on the Wahnapitæ, were purchased from the Consolidated Company, which, owing to the death of the Hon. W. E. Dodge, went into voluntary liquidation. The present company, until the death of Mr. A. M. Dodge a fortnight ago, was composed of Messrs. Arthur M. Dodge and D. Stewart Dodge, of New York, Alderman James Scott, of Toronto, W. J. Sheppard and H. L. Lovering, of Coldwater, and some others who have been long connected with the business, the officers being: A. M. Dodge, president; James Scott, vice-president; C. P. Stocking, secretary-treasurer; W. J. Sheppard, general manager.

About the middle of August last the Port Severn mill was struck by lightning and burned, together with the company's store and storehouse, all of which were a total loss. This mill was the third which had been erected at that

place, and had a capacity of fifteen to twenty million feet per year. It was a water power mill, equipped with two gangs, a circular and a pair of twin circulars, with the usual trimmers, edgers, etc., necessary to make a complete mill. In connection therewith were also a lath mill and a shook mill, the latter being for the purpose of manufacturing slabs into material from which box shooks were made. The extensive piling grounds on each side of the river afforded accommodation for about ten million feet of lumber. Shipments were made by water, and the year 1884, the property was handed over to his son, Mr. J. B. Miller, who is now president of the company. The other officers are Mr. John McClelland, vice-president, and Mr. W. B. Tindall, secretary treasurer.

The mill property is situated in the town of Parry Sound, on the Georgian Bay, their limits, comprising 300 square miles, being situated contiguous to the mill and being watered by the Seguin river. The farthest limit is said to be only twenty miles from the town, which necessarily permits of bringing the logs to the mill at

PARRY SOUND LUMBER CO.'S MILL AT PARRY SOUND.

also by scow to Waubaushene, whence the lumber was carried by rail.

The Waubaushene mill is located on the south-east corner of the Georgian Bay, about ten miles from Midland. This mill was erected in the year 1881, and is one of the most complete establishments for the manufacture of lumber west of the Ottawa river. The machinery is of the latest, most improved and substantial character, and was furnished almost entirely by the William Hamilton Manufacturing Co., of Peterboro. The equipment consists of one circular, one slabbing gang, two stock gangs and a pair of twin circulars, together with two edgers, two trimmers, lath mill, shook mill and necessary accompanying machinery. Unique labor-saving appliances are provided for handling and disposing of the lumber and refuse. The capacity of the mill in eleven hours is 300,000 feet, the lath mill producing 30,000 lath in the same time. The annual output averages from twenty-eight to thirty million feet, the mill operating in the day time only, and not running even until the end of the season.

One of the finest piling grounds in Canada is connected with this mill, seven sidings running into the yard from the Grand Trunk Railway, which permits of the lumber and lath being handed from the pile to the car. The tramways are equipped with T rails of a substantial kind, and cover several miles in extent. The yard is located a sufficient distance from the mill to minimize the danger of fire spreading from one to the other. From their extensive docks large vessels can load and unload. An electric plant furnishes light for the mill, thereby doing away with night owls, which are so dangerous from an insurance point of view. From this plant the principal buildings in the village are also lighted.

The company also own two stores in the village, from which the inhabitants are supplied with all necessaries.

PARRY SOUND LUMBER COMPANY.

In the year 1872 the Parry Sound Lumber Company, Ltd., was incorporated, the principal shareholders being Mr. A. G. P. Dodge, of New York, and the late J. C Miller. The latter afterwards became the sole owner, and upon his death, which occurred in Southern California in a very small cost. The company possess probably the largest block of standing timber on the shore, some of which is virgin forest.

The saw mill is water power, driven by four water wheels, the power being obtained from the Seguin river. It is equipped with two flat gangs, two slabbing gangs and one large circular, with all necessary appurtenances. This mill was the first in the district to use thin gang saws, the gauge being between 14 and 15. The docks have a piling capacity for ten million feet, at which the largest boats on the lakes can load.

The shingle mill contains two "Boss" machines, having a capacity of 75,000 per day. Large shingle sheds are provided, with a capacity of four to five million shingles, which enables the output of the mill to be kept under cover, thereby keeping it in good condition.

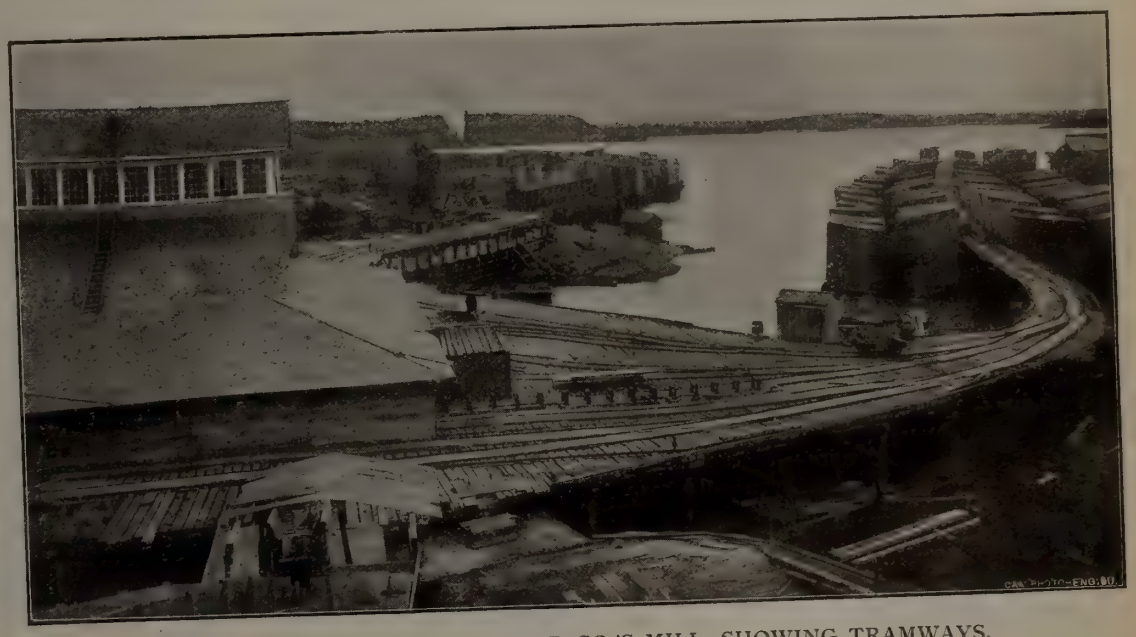
The annual production of the company is from ten to twelve million feet of pine lumber, ten million shingles and six million laths, and in the neighborhood of one hundred hands are employed.

The company have also a controlling interest in the steel steamer "Seguin," which has a carrying capacity of one million feet, and was built at Parry Sound by the Polson Iron Works Company.

Mr. Miller, the president, was born at Farmersville, now Athens, Ont., on the 26th of July, 1862. He began his commercial career with his father, and upon his death 12 years ago assumed the management of the company's business.

MICKLE, DYMENT AND SON.

The organization of the present firm of Mickle, Dyment & Son was effected in the year 1886, being composed of Messrs. Charles Mickle, N. Dyment and S. Dyment. They purchased extensive timber limits, and at the time of the failure of Christie, Kerr & Co. were compelled to take over the limits held by that company and situated on the South Muskoka and Black rivers. To-day they are possessors of upwards of three hundred square miles of limits, located in the townships of Oakley, Ridout, Livingston, Peck, Sherbourne and Hudson. They acquired the mill properties, Nos. 1 and 2, formerly owned by Charles Mickle and situated at Gravenhurst, on Muskoka Bay, and also purchased No. 3 mill at the same place from Thomas Tait. Afterwards the mill property at Barrie owned by Mickle & Dyment, and the Bradford mill of Christie, Kerr & Co. passed into their possession. A mill was then erected by the company at Severn Bridge, on the Severn river, while they also purchased a mill at that place from P. Christie. In 1887 No. 1 mill at Gravenhurst was destroyed by fire and was never rebuilt, while a little later the Barrie mill was also burned. The mill at Bradford has since been torn down and the machinery removed to the new mill at Severn Bridge, and No. 3 mill has been changed to a shingle mill. The company are, therefore, in possession of two saw and two shingle mills, one of each being located at Severn Bridge and one at Gravenhurst. The view of the Gravenhurst mill shown was taken in 1887. The saw mill at Gravenhurst has a capacity, per day of ten hours, of 80,000 feet of lumber, 20,000 shingles and 25,000 lath. It is steam power, being driven by a 125 h. p. engine and three tubular boilers.



VIEW OF PARRY SOUND LUMBER CO.'S MILL, SHOWING TRAMWAYS.

The equipment of the mill consists of one circular and one band saw, with edgers and trimmers complete, lath mill and Drake shingle machine. In addition to the mill there is a filing room, 26x 50 feet, and machine shop, also planing mill with output of 15,000 feet per day. The lumber is taken from the mill on high cars, being ten feet from rail to platform.

The shingle mill has a capacity of 160,000 per day, and contains four shingle machines, driven by a 65 h. p. engine and two boilers. The logs for these mills are brought down the Muskoka river from their limits, and towed from the mouth

of the river, across Muskoka lake, to the mill, a distance of eleven miles, a tug being kept specially for this purpose. The piling grounds in connection with the mills afford accommodation for twelve million feet of lumber.

A gang saw instead of a band is the only difference in the equipment of the mills at Severn Bridge from those at Gravenhurst. An electric light plant in connection with the mills furnishes light. The logs for this mill come down from their limits tributary to the Black river.

In the location of their limits and mills the company are particularly fortunate, as should it be found expedient at any time to close down the mills at either place, the logs from any section may be conveniently taken to the other mill. At the various mills of the company upwards of one hundred men are employed during the sawing season, while the average number sent to the woods each winter is 250.

The firm of Mickle, Dyment & Son are among the most enterprising lumbermen of Ontario. Mr. Charles Mickle looks after the manufacturing portion of the business and resides in Gravenhurst, while the Messrs. Dyment are located at Barrie and devote their attention to the commercial end.

MICKLE, DYMENT & SON'S MILL AT GRAVENHURST.

JAMES PLAYFAIR & COMPANY.

A view of the mill, docks, etc., of the above firm is to be seen on this page. They are located at Midland, on the south-eastern shore of the Georgian Bay. The business was started in 1884, the principal lumber manufactured being white pine. The mill is now cutting on a ten years' contract for Arthur Hill & Company, of Saginaw, Mich. The capacity is about 150,000 feet per day of 10½ hours, the average output per year being in the neighborhood of twenty-five millions. A specialty is made of bill timber. There is also in connection therewith a lath and shingle mill. The machinery consists of a band saw, circular saw, and a No. 1 Wickes gang, fitted up with the latest improved accompaniments, such as steam stock lifters, niggers, log docks, etc. Power is furnished by four engines, so that if any part of the machinery stops it does not affect the whole mill.

THE RATHBUN COMPANY.

This is one of the most extensive concerns in Canada, and was incorporated by special act of parliament in 1883. Its paid up capital stock is $1,500,000, with power to increase to $2,500,000. It is a broad gauge charter, granting all the powers of general merchants and dealers, general manufacturers, common carriers, warehousemen, and ship and vessel builders and owners. In 1884, by special act, the company was authorized under the laws of the state of New York to hold property there to the extent of $250,000, with its principal place of business at Oswego, N. Y., and securing to it all the privileges of an American company. The capital stock of the company is held entirely by the sons and daughters of the late Hugo B. Rathbun.

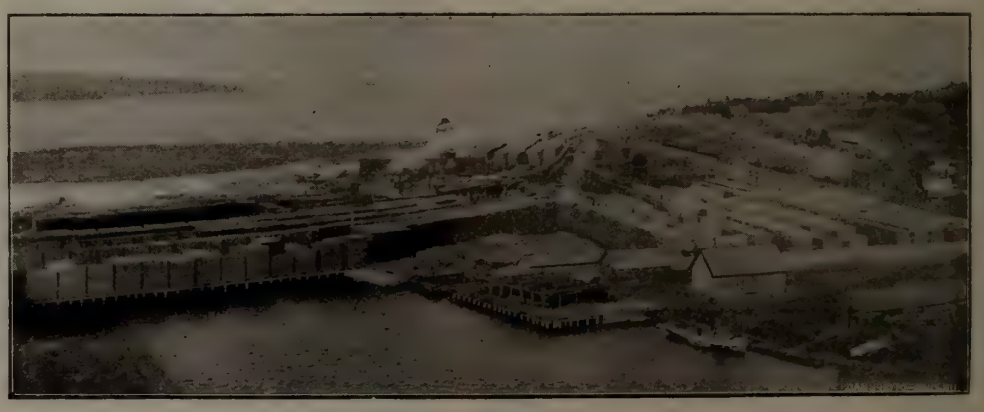
The company owns and operates about 550,000 acres of timber lands under government license, 60,000 acres of deeded timber lands, and 7,750 acres of timber rights only. It holds large blocks of virgin forests, mainly pine, which for convenience and cost would have paid far better than much that has been operated; but this timber has been kept intact as a factor of value for future returns. The temptation of good returns has not influenced the company to sacrifice future profits. Timber lands are logged with an eye to safety against fire and a continued supply of fair average quality. On the lands are found large quantities of cedar, hemlock, tamarack, basswood, ash, maple, birch, etc., for which there is found excellent and increasing markets. This timber is largely tributary to the rivers flowing into the Bay of Quinte, namely, the Napanee, the Moira, the Salmon and the Trent. The completion of the Kingston, Napanee and Western Railway, owned by the same company, to a connection with the Canadian Pacific and Kingston and Pembroke roads, has opened a cheap and expeditious rail route to Deseronto for the forest products of these and other sections tributary to the streams intersecting those railways, as well as the railways stated. The timber licenses were purchased from the crown, and the tenure is considered perpetual, but subject to a charge of $3 per square mile a year for ground rent, besides dues upon the timber taken out.

The company owns lumber yards, docks, offices and sheds at Oswego, N. Y., and at Napanee, Kingston, Gananoque, Picton, Belleville, Campbellford, Lindsay, Ottawa, Brockville and Peterboro, Ontario. For 30 years the best efforts of the management have been directed to working out the details of the original conception; first, to secure a sufficiency of timber accessible to Deseronto to warrant the establishment of substantial industries of a permanent character; second, to so manipulate the coarse and refuse products of the forests as to enlarge and perpetuate the yield therefrom, and to profitably utilize the waste of the mill, which otherwise would be a great loss of material and would cost a large sum of money to get out of the way; third, to provide the best means of transporting the raw material from the forests to the mills, and provide the best and most economical methods for marketing the output of the mills and factories.

THE STONE SAW MILL, DESERONTO.

The first saw mill owned by the company's predecessors was located on this site in 1849, was a small wooden structure, which steadily grew to a mill of 15,000,000 feet capacity, and was destroyed by fire. The present building is stone, with iron roof, 90 x 115 feet, a brick iron-roofed fireproof engine and boiler house, 50 x 80 feet, and a wooden addition, 60 x 90 feet. A Stearns band and double edger, two Wickes gangs, a slabbing gang and a twin circular, manufactured by the Wm. Hamilton Manufacturing Company, with an unusually large complement of small machinery, make up the equipment. All the parts are apparently well balanced, and everything goes with the precision of a clock movement. The entire product is moved with the minimum of manual labor. The twin circular is a unique machine, with shot gun feed, and a single "dog" at the end of the log.

The motive power is a twin engine, each cylinder 26 x 30 inches, backed by seven steel boilers, all located in fireproof compartments. The lumber drops to slides from the trimmer, where it is sorted to standard gauge cars for distribution. It is the most perfect system possible, all departments being connected by standard gauge tracks, each practically a terminal of the Bay of Quinte Railway. The switching engines are kept constantly employed at this mill. The docks in connection with the mill have sufficient frontage to enable the lumber to be piled as it comes from the mill, so that it can largely be shipped directly into vessels without haulage. There are ten miles of railway tracks in the yard and on the docks in connection with the Deseronto business.



JAS. PLAYFAIR & CO.'S MILL AT MIDLAND.

SASH, DOOR AND BLIND FACTORY, AND GENERAL WOOD-WORKING DEPARTMENT, DESERONTO.

This factory was started in a small way in 1874, has had five stages of development, and is now a substantial two-storey brick building 60 x 319 feet, with an L 40 x 100 feet. The building is divided into four compartments with heavy brick walls for fire protection, is covered with asbestos roofing, has automatic fire sprinklers on both flats, is heated throughout with steam, and is equipped with the most improved wood-working machinery. The lumber is delivered to the

department from the yard or kilns on standard gauge railway tracks. It is the largest factory of the kind in the Dominion.

This industry utilizes door panels and cuttings from slabs and edgings of the lumber mills, as well as using a class of stock containing defects which injure its value for export, yet from which a choice quality is cut. All sound cuttings down to nine inches long from the mills are saved and utilized. This department supplies the company's agencies with all descriptions of finished building materials. The average number of hands employed the year round is 160. In connection with this factory are works for the manufacture of match splints from the waste ends of the mills and factories.

A rear view of the stone saw mill, blacksmith and machine shops, and sash, door and blind factory and general wood-working department is shown on this page. This view gives a clear idea of the size of the wood-working department.

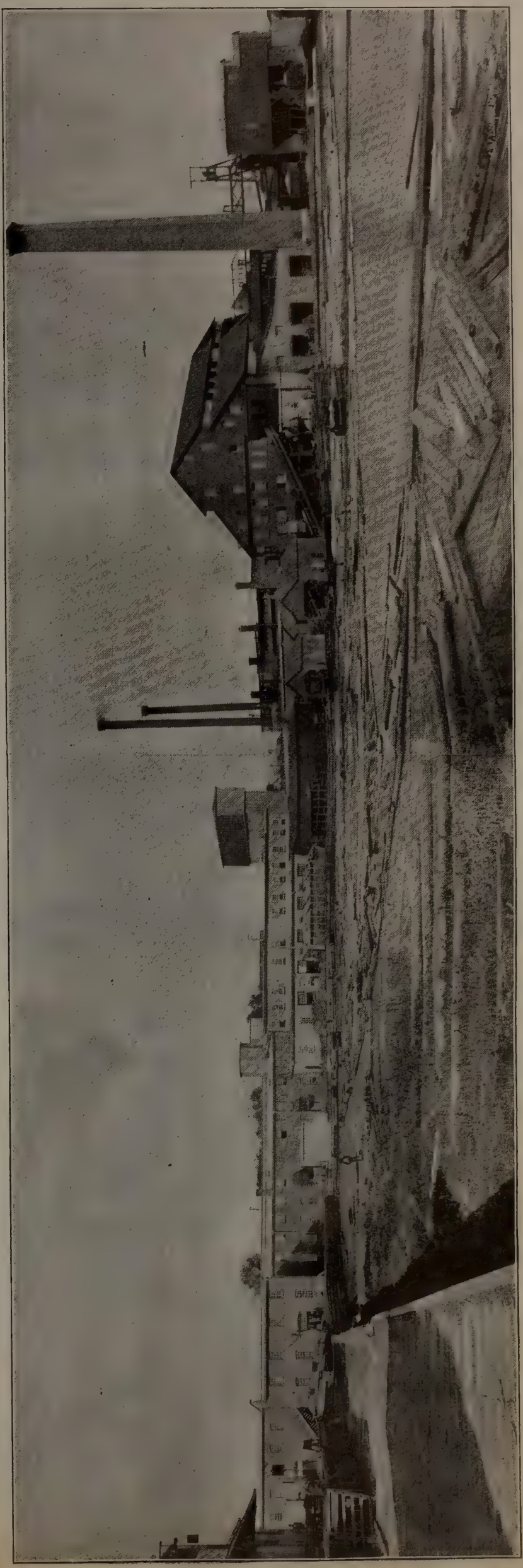
The export business is done through the company's own representatives in Britain, with headquarters in London and Glasgow, who also manage the company's warehouse and dock at 28 City Road Basin, London, England, exporting match splints, electric casings, doors, sashes, mouldings and lumber. Doors, etc., are also exported to Australia and South Africa.

CEDAR MILL--RATHBUN CO., DESERONTO.

THE CEDAR MILL—DESERONTO.

This mill was started in a small way in 1872 to meet a demand from the United States for cedar timber cut to suitable shapes for railroad sleepers, fence posts, shingles, etc., and for pine, hemlock, etc., cut long lengths for structural purposes, and to saw plank and other stuff for the company's ship work. It is a two and three story structure of wood, the outside walls being lined with brick, with stone partition walls. The size is 60 × 180 feet, with an addition of 30 × 85, fitted with automatic sprinklers and steam force pumps. The boiler and engine room is fire-proof. This mill is fully equipped with the best class of machinery for the economical manufacture of this class of material and is operated the year round. Its power equipment is a single engine with condenser, and backed by five boilers of 375 horse power.

In place of the usual refuse burner, the company erected furnaces over which were placed four steam boilers capable of providing 100-horse power each, utilizing the steam thus produced at the flour mill, and supplying the chemical works and town water works pumps at a fair paying rate. Wet bark, rotten stuff, some sawdust and all "the holes" make a hard looking lot of fuel, but all goes. In connection with this steam plant, on a



VIEW OF STONE MILL AND GENERAL WOOD-WORKING DEPARTMENT—RATHBUN CO., DESERONTO.

wharf, is an open iron roofed building, 75 × 396 feet, 27 feet high at the eaves, into which an elevated railway track runs the entire length. This serves to hold much of the refuse not required during the sawing season, and which is delivered on cars holding about two cords each and moved by steam motors. This refuse is used for fuel during the winter months to run the dry kilns and other departments, all of which pay or account therefor at a proper price.

THE OSWEGO YARD.

The property at Oswego, N. Y., consists of water frontages, docks and storage facilities, to which additions have been made as the growth of trade demanded. The growing business indicates the advantages of the location. Starting in 1880 with a trade amounting to $159,242.85, it has done a business in fifteen years amounting to some $6,000,000. In addition to the above an average of from 15,00,000 to 20,000,000 feet of lumber have annually been transhipped to Albany, N. Y. Since 1882 it has been under the management of Charles H. Bond, who has grown up in the lumber business.

THE CAMPBELLFORD SAW MILL

was located on the Trent river in 1886 for the purpose of manufacturing railway ties and the sawing of such logs other than pine as were found to be inclined to become water-logged when they reached that point, and thus save them from probable loss on the way down the river. It is newly equipped with machinery, and has ample facilities in the way of land. It is connected by railway direct to the mill, and is the headquarters for a part of the Trent river logging operations, under the management of Thomas Callaghan.

The company also have mills located at Lindsay for similar purposes, and are using the same class of material as that at Campbellford. At Gravenhurst they have also a mill with a capacity of about 7,000,000 feet per year.

THE TORONTO AGENCY

was established in 1881 for the purpose of purchasing lumber and forest products on the lines of railway tributary thereto, and on the north shore of the Georgian Bay and Lake Huron, to supply the requirements of the Oswego yard and the factory at Deseronto, which could be thus better met than by the company's mills alone. This point is also a center for the purchase of red oak, basswood, ash and red birch, which are found north and west from Toronto, the handling of which has become an important factor of the Oswego yard. A large city trade is also done from the office on Front street.

Mr. E. W. Rathbun was made general manager in 1862, when about 20 years of age, and has been its manager ever since.

Mr. Frederic S. Rathbun, secretary and treasurer, and acting manager in the absence of the manager, began in 1872.

Mr. E. Walter Rathbun is superintendent of the general outside work.

GILMOUR & COMPANY.

The above company have for many years conducted an extensive establishment at Trenton, manufacturing lumber, dimension timber, lath, shingles, etc. They also have a complete woodworking establishment, from which is turned out a variety of work, such as sashes, doors, pickets, interior finishing woods, etc. The saw mill cuts annually about 40,000,000 feet of pine, and is furnished with three band saws and three large gangs, besides a complement of circular and and other saws for cutting pickets, staves, barrel headings, and other articles. The mill is driven by steam engines, which furnish upwards of 1,500 horse power. The planing mill is located two miles from the saw mill. The company have recently erected a fine saw mill at Canoe Lake, in Algonquin Park, adjacent to their limits. A description of this mill was promised for this number, but had not been received at time of going to press. The Gilmour Company manufacture largely for the South American market, but lately have also been giving some attention to cutting deals for the British trade.

THE OTTAWA VALLEY.

EXTENSIVE OPERATIONS OF CANADIAN LUMBERMEN.

In writing of the lumber industry of the Ottawa valley we must necessarily include a portion of the province of Quebec, the territory embraced being that adjacent to the Ottawa river and its tributaries on both sides, the Ottawa river being the dividing line between the two provinces for a considerable distance. The length of the Ottawa river from its outlet into the St. Lawrence, as far as explored, is in the neighborhood of 750 miles, although lumbering operations have as yet only extended a distance of about 375 miles above the city of Ottawa. On the north side of the river the principal tributaries which have afforded assistance to the lumberman in floating his logs to a point of manufacture are the Rouge, 'Nation, Lariviere, Gatineau, Coulonge, Black, Schyan, Du Moine, Bear, Magnacippi, Beauchene and Kippewa. To the south of the Ottawa, in the province of Ontario, are the Madawaska, Petite Nation, Rideau, Mississippi, Bonnechere, Indian, Petawawa, Mattawa, and Amable du Fond rivers.

The Ottawa valley, as is well known to lumbermen, possesses the greatest pine producing forests of Canada, the timber being both of the largest and best on the continent. It also produces large quantities of tamarack, ash, elm, white oak, birch, maple, etc., while recent discoveries have verified the belief that immense spruce forests exist in territories as yet unexplored. The area of the valley is perhaps about 80,000 square miles. Various estimates have been made of the quantity of timber existing thereon, but the figures presented by the different experts are somewhat at variance.

According to the "Forest Wealth of Canada," prepared by Mr. Johnson, Dominion Statistician, the total product of the Upper Ottawa, which extends from the eastern watershed of the Ottawa river up to the head of Lake Temiscamingue, from 1826 to 1881, was as follows :

Provinces.	Pieces.		
	Square Pine.	Other Woods	Pine Saw-logs
Ontario	7,173 182	494,824	22,005,108
Quebec.	3,955.166	20 ,338	19,507,159
Total	11,128,348	704,162	41 51 ,267

During fifty-six years an average of 199,600 pieces of square pine timber and of 741,300 pine saw-logs was taken out. For eleven years, from 1882 to 1892, the annual output of square white pine averaged 64,414 pieces, and pine saw logs 3,807,800 pieces.

In the Lower Ottawa agency, from 1856 to 1881 crown dues were paid on 106,398 pieces of square white pine, 943 pieces of square red pine, 38,459 pieces of other woods, principally birch, 5,735,931 pieces pine saw logs, and 383,354 pieces spruce logs. Of square white pine, 95,155 pieces were cut in the first fifteen years and 11,243 pieces in the following ten years. In 1881 the cut of pine was 405,709 logs, and in 1891 451,538 logs.

In 1806 the first raft of square timber left the mouth of the Gatineau. From that time the business gradually increased, and during the years from 1850 to 1878 large quantities were rafted down the St. Lawrence to Quebec for shipment to Great Britain. But, as the above figures show, there has been a steady decrease in the quantity of square timber manufactured since that date, while sawn or manufactured lumber has greatly increased, and the annual output for the past few years has been in the neighborhood of six hundred million feet. There is yet to be found in the Ottawa valley considerable quantities of pine suitable for square timber.

Of the forests of the valley, perhaps one-third have been denuded of their merchantable timber. This has been the result not only of the inroads of the lumberman, but also of forest fires.

Among the first large operators in the square timber business were the Gilmours, the late John Egan, the Macdonalds, Alex. Fraser, Wm. Mackey, the McLaughlins, Gillies & McLaren, the Caldwells, Thistle, Carswell & Co., Hurdman Bros., A. & P. White, Klock Bros., the Poupores, Barnett & Mackie, and Alex. Barnett. Some of these have withdrawn entirely from the lumber business, while others are devoting their attention to sawn lumber. Still connected with the business are Messrs. Wm. Mackey, Alex. Fraser, Thos. Mackie, Alex. Barnett and Klock Bros. During the past summer only four rafts were taken down the river, while some years ago as many as two hundred found their way to Quebec for shipment. A view of a raft taken out by Mr. Mackey appears on this page, which

WM. MACKEY'S RAFT OF SQUARE TIMBER, OTTAWA, 1896.

also shows the Chaudiere docks. It is said to be one of the best ever taken out, both as regards quality and manufacture.

At no other point in the Dominion is the manufacture of lumber carried on so extensively as in the Ottawa valley. Within the past few years the quantity disposed of in the British market has greatly increased, and many manufacturers dispose of their entire season's cut to one shipper. Amongst the largest operators are Messrs. J. R. Booth, Bronson & Weston, W. C. Edwards & Co., Gilmour & Hughson, the Hull Lumber Company, Pembroke Lumber Company, Hawkesbury Lumber Company, Wm. Mason & Sons,

MR. HIRAM ROBINSON,
President Hawkesbury Lumber Company.

McLachlin Bros., St. Anthony Lumber Co. and Gillies Bros. Other prominent manufacturers are the Canada Lumber Company, Messrs. Ross Bros., Estate Jas. McLaren, Ottawa Lumber Company, A. Hagar & Co., Klock Bros., J. R. & J. Gillies, A. Lindsay, R. W. Conroy, A. & P. White, John Mackay, Martin Russell, Carswell & Francis and the Shepherd & Morse Lumber Company. Descriptions and illustrations pertaining to the operations of several of these manufacturers appear below :

THE HAWKESBURY LUMBER COMPANY.

The Hawkesbury mills are situated on the Ottawa river, in the county of Prescott, Ontario, on the first break on the Ottawa, half way between Ottawa city and Montreal. The mills were first founded on the Ottawa by Thomas Mears in the year 1804, and subsequently became the property of William and George Hamilton in the year 1808, and were enlarged and improved from time to time. They are supplied with power from the Ottawa river. A very substantial stone dam, about 1,200 feet in length crosses from the Ontario side of the Ottawa to a large island, giving the necessary head. The property remained in the hands of the Hamilton family until the death of the Hon. John Hamilton in 1888, when it became the property of the Hawkesbury Lumber Co., Ltd., the company being composed of Hiram Robinson, President ; H. K. Egan, Managing Director, and R. L. Blackburn, Secretary. Mr. Robinson, whose portrait we present, has spent all his business life in connection with the Hawkesbury mills. A view of the mills is also shown.

These mills were the first large saw mills established on the Ottawa river, and their output has been principally deals for the English market, where their brand "H" is well known to the trade on that side. They also manufacture all grades of white and red pine, their output being from fifty to sixty million feet per season. Their supply of pine is taken from their limits on the Dumoine, Black and Sweyo rivers, in the province of Quebec, and on the river Petawawa, in the province of Ontario.

Early in May last two of the mills were destroyed by fire. One of these was a spare mill and used only in the early spring. Of the remaining mills, three in number, one is furnished with a Wicks oscillating gate, a pair of twin circulars, and a large circular, having two double edgers, etc.; another is a band mill with double edger and butters, with paling, lath and shingle machines, and band re-saw, the third mill having two dealing gangs, with their accompanying slabbing gangs, two double edgers and one circular splitter.

In an additional building is contained a slab splitter and butter, also a deal edger and butter. It is probable that the company will add another mill at an early date.

There are in connection with the mills 17 miles of double piling tram car tracks and a piling capacity for 80 million feet of lumber. The town of Hawkesbury and the Hawkesbury mills have both rail and navigation facilities.

HAWKESBURY LUMBER COMPANY'S MILLS, HAWKESBURY, ONT.

W. C. EDWARDS & COMPANY.

The composition of the above firm is as follows : W. C. Edwards, M. P., President, J. C. Edwards, John A. Cameron, James Wood and John A. Wood, jr. They are among the largest operators of the valley, having large mills at New Edinburgh and Rockland. The limits from which their supply of timber is obtained are situated on the North Nation, Gatineau, Kippewa, Dumoine, Coulogne and Black rivers. The New Edinburgh mills are situated at the junction of the Rideau and Ottawa rivers, and comprise a large water power saw mill and a planing mill, which are under the able management of Mr. James Wood. Some conception of their extent may be obtained from the illustrations appearing on this page.

The saw mill was built some years ago by Mr. Isaac Tyndal, but has since been improved to meet the demands of the trade. Three Stephenson duplex turbine wheels, two 38 inches and one 43 inches, operate the machinery in the lumber mill, generating about 700 h. p. The equipment consists of one Allis and two Prescott band saws and a Wicks gang, with necessary trimmers, edgers, etc.

The dimension mill is operated by two 30-inch Stephenson turbine wheels, and contains two sets of lath and shingle machines. Conveyors carry all the refuse to the burner, which is 20 ft. diameter and 90 feet high. The floor of the mill is kept on a level with the sorting table, to which the lumber is raised by air compression. The carriages, niggers and rollers are also operated by compressed air.

Above the dimension mill is the dynamo and store room. The dynamo, a 20 arc machine converted into a series incandescent system, furnishes light for the complete premises, and is operated by a separate 20 inch water wheel.

The scows on the river are loaded by means of shutes, which are raised or lowered by chains to suit the height of the boats. Switches extend from the C. P. R. track into the yards, so that every facility is afforded for quick shipment.

The piling ground covers an area of fourteen acres, and there is usually carried in stock about five million feet of lumber. A specialty is made of dimension timber, which is shipped to the American markets.

SAW MILLS.

FACTORY AND PLANING MILLS.

W. C. EDWARDS & COMPANY'S MILLS AT NEW EDINBURGH.

At Rockland, which is about twenty-two miles down the Ottawa river from New Edinburgh, the company have one large mill and a smaller one, steam power. This portion of the business is under the general supervision of Mr. W. C. Edwards. In the large mill are two Wicks gangs, pair twin circulars and two band saws, also three small band saws for splitting and two circulars. Power is furnished by twelve boilers and a pair of engines, with cylinder of 24 inches diameter and 3 feet stroke, furnishing about 500 h. p. The small mill contains a circular and a gang saw,

with trimmers, tie and shingle machinery, etc. Five boilers and a pair of engines, 22" diameter and 3 feet stroke, supply about 300 h. p. The burner for sawdust is 30 feet diameter and 145 feet high. The product of these mills is largely deals for the English market, which are shipped mostly by rail to Montreal. At the different mills of the company about 800 hands are employed during the sawing season.

The planing mill at the New Edinburgh mills is one of the most complete establishments of its kind in Canada, and consists of seven buildings devoted to planing, sawing, drying and storing. At the entrance are the offices of the manager of this department, Mr. Armstrong. The large stone building in the front contains the draughtsmen's offices, back of which is the large work room and cutting-up department. The sash and blind department and box factory are fully equipped with improved machinery. The dry kiln is 48 × 48 feet, and is situated above the boiler room. On the first storey is the door department, and the finishing and paint room, with glass room above. A store room, 40 × 100, is situated above the box factory. The third storey is used for storage purposes. The building is heated by the Sturtevant hot air system. In the engine room are two boilers of 85 h. p. each, which are used for heating and drying, and drive a small engine at night. A Stephenson duplex water wheel of 100 h. p., supplied by a 30 feet head from the Chaudiere Falls, operates the machinery.

Another building is a frame structure, 84 × 36 ft. The ground floor is used for storing kiln-dried lumber, and the top floor for the sashes and doors.

The planing mill proper is 130 × 35 ft., the ground floor containing the planing and moulding machines and re-saws, and the top floor being devoted to mouldings. Beneath the building is a Stephenson duplex water-wheel of 200 h.p. and 43 feet head.

In a two-storey building, 24x96 ft., is stored the fancy hardwoods and other kiln-dried lumber, while in another building, 132x48 feet, the dressed lumber is taken care of. A shed of two stories, 156x48 feet, has recently been completed, which will be used for rough lumber, and will have a capacity of one million feet. The heavy hardwood shed is 134x20 feet, and is situated alongside the new offices.

PEMBROKE LUMBER CO.'S SAW MILL, PEMBROKE.

PEMBROKE LUMBER COMPANY.

Amongst the best known lumber manufacturers of the Ottawa valley is the Pembroke Lumber Company, whose mills are at Pembroke, Ont. The composition of the firm is as follows : Hon. Peter White, late speaker of the House of Commons, Andrew White, C. Chapman, Mrs. A. Dunlop, Judge Thos. Deacon and John Bromley, the latter being the general manager.

The timber and lumber mill was built 25 years ago in the Ottawa river on piers, the space between the shore and the mill being long since filled up. The first owner was John Rowan, who sold it to W. R. Thistle, who in turn sold it to the present owners. Since coming into possession of the present owners, substantial improvements have been made and its capacity doubled. The dimensions of the mill are 250 × 40 ft., 2 stories, with lath mill annex 20 × 50 ft. and boiler and engine rooms 20x60 ft. and 30x60 ft. a level with the G. T. R. flat cars which pass alongside. The lumber is loaded from trucks onto the cars ready for shipment.

The yards are very extensive, affording piling ground for a large quantity of lumber. Upwards of 120 men are employed around the mill. On an average of 100,000 logs are always floating in Lake Allumette, an expansion of the Ottawa river.

On Lake street are the commodious business offices of the company, with stores in rear. Mr. Bromley is assisted in the management of the affairs of the company by his son, and the large connection which has been established requires their close attention. The accompanying cut will enable the reader to judge of the extent of the mills and the variety of lumber manufactured, which is shipped to various parts of the world.

MR. J. R. BOOTH.

To Mr. J. R. Booth, of Ottawa, belongs the distinction of being the largest saw mill operator in the world, while the area of timber lands in his possession is also said to be greater than that owned by any other one person in Canada. Until two years ago Mr. Booth operated two mills on the Chaudiere river at Ottawa, but during the summer of 1894 the larger of these two was destroyed by fire. This mill contained fourteen band saws, four gangs and four twin circulars, and was said to be capable of cutting one million feet per day. The average cut for six months was over 100,000,000 feet, while about one thousand employees were required for its operation. This will give our readers some idea of its magnitude. The other mill operated by Mr. Booth was the old Perley & Pattee mill, which was purchased some years ago and remodelled. It is now one of the most complete establishments of its kind in Canada, and by running day and night during the sawing season makes an annual output of 100,000,000 feet. The equipment of the saw mill proper comprises four band mills, two Wicks gangs, and a pair of twin circulars. In the timber mill is one band saw, while the slab mill cantains three re-saws. Three lath tables and two picket tables are located in the lath mill.

Ample power for the operation of the mill is furnished by the Chaudiere falls, and the water-wheels have a capacity of 4,000 horse power. A complete electric plant supplies light to the mills and yard, the latter covering an area of 160 acres. Some idea of the benefit derived from such an establishment may be estimated from the fact that Mr. Booth has now in his employ upwards of 1,800 hands. His limits at the head waters of the Ottawa comprise 5,000 acres of timber lands.

Forty-four years ago Mr. Booth was a millwright working in Ottawa. He first commenced business by leasing a saw mill with one saw, and by industry and progressiveness has succeeded to such an extent that he is said to be the largest owner of property in Ottawa, with the exception of the government. Not alone in the lumber business has his business ability and enterprise been shown. The Ottawa, Arnprior and Parry Sound Railway, which extends from Ottawa to Parry Sound, a distance of upwards of 260 miles, and passes through a portion of the province which had hitherto been practically devoid of railway facilities, was constructed largely through the instrumentality of Mr. Booth. This road promises to be of great benefit to lumbermen, and to aid materially in the development of the surrounding country.

THE HULL LUMBER COMPANY.

The lumber business carried on for some years by the firm of Buell, Hurdman & Co. has been taken over during the past summer by the Hull Lumber Company, which is composed of A. A. Buell, of Burlington, Vt., W. G. White, of Albany, N. Y., F. W. Avery and C. E. Read, of Ottawa, and J. M. McDougall, of Hull. The capital stock of the company is placed at $600,000. Their limits are situated on the Petawawa, Magnacippi, Mattawa and Kippewa rivers. They manufacture largely deals for the English market, together with considerable lumber, siding, etc., for the United States trade, their annual output being about 50,000,000 feet.

The company operate two mills on the Ottawa river at Hull, just across from the city of Ottawa. One is 85x135 feet in size, water power, driven by two "New American" water wheels. The machinery comprises three band saws, a Wicks gang, two double edgers, two pair double butters, with live rollers, log turners, transfers and other necessary equipment to accompany same.

In the re-sawing mill is a double edger, re-sawing band mill, butting saws, small splitting saw, etc.

The system of transfer rolls for transferring lumber from the gangs to the butters effects the saving of several men, and the mill is considered one of the most modern in the Ottawa district. Its capacity is 265,000 feet per day. A large power pump has lately been put in, together with 1,400 feet of 2½ inch standard hose for fire protection.

The other mill is 95x120 feet in size, with wing 50x40 feet. Power is furnished by three Rose and two Lamb water wheels, with four central discharge wheels for running edgers and butting saws. Three gang saws, one Yankee gang, two edgers and two butting saws, with tables, comprise the principal machinery. The capacity is 200,000 feet in ten hours.

The mills are lighted by 40 arc lights, furnished by three Weston dynamos, one of 20 and two of 10 lights. The sawdust is destroyed by burners.

BRONSONS & WESTON LUMBER COMPANY.

By an act of the parliament of Canada was incorporated the Bronsons & Weston Lumber Company, Limited, of which the Hon. E. H. Bronson is president and general manager, and Mr. L. Crannell secretary-treasurer. They operate two saw mills and a shingle mill, all water power, with a capacity of 300,000 ft. in ten hours, and own large limits located some distance up the Ottawa. The larger mill contains one band saw and six sets of gang saws, while in the smaller mill are three gang saws, in addition to the ordinary trimmers, butters, edgers, etc. The average output is about 75,000,000 feet per year, principally for the United States market. In this respect they differ from many of the other mills, which manufacture deals for the British market. This firm employs over four hundred men at the mills, exclusive of those engaged for the woods each winter. Their mill and yards are lighted by twenty-five arc lights.

GILMOUR & HUGHSON.

Of the firm of Gilmour & Hughson, Mr. John Gilmour is president and Mr. W. Hughson vice-president. The firm own large limits on the Gatineau river and three large saw mills, the largest being situated at Hull, on the Ottawa river, and the two smaller ones at Chelsea, about eight miles up the river. The mill at Hull has a capacity of 250,000 feet per day, and is 180x80 feet, with additional sorting tables on each side. Steam power is used, there being two Goldie & McCulloch engines of 500 h. p. each, and ten boilers with a total capacity of 1,500 h. p. The mill comprises two band saws, with steam feed, a gang saw, pair of twins for slabbing small logs, steam crane for lifting logs for gang, steam rollers, steam flippers, two slash tables, five saws in each, for butting slabs, two sets of trimmers, and two double edgers. Down stairs are located the lath, picket and shingle mills of large capacity. Throughout the mill are live rollers for conveying the stock.

The chimney is of brick, 13 feet base and 8 feet top, with flue 5 feet square inside. Its height is 160 feet, with smoke-stack 103 feet high and 54 inches diameter.

As the lumber comes from the mill it is placed on rollers and then loaded on cars in a unique manner by means of a swing table. Forty cars are required for hauling lumber from the mill to the yards, which comprise about sixty acres.

From their limits the logs are brought down the Gatineau river to the mill and drawn up on a logway by an endless chain. As the logs enter the mill they are counted by an automatic device, the invention of Mr. John Craigie, mechanical superintendent. Sawdust is used for fuel, being conveyed to the boilers by carriers. The mill is lighted by an electric light plant, the dynamo having a capacity of 150 lights of 16 c. p. each, driven by a 30 h. p. engine.

At Chelsea the two mills have a combined capacity of about one-third greater than the mill at Hull. They are driven by water power. The firm have a large lumber yard at Ironsides, the lumber from the Chelsea mills being conveyed to the yard by means of a water flume or spout 3½ miles long, 2 feet wide and 20 inches deep. They manufacture largely for the American market, their deals going to Great Britain, being shipped in barges to Montreal and loaded on steamships. The ends of deals are sold for making matches.

R. H. KLOCK & COMPANY.

Messrs. James B. and Robert A. Klock comprise the firm of R. H. Klock & Co., whose head offices are at Klock's Mills, Ont. Besides manufacturing sawn lumber they have for many years been engaged in the square timber business, and purpose taking out a small raft during the approaching winter. Their mills are located at the following points: One steam saw mill, with lath and shingle mills and planer, at Bonfield, Ont.; one steam mill, with lath and shingle mills attached, and one water power mill with planer, at Klock's Mills, Ont.; one steam mill with lath and shingle mills attached at Moore Lake, Ont.; one large band and circular mill, with lath and shingle mills, at Aylmer, Que.

THE GILLIES BROS'. SAW MILL, BRAESIDE.

McLACHLIN BROS.

The mills of the above firm are situated at Arnprior, at the confluence of the Madawaska and Ottawa rivers. Here a little more than forty years ago the late Daniel McLachlin purchased the water power and 400 acres of land in the township of McNab, within the limits of which the municipality now stands. Among the first buildings to be erected by Mr. McLachlin was a water power saw mill. This was in the year 1862. A little later another mill was built, and both these mills have been running every season since without intermission. A third mill, operated by steam, was built in 1871 on the shore of Chats lake, but was destroyed by fire four years later. It has since been replaced by another, built by the present firm, while in the year 1892 a fourth mill was constructed.

The two last-named mills are equipped with every possible appliance which science has invented for the manufacture of lumber, and the quality of the manufactured product speaks well for the enterprise of the proprietors.

During the sawing season 700 men are employed, and from 900 to 1,000 are engaged in logging operations in the woods. The annual output has reached as high as 80,000,000 feet, although last season only 55,000,000 feet were manufactured. The piling ground is said to be among the largest in the world, there being ten miles of track.

The firm of McLachlin Bros. are owners of very extensive limits on the Madawaska, Bonnechere, Petawawa, Amable du Fond and Coulogne rivers, and a few years ago purchased 500 miles of virgin timber land on the Upper Ottawa. Their logs are taken a distance of about four hundred miles, and two seasons are sometimes required for floating them to the mills. The business to-day is carried on by Messrs. H. F. McLachlin and Claude McLachlin, surviving sons of the late Daniel McLachlin.

THE GILLIES BROS. COMPANY.

The firm of Gillies Bros., consisting of James William, John and David Gillies, sons of the late John Gillies, of Carleton Place, Ont., (himself a prominent lumberman on the Mississippi a generation ago), commenced business at Braeside in the year 1873, buying the mills at that place, and the limits on the Coulonge river belonging to the Rev. Henry Usborne. They have since been actively engaged in the manufacture of sawn lumber and square timber.

The saw mill is situated at Braeside, on the shore of Chats lake, an expansion of the Ottawa, and three miles from Arnprior. At time of purchase it had a capacity of eighty to one hundred thousand ft. per day of 11 hours, but has since been enlarged and remodelled until now the capacity is 200,000 ft. in the same time. The machinery consists of twin circulars, a 56-in. double cant gang and two band saws, with necessary steam feeds and canters, edgers, trimmers, re-saws, lath and picket machinery, etc. These are driven by a cross compound condensing engine, with cylinder of 26 and 46 in. diameter and 40 in. stroke, with a battery of eleven boilers. There is also a 25 horse power engine driving resawing machinery, and an independent engine and dynamo for electric lighting. The piling ground has a capacity of 35,000,000 to 40,000,000 ft., the lumber being piled directly from car tracks, of which there are some five miles owned by the company, and connected to main line of the C. P. R. The Ottawa, Arnprior and Parry Sound Ry. also runs within two miles of the yard, with which connection will probably be made.

During the early years of the firm, square timber for the British market was extensively manufactured in addition to sawn lumber, but of late years nothing has been done in this way. During the coming winter, however, they expect to take out considerable waney square pine of large size and fine quality.

The mill has sawn almost exclusively for United States markets, but during the season just closing they have sawn largely for British markets. The season's cut will be about 30,000,000 ft.

The firm employ some 250 men at the mills, and 500 to 600 in the woods, and have over 1,200 miles of timber limits under license, all of which is on waters tributary to the mill. In 1894 the firm was changed to a joint stock company, known as the Gillies Bros. Co., Ltd., with the four members of the original firm and four sons as the shareholders and directors, thus making three consecutive generations who have been engaged in the business.

WM. MASON AND SONS.

The present members of the above firm are Messrs. George Mason and Wm. Thos. Mason. The business was originally started by Messrs. Robert and George Mason in 1861, who ran a small dimension mill at the Chaudiere. About the year 1868 they sold the business to their father, Mr. Wm. Mason, who purchased the present site, on which he erected a small mill and conducted the business, with Mr. Robert Mason, his eldest son, as manager, until 1886, when his three sons, Robert, George and Philip N., were taken into partnership.

Mr. Wm. Mason died in April, 1888, and the business was carried on by the sons until November, 1889, when Robert and Philip sold their interest to George and Wm. T. Mason, who have since carried on the business. Under the present management the business has, notwithstanding the extreme dullness which has affected the lumber trade in general, been more than doubled since 1889. They manufacture dimension timber, lumber, lath and shingles.

The mill now has a capacity of from 75,000 to 100,000 feet B. M. per day, together with a daily output of 30 to 35 thousand of lath and 25 to 30 thousand of shingles.

Last year the output of the mill was about 12,000,000 ft. of lumber and timber, 6,250,000 lath and 5,500,000 pine and cedar shingles. The present season's cut will be about the same. The firm employ about 125 men and from 36 to 40 horses at the mill, and during the winter from 200 to 250 men and sixty teams of horses are employed in logging operations.

They obtain their supply of timber from their own limits, which are situated on the Madawaska and Mattawa rivers in Ontario, and the Coulonge and Dumoine rivers in Quebec, and are in extent about 450 square miles.

The mill, of which the owners are justly proud, is one of the best equipped and most convenient in the province. The driving plant consists of four 100 horse power boilers and a 300 horse power Wheelock engine, which are contained in separate stone buildings with fire-proof doors and roof. The mill proper is a two and a half storey frame building, 73 feet wide by 140 feet long, with annex

30 × 40 ft. on west side. On the ground floor in the mill are two pair of twin oscillating steam engines, which are used to drive the feed works for carriages, also two steam engines for operating the kickers which throw the logs out of the jack ladder, and another steam engine connected with a butting-off saw used for cutting the slab and other wood into shingle and lath bolts. In addition there are the shingle mill, shingle edgers, carriers and all the shafting and pulleys for driving the machinery in upper part of mill, as well as single edger, double edger, large band re-saw machine and small band-saw, all of which are in the annex, and which are used for trimming purposes.

On the first floor of the mill there are two new Allis band mills, manufactured by the Waterous Engine Works Company, of Brantford, which were put in two years ago. These mills have given entire satisfaction to the proprietors. They are driven with the rope drive instead of with belts. The log carriages were manufactured by the Wm. Hamilton Manf g. Co., of Peterboro', and are of the most improved patterns. Passing the band-saws we come to a butting-off saw, which is rather a novelty of its kind, being worked up and down by one of the steam engines referred to above. It is the only one of its kind in the district. On this saw all the slabs are cut into shingle or lath bolts or fire wood.

The timber and lumber after passing the band saw is conveyed on live rollers to the timber butting-off saws, where the timber is butted to required lengths and the long timber in lengths to suit the edger. The timber after being butted on both ends, passes on live rolls to the outside of the mill, where it is rolled down on skids to be drawn out and distributed to its proper piles, while the lumber is passed through the double edger to the butting table, where it is cut to proper lengths, and finally reaches the culling table, from which it is distributed to its proper grade.

On the second floor is to be found the filing room, also fitted with machinery furnished by the Waterous Company. Here are situated the racks for holding the spare saws, fifteen in number.

Connected with the boiler room, but in a separate fireproof building, are situated two powerful steam pumps, which, with a third one situated in the engine room, constitute a very efficient protection against fire, being capable of throwing six heavy streams of water.

The piling grounds extend over twenty-four acres, and are well laid out and convenient. The office is a large two storey frame building, finished inside in white pine, and is situated near the mill. Mr. W. T. Mason, one of the firm, has his residence within a few yards of the office, in the centre of the yard.

In addition to the yard at the mill the firm have lately opened a yard on the Richmond road, where they carry a full stock of rough and dressed lumber, sash, doors, mouldings, etc.

MR. WM. MACKEY.

We take pleasure in presenting to our readers the portrait of Mr. William Mackey, who enjoys the distinction of being the oldest square timber dealer in Ottawa. Mr. Mackey was born in the county of Down, Ireland, and came to Canada with his father, brother and sister in

MR. WM. MACKEY, OTTAWA.

1835, settling in Perth. In 1837 he moved to Ottawa, or By-town, as it was then called. He commenced shantying in 1841, and in 1843-4 went into business on his own account, taking out his first raft of square timber on Mackey's creek, Madawaska river. At that time lumbering was far different from what it is at present; there were no improvements on the Madawaska, and it was quite difficult to get timber to market. All supplies were taken up the rivers in canoes, towed up the rapids, and carried over the difficult places or portages on men's backs with tump lines. Driving the timber down the chutes of the Madawaska river in the spring of the year was then pretty dangerous, and often resulted in loss of life—this river being one of the roughest on the Ottawa. Mr. Mackey has been principally identified with the square timber business, this being his fifty-third year in succession of making timber for the Quebec market, where his mark "W. M." and the quality and manufacture of his timber is well known, as well as in the English market.

GILMOUR & COMPANY'S MILL AT CANOE LAKE.

Just as we are going to press the following description comes to hand of the new mill recently completed at Canoe Lake by Messrs. Gilmour & Company, of Trenton, and which is referred to on another page:

The new mill is located in the heart of the limits purchased by the company in the townships of Peck, Hunter, and McLaughlin, Nipissing district. Operations were started on the first of March, 1896, and on the sixth day of June following the first lumber was sawn, although the regular night and day sawing did not start until June 29th. The mill is solid and substantial, and cannot be surpassed in points of excellence and lumber sawing facilities.

Situate at Canoe Lake, on the line of the Ottawa, Arnprior & Parry Sound railway, it is in the heart of the great lumber district of the north country, and is in direct communication with Ottawa, the lumber metropolis of Canada. In less than one year a space of about 300 acres has been cleared up, and a substantial mill erected, with offices, storehouses, boarding and tenement houses in close proximity.

The piling grounds are excellent, being well drained, with good, solid bottom. A switch from the O. A. & P. S. railway runs directly to the mill.

The mill is erected on the shores of Canoe Lake, where an abundance of water is always procurable for fire and other purposes. Eight saw log shanties are now in active operation, as well as two board timber gangs, within a short distance of the mills. The logs after a short drive are boomed in the lake opposite the mill, and elevated to the sawing floor by improved methods, everything, in fact, being conducted on the most approved systems.

The dimensions of the mill and other buildings are as follows: Mill, 240 ft. x 56 ft., with following machinery, two band mills, one set twin circular saws, one 52-in. gang, one band re-saw, one circular splitter, two large edgers, two trimmers, two machines for making mouldings, with all necessary slash and butting saws; lath mill, 50 x 32 ft., with picket and heading machinery; sorting shed, 240 x 24 ft.; boiler house, 84 x 38 ft., with eight 46 in. x 14 ft. tubular boilers, and three 60 in. x 12 ft. tubular boilers; engine house, 51 x 28 ft., with one 750 h. p. engine, and one boiler feeder; fire engine house, 24 x 28 ft., with one Amoskeg fire engine and two hose reels, including hose; pumping house, 22 x 24 ft., with one Worthington duplex fire pump, capacity 1,500 gallons per minute, one 30 arc light dynamo, and one 40 h. p. engine; machine shop, 50 x 24 ft., containing two lathes, one bolt cutter and one drilling machine; blacksmith shop, 24 x 24 ft., containing two forges, with engine and blower; carpenter shop, 55 x 24 ft., with one Daniel planer and circular saw table; water tank, for fire purposes, with a capacity of 30,000 gallons.

ST. ANTHONY LUMBER COMPANY.

Located at Whitney, at the foot of Long Lake, 144 miles west of the city of Ottawa, is situated one of the most complete saw mills in Canada. The proprietors are the St. Anthony Lumber Company, which is composed of Messrs. E. M. Fowler, of Chicago; Arthur Hill, of Saginaw; and E. C. Whitney, manager, located at Ottawa.

The company purchased limits from Messrs. Perley & Pattee, of Ottawa, in 1892, and have since secured other limits, until to-day they possess nearly 400 square miles from which to draw their supply of logs. These limits are on the head-waters of the Madawaska and its tributaries, and are said to be among the best in Ontario. They contain a vast amount of virgin white pine. Their property at Whitney consists of some 1,800 acres.

The mill was erected in the spring of 1895, and on July 25th sawing was commenced. The main building is 88 × 208 ft., with shingle mill 48 × 52 ft., and lumber shed 32 × 276 ft. The saw floor of mill is without posts, the roof being supported by a truss. The engine and boiler house is 81 × 82 ft., built of brick, stone and iron, covered by an iron roof. It contains eight boilers, 60 in. × 20 ft., each boiler having eighteen 6-inch flues. The engine is an Allis Corliss of 900 horse power. The power house is of brick, stone and iron, 24 × 56 feet, and contains one 125 horse power boiler and a 75 horse power engine, with arc and incandescent dynamos to light the mill and lumber yard. In the mill there are 300 electric lamps of 16 candle power each. The power house also contains one Worthington Underwriter pump, capable of throwing 1,000 gallons of water per minute, with four hose attachments. The fire protection is the Grinnell sprinkler system, there being over 900 sprinkler heads in the mill, supplied by a tank holding 24,000 gallons of water elevated 95 feet above the ground. The said tank is also supplied by the Underwriter pump mentioned above.

ST. ANTHONY LUMBER CO.'S MILL, WHITNEY.

In the lumber yard there are ten miles of small railway tracks to carry the lumber from mill to yard, which requires 250 lumber cars. There is also five miles of standard gauge tracks laid with 56-lb steel rails to accommodate cars to load lumber for shipment over the Ottawa, Arnprior & Parry Sound railway. The mill contains three Allis band saws and one Wickes gang, two six and one four saw edgers, and two eleven saw trimmers. The mill is supplied with all the latest and best labor-saving machinery, such as steam niggers, steam feed, steam flippers and kickers, required to handle logs and lumber.

The output of the mill is white pine lumber, lath and shingles. The capacity is 200,000 feet per day of ten hours. Over 300 men are employed at the mill, and about 500 in the woods in winter.

UPPER OTTAWA IMPROVEMENT COMPANY.

The present system of bringing the logs down the Ottawa river is said to be giving entire satisfaction to lumbermen. As soon as the logs reach the river they are handled by the Upper Ottawa Improvement Company, under the direction of the secretary-treasurer, Mr. G. B. Greene. This company holds a charter from the Dominion government and has a capitalization of $150,000. Once the logs are delivered in the river within the company's jurisdiction, the owners are relieved of all responsibility until they reach the mill. This is the only company of the kind in Ontario which takes full charge in this manner. The cost of bringing the logs from the head of Lake Temiscamingue, a distance of over 300 miles, is about $1.30 per thousand feet, B. M.

Some years ago several of the lumber firms owned improvements along the river and did their own driving and assorting. This system did not prove altogether satisfactory and arrangements were made that the present company should be incorporated to take over the improvements and undertake the work. The length over which the operations extend is in the neighborhood of 325 miles and from 400 to 600 men are employed. Six steel and five wooden steamers are used. All the towing, driving and assorting of the logs and timber is done at actual cost, the tolls charged by the company for the use of their river improvements, averaging about fifteen cents per 1,000 ft. B. M., being sufficient to pay for all repairs and provide an annual dividend to the stockholders.

At the beginning of the season rates for towing, driving and assorting are fixed which are known to be sufficient to cover expenses, and if at the end of the year any surplus exists, the directors authorize a reduction of the rates to the actual cost, thus securing to the lumbermen the advantage of any favourable conditions which should reduce the cost of the work.

PORTABLE SAW AND SHINGLE MILL.

The accompanying photo, No. 1, represents James Dunbar's portable saw and shingle mill on the shore of Stoney Lake, near the village of Sundridge, Ont., on 1st April, 1896. The logs surrounding the mill amount to 1,000,000 feet, and Mr. Dunbar had just started cutting on these.

View No. 2 shows the mill on the 1st of July following. The entire 1,000,000 feet of logs had been cut up and piled in the shape of lumber on three long sidings to the right of the mill, not all shown in the photo. The logs in the foreground are a portion of a raft that was towed across the lake, and are not the same as were taken in the first view.

The above work was done by a Waterous portable saw mill, consisting of a 35 h. p. return tubular fire-box boiler

James Dunbar's Saw and Shingle Mill—View No. 1.

on wheels, and a 30 h. p. engine, connected to a set of saw irons, bull wheel, single edger, slab saw and shingle machine.

The building, it will be seen, is only a temporary structure, as the mill is very readily moved as occasion demands.

This is a medium sized portable mill built by the above firm, who build smaller ones down to 12 h. p., and larger ones up to 100 h. p., as will be shown by the fact that on the 13th of March last they received a cable from England closing for one of their largest portable saw mills for South Australia, including a 70 h. p. engine with locomotive boiler, heaviest saw frame with top saw attachment, taking a 72" lower saw and 40" upper saw, and girder steel carriage to carry logs 6 ft. diam., 25 ft. long, of the heaviest hardwood, the carriage being actuated by steam feed. On the same day, we are informed, they sold one of their smallest portable outfits for mule back transportation to the mining districts of British Columbia.

OTTAWA LETTER.

[Regular Correspondence of the Canada Lumberman.

By the courtesy of the United States Consulate-General a comparative statement of the value of forest products shipped from Ottawa to the United States for the quarter ending September 30th, for the years 1894, 1895 and 1896, is given below. These figures do not include any shipments less than $100 in value, the aggregate of which, consisting of hop poles, telegraph poles, tan bark, pulp wood, railroad ties, etc., is considerable.

Shipments for Quarter Ending September 30th.

Product.	1894	1895	1896
Sawn lumber.....	$649,531.36	$661,087.22	$572,105.36
Lath and shingles.....	16,648.02	24,908.55	34,372.86
Pickets and paling.....	3,107.54	3,406.72	4,669.66
Sulphite pulp.....	29,531.17	14,478.94	8,039.53
Pulp wood	4,167.20	1,492.00	297.00
Railway ties.....	....	3,307.30	888.20
Slats	.....	3,807.27	.....
Logs and timber.....	.....	1,587 26	5,245.82
Match blocks.....	.....	.....	731.25
Total	$702,685.29	$714,075.36	$626,349.68

A slight reduction in the value of sawn lumber exported to that country is shown by the above statement, and an increase in lath and shingles and logs and timber.

The report of Mr. McGrady, Crown Timber Agent for the Ottawa district of Quebec, shows a small increase in the quantity of logs and square timber taken from his territory during the season of 1895-96 as compared with the previous year. There were fewer logs, but a greater quantity of square timber. The number of logs was 2,800,000, averaging a little over 100 feet each, which represents a total of 300,000,000 feet.

A fortnight ago Mr. J. R. Booth entertained about one hundred senators and members of the House of Commons to a dinner and trip out to the end of the Ottawa, Arnprior and Parry Sound Railway. The party went to Potter Lake in Algonquin Park, eighty miles from Parry Sound. On the return home speeches were made by Mr. John Charlton, M. P., Sir Henry Joly and others.

INDIFFERENT LENGTHS.

Mr. John Gilmour, lumberman, has purchased the residence owned by Judge Ouimet, ex-minister of public works, for $12,000.

Mr. J. H. Thompson recently returned from Bay City, Michigan, where he has been during the past summer, looking after the lumber interests of Mr. J. R. Booth.

It is probable that the saw mills will be kept running until late in the season.

Ottawa, Ont., Oct. 26th, 1896.

NEW BRUNSWICK LETTER.

[Regular Correspondence of the Canada Lumberman.]

The announcement that the Dominion government had decided to grant subsidies for direct steamship service from St. John to London, Glasgow, Belfast and Dublin was learned with much satisfaction. It is intimated that the Beaver line will make more than fortnightly trips to Liverpool, and the Furness line steamers will sail fortnightly for London, and will carry five thousand tons freight. The Donaldson line will run to Glasgow and the Head line to Dublin and Belfast. Thus lumbermen will be enabled to place regular lots of goods upon the English market during the winter.

Recent floods in the vicinity of Sussex have caused much damage to mills. The boom in the river near Hampton Village gave way and the drives of C. I. Keith and Andrew McAfee have gone adrift. The saw mill of James A. Moore, of Waterford, was swept away and complelely destroyed. Mr. Moore also lost a large quantity of sawn lumber and logs, his loss being estimated at $5,000. It is rumored that he will not rebuild.

The recent rains have sufficiently raised the water in the streams for water power mills that have been idle since early last spring to resume operations. I. & C. Prescott's mill at Albert is running full time, as is also the mill of A. & G. Bray at Curryville. Each of these mills have a large quantity of logs in the stream for sawing.

Lumbering operations in Albert county this season will be conducted on a larger scale than last year. John F. Milton has bought up a large amount of timber in the vicinity of the shiretown, and will operate very extensively there this winter. It is said there will be at least four mills at work at the Cape the coming season.

BITS OF LUMBER.

George Vaughan, of Sussex, has purchased the old Stewart mill at Black Brook, Miramichi, and will operate it next season. He has contracted with Mr. Welch to get out 9,000,000 logs this winter.

The G. &. G. Flewelling Co., of Hampton, have their saw mill illuminated with a 175 light dynamo. The plant was supplied and installed by James Hunter, electrician, of St. John.

St. John, October 24, 1896.

BRITISH COLUMBIA LETTER.

[Regular Correspondence of the Canada Lumberman.]

The Central Lumber Company is now receiving more than its share of attention, in view of the steps taken by one of its members and the near approach of the time when re-organization for a period of five years was to be effected. The object of the combine, as has been before pointed out, was to handle the foreign trade, the business to be given to each mill to be regulated by the capacity of the mills, a proposition being made on the basis of the maximum output. Mr. James E. Bell, of the Everett mill, became dissatisfied with the amount of business allotted to him, and withdrew from the organization. He shipped two cargoes of lumber to San Francisco, consigned to the Everett National Bank, both of which were attached by the combine and held. The bank commenced action in the courts, and it is said the case has never yet been settled. At the annual meeting of the association held at San Francisco, a fair representation from both British Columbia and Washington was present. An effort was made to effect a settlement, and a committee was appointed to suggest a plan of re-organization that would harmonize all interests concerned and promote the welfare of the combine. The lumbermen who do business on a commission basis also offer strong opposition to the organization, and develop ments of a startling nature may be looked for in the near future.

James Dunbar's Saw and Shingle Mill.—View No. 2.

For a month past forest fires have been raging along the Skeena and Naas rivers, and several mining settlements are said to have been wiped out. The loss to standing timber is already considerable, while fears are expressed that several prospectors have perished.

Blue & Fisher, saw mill, have amalgamated with A. R. Tillman, of Greenwood, under the name of the Boundary Creek Milling & Lumber Co.

Gennelle & Co., of Revelstoke, are about to build a large mill at Arrowhead, which will have a capacity of from 75,000 to 100,000 feet per day. They will also add a sash and door factory next summer.

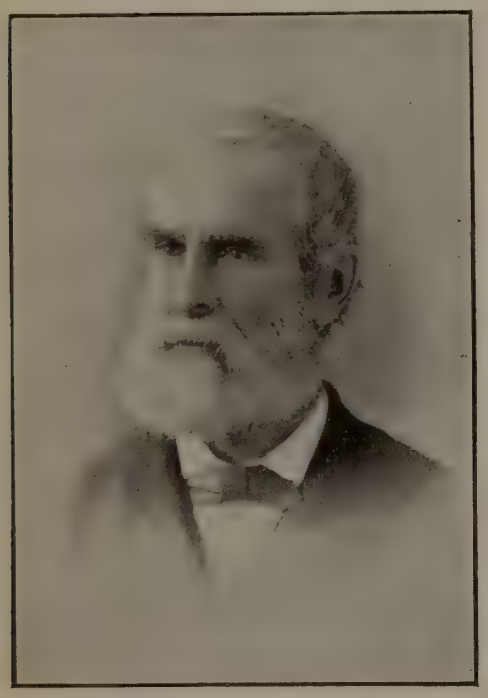
New Westminster, B. C., October 20, 1896.

QUEBEC

AREA OF FOREST LANDS YET UNLICENSED.—LOCATION OF THE VARIOUS CLASSES OF TIMBER.—STATISTICS OF THE PORT OF QUEBEC.—THE ST. MAURICE RIVER A GREAT LUMBERING CENTRE.—REPRESENTATIVE MILLS.

WHILE the white pine forests of Quebec possess the greatest wealth in proportion to their extent, the spruce forests are rapidly becoming more valuable from a commercial point of view. The pine forests of this province have been denuded of their timber to a greater extent than is the case in Ontario, but nevertheless there still exist considerable quantities both of the red and white variety, principally located in the Ottawa valley. The valley of the St. Maurice river once contained valuable pine forests, but spruce now furnishes the principal source of wealth. The spruce forests, which are being more and more exploited every year, extend much further eastward than the pine, and beyond the St. Maurice valley and south of the St. Lawrence are found the largest trees.

A report issued by the Quebec Crown Lands Department in 1893 gives an estimate of the quantity of timber lands yet unlicensed. According to this report, the total area of Government lands still vacant and not yet under license to cut timber, as well as can be ascertained (the northern boundary line being assumed to be for the present at the height of land, a line which is extremely irregular and geodetically determined at a few points only) is certainly not less than 75,000,000 acres, or 117,187 square miles, of which say 45,000,000 acres may be deducted, being



HON. J. K. WARD,
Proprietor Mono Saw Mills, Montreal.

destitute of timber, leaving 30,000,000 acres still untouched and to be disposed of for the requirements of the future. Of the above superficies three to four million acres may be safely computed as pine growing. The remainder is chiefly covered with spruce, cedar, tamarac, white birch, cypress, maple and birch. The above named species in the order where they each predominate may be distributed as follows:

Pine in the Lower Ottawa and St. Maurice agencies, but principally in the Upper Ottawa valley.

Excellent spruce, and in quantity, is to be found in the St. Maurice, Saguenay, Lake St. John, Rimouski, Bonaventure and Grandville agencies, as well as tamarac and cedar, the latter being notably good and abundant in the three last named localities.

Tamarac is spread evenly all through the divisions just mentioned. White birch is met with everywhere, but is particularly plentiful in the St. Maurice valley and the Saguenay and Rimouski districts. Cypress, scrub pine (Banksian pine), predominates in the Saguenay region. According to the surveyors' reports, this timber (which is well adapted for railway ties) covers the extensive tracts of land watered by the Peribonka, Bersimis, Aux Outardes, Manicouagan rivers and tributaries.

Moreover, all through the immense tracts of country just described, an unlimited supply of poplar, spruce and other soft woods can be found, especially suited for the manufacture of pulp. In fact, on this pulp-wood trade, which is yearly taking greater proportions, most probably depends the best future prospects of a great portion of these back regions.

The right to cut timber in the province of Quebec is disposed of at auction by the Government, the licenses being subjected to a yearly ground rent of $3 per square mile, together with the Crown dues. The receipts derived from timber dues, bonuses, ground rents, etc., for the year ending June 30th, 1895, were $772,355.56.

In the province of Quebec are situated two of the most important shipping ports of the Dominion, viz., Montreal and Quebec. In earlier years, so far as the shipment of forest products was concerned, Quebec was the most important port, but with the construction of railways and the gradual cutting away of the forests came a revelation in this connection, until to-day the greater portion of deals and lumber is loaded upon the steamers at Montreal for shipment across the Atlantic. Quebec has, however, maintained her position as the shipping port for square timber. Below will be found some interesting statistics bearing on the timber trade of this port:

EXPORTS FROM PORT OF QUEBEC.

	White Pine. Cub. Ft.	Red Pine. Cub. Ft.	Oak. Cub. Ft.	Elm. Cub. Ft.	Ash. Cub. Ft.
1890	5,498,380	355,520	1,119,160	530,260	15,280
1891	4,715,120	249,350	897,280	675,800	130,320
1892	5,300,440	379,680	1,127,580	637,800	177,880
1893	4,092,280	312,670	1,013,160	421,840	168,840
1894	3,468,600	146,120	937,840	528,880	134,920

	Birch. Cub. Ft.	Pine Deals. Quebec Stds.	Spruce Deals. Quebec Stds.
1890	493,740	1,075,992	3,975,576
1891	148,320	704,472	2,280,409
1892	345,840	361,945	3,629,783
1893	121,480	728,300	3,540,000
1894	189,920	479,700	3,462,800

STOCKS WINTERING AT PORT OF QUEBEC.

	White Pine. Cub. Ft.	Oak. Cub. Ft.	Red Pine. Cub. Ft.	Elm. Cub. Ft.	Ash. Cub. Ft.
1890	8,327,842	753,566	612,918	459,501	99,383
1891	4,992,578	520,040	348,145	102,608	21,357
1892	4,452,660	291,541	359,455	181,811	49,000
1893	3,762,217	376,141	339,789	391,452	56,761
1894	3,267,564	699,205	282,084	244,145	99,659

	Birch. Cub. Ft.	Pine Deals. Quebec Stds.	Spruce Deals. Quebec Stds.
1890	13,752	246,015	774,020
1891	13,177	274,782	1,119,950
1892	45,503	142,633	579,588
1893	29,245	145,916	844,718
1894	13,242	63,624	579,774

THE WARREN CURTIS SAW MILL, THREE RIVERS.

TONNAGE ENTERED AND CLEARED AT PORT OF QUEBEC.

	Ocean Steamers.	No. of Steamers.	Sailing Vessels.	No. of Vessels.
1890	642,874 tons.	341	320,093 tons.	381
1891	623,858 "	313	233,327 "	252
1892	753,379 "	379	307,301 "	346
1893	835,876 "	415	190,418 "	211
1894	779,944 "	368	163,297 "	191

	First Arrivals from Sea.	Latest Sailings.	Length of Season of Naviga'n.
1890	April 29	November 25	211 days.
1891	" 27	" 30	217 "
1892	" 27	" 24	215 "
1893	May 6	" 22	217 "
1894	April 26	December 5	226 "

A correspondent at Quebec, under date of 15th October, sends us the following letter relating particularly to the various coves at that port:

Any lumberman coming to Quebec now, during the season of navigation, will express surprise at the unusually small quantity of timber (particularly pine) in the different coves. Starting at Cap Rouge, I am sure many of your readers will remember the number of rafts which formerly moored here every summer, in the booms of the Cap Rouge Pier & Wharf Co., while this season, at the present moment, there is not a raft intact, and in fact very few sticks of timber in the whole cove. Of course, almost all the wood which came into Cap Rouge cove in former years was from the Ottawa district, and as the production last winter in that locality was exceedingly limited, this to some extent accounts for the scarcity of stock in the cove.

The next cove on the way down to the city is Victoria cove, and here there is not even a boom to be seen, the wharves all going to ruin.

Next come Bridgewater and Safety coves, owned and operated by the Messrs. Sharples, where a brisk business was done this season.

Rings' End cove, a commission boom, owned and operated by Messrs. A. H. Falardeau & Co., comes next, and contains at present a very small stock of oak, etc.

New London cove is next in order, and here the large

shipping operations of Messrs. McArthur Bros., Ltd., of Toronto, are conducted. A very considerable quantity of timber and deals are shipped out of here annually to the English markets, and consequently over a hundred men are kept almost constantly employed during the shipping season.

Another commission cove is operated by Mr. James Timmoney, under the business title of M. Stevenson & Co. This firm handle a considerable quantity, chiefly for Messrs. W. & J. Sharples and Messrs. Dobell, Beckett & Co.

Messrs. Dobell, Beckett & Co.'s large cove property, known as LeMesurier's cove, is next in order, at which the largest export business of the port is conducted. At present there is a very large stock of pine and oak in this boom, while the shipments during the present season by this firm have been exceptionally large.

Messrs. W. & J. Sharples' Sillery cove adjoins the former, where a very large business is also done. They

MR. ROBERT REFORD,
President Charlemagne & Lac Ouareau Lumber Co.

have deep water piers opposite their booms and bring their ships up there to load.

Bowens' cove, operated by Messrs. Dobell, Beckett & Co., is the cove below that of Messrs. Sharples, and opposite their booms there are also deep water piers, where their vessels take in cargo. At the blocks of the two last-named firms there are at times six or seven large ocean steamers and as many more sailing vessels taking on board wood goods at one time.

Following down from here come the following cove properties: Point-au-Pizeau, St. Michael's, Woodfield Harbour, Spencer, Wolfe's, Ottawa, and Hall's Booms, the whole covering a distance of about two miles, none of which are now being worked, even the booms not having been put out for two or three years. All these beach lots, which a few years ago were covered with timber, are now lying waste. One of the coves was bought for $1,000 a few years ago, and now the owner cannot get it off his hands at any price. For another of these vacant coves $60,000 was asked some ten or fifteen years ago, but to-day the houses on the property are being sold as fire-wood, some of them scarcely realizing the paltry sum of $10.

The foregoing covers all the cove property on the north side of the St. Lawrence.

On the south shore New Liverpool cove is the furthest west, and is the property of Mr. E. Harper Wade. These booms have not been worked for some few years, but there are several good deep water piers, where Messrs. McArthurs' vessels take on cargo.

Hamilton's cove has not been in operation for a number of years.

A very large quantity of deals piled on several wharves come next, and these are from the mill of Mr. Henry Atkinson, at Etchemin.

The Edson Fitch Co.'s splint factory is close by, at which a very large trade is done. The A. Gravel Lumber Co., whose large attractive mill is admired by all, are also doing a brisk business. This latter firm also ship largely to the American markets.

Messrs. King Bros. and Price Bros. have wharves on this side of the river, but these firms' operations are carried on, to a very large extent, at St. Thomas and in the Saguenay district, respectively. Their shipments are chiefly spruce deals. The head offices of both firms are in Quebec.

Indian cove east is now operated by the Indian Cove Co., composed of the Messrs. Kennedy and others, and a large business has been done this year. A large number of steamers take timber and deals here for different shippers. The Head Line boats, running between London and Belfast to Quebec, Three Rivers and Montreal, take portions of their cargo at this point on every trip.

Shipments of all descriptions of wood goods from Quebec this season were very large, the demand in the European markets being brisk, and the prices fairly good. Freights, however, since early in September, have taken an upward tendency, and 60s. per St. Petersburg standard is now being paid to Liverpool, and 50s. to 55s. to Glasgow and London. The exceptionally large quantity of grain, apples, cheese, etc., now offering is the cause of this, and as this class of cargo seems to pay the steamers better than deals or timber, they, of course, only take wood goods when there is no general cargo offering. Shipments of timber and deals, therefore, for the balance of the present season will be very limited.

MONO SAW MILLS.

The connection of the city of Montreal with the lumber business is chiefly as a shipping port for the products of the Ottawa valley. There is, however, at least one saw mill of considerable importance, known as the Mono Saw Mills, and owned by the Hon. J. K. Ward. It is located on the Lachine canal, about two miles from the centre of the city. Mr. Ward's limits are situated along the river Rouge, a tributary of the Ottawa. The logs are rafted at the mouth of the Rouge in cribs, and come down the Ottawa river to Lachine, being towed down the canal by steamers.

The mill building is 78 × 50 ft., with wings, the engine and boiler house being a two-storey structure 50 × 30 ft., with brick chimney 120 feet high. The yard covers an area of ten acres. The principal lumber manufactured is pine and spruce.

The mill is equipped with three circular saws of most modern design, steam feed, and all necessary saws for butting, edging and lath and shingle making.

Power is furnished by a high pressure engine of 150 h.p., 20 inch bore, 20 inch cylinder and 3 ft. stroke. The three tubular boilers are fed automatically by iron hoppers above, sawdust being used for fuel.

The product is disposed of in the United States, British and local markets. In addition to the lumber manufactured at the mill, Mr. Ward purchases a considerable quantity in the Ottawa district, his annual transactions averaging from fifteen to twenty million feet.

The Hon. J. K. Ward, whose portrait may be seen on the previous page, was born in the Isle of Man in 1819. He served as a carpenter for some years, and in 1842 emigrated to the United States, and shortly afterwards entered into business at Troy, N. Y., purchasing a planing mill, which he successfully conducted until 1853, when he removed to Canada. After prospecting for a time, he purchased a mill property on the Maskinonge river, in the province of Quebec, where he spent ten years. In 1863 he moved to Three Rivers and took over the property of Norcros, Philips & Co., which he afterwards sold to an American firm, and commenced business at his present stand. Mr. Ward has always taken a deep interest in the question of forestry.

THE ST. MAURICE RIVER.

The St. Maurice is a noble river, in every respect a worthy tributary to the grand St. Lawrence. In this practical age, however, its beautiful scenery and the allurements it possesses for sportsmen are overshadowed by the fact that it is pre-eminently a great lumber highway. It drains an area of 16,000 square miles, which is almost wholly a forest region. The number of logs cut last year on the St. Maurice and its tributaries was 1,500,000. The Government owns slides, retaining booms and piers along the river to the value of $400,000, each company paying their proportion of slide and boom dues.

The first large plant on its course is that of the Laurentide Pulp Co., at Grand Mere, where the pulp output is 65 tons per day. Their yearly cut of logs is some 280,000, principally spruce. Apart from that amount the total cut along the river is driven to the mouth of the river, where it is disposed of by the trio of large saw mills at Three Rivers.

The Warren Curtis mill, of which Mr. F. F. Farmer is agent, is a modern mill, designed and built by Mr. S. W. Butterfield, who is the mechanical superintendent. A view of same appears on the opposite page. The mill has two band saws and a gang saw, and has a capacity of 100,000 ft. per day of ten hours. The cut is about 200,000 logs per season, two-thirds being pine and the balance spruce. The lumber is principally sawn into deals for the English market, the sidings going to the United States market. Some 40,000 spruce logs are sawn into two feet lengths with an improved machine, by which one man is able without assistance to haul up from the river and cut 1,000 logs per day. A chain carrier takes the blocks from saw to barkers, thus lessening the labor in handling. The barking machines have an attachment, patented by Mr. Butterfield, which facilitates the work about thirty to fifty per cent. The blocks are taken to cars by chain carriers and shipped direct to Palmer Falls, N. Y., where they are converted into paper by the Hudson River Pulp & Paper Co., of which Mr. Warren Curtis is manager. The boilers, engines and band-mills were manufactured by the Waterous Engine Works Co., of Brantford.

The St. Maurice mill, owned by the Glens Falls, N.Y., Pulp & Paper Co., is under the management of Mr. Robert Grant. It has a capacity of 100,000 ft. per day, and is equipped with Waterous band mill, two gangs and a circular. The greater part of their logs are cut into two feet lengths and shipped in the rough by barges to Glens Falls and Fort Edward, where they are manufactured into paper. They cut about 700,000 logs per season, largely spruce.

MR. ALEX. MCLAURIN,
Manager Charlemagne & Lac Ouareau Lumber Co.

Situated on an island at the mouth of the river is the saw mill owned by Mr. Alex. Baptist, the "lumber king" of the St. Maurice. His father was the pioneer lumberman of the region, and Mr. Baptist owns a greater number of miles of limits than any other person on the river. His usual cut is somewhere about 300,000 logs a season, of pine and spruce. The mill is provided with two slabbing gates and two gangs, running day and night through the season, the capacity per twenty-four hours being 160,000 ft. The output is principally deals for the English market.

The lumbermen of the St. Maurice expect to do about the same amount of business this coming winter as was done last year.

CHARLEMAGNE & LAC OUAREAU LUMBER CO.'S MILL.

CHARLEMAGNE & LAC OUAREAU LUMBER CO., LTD.

The limits of this company are situated in the counties of Joliette, Montcalm and Berthier, in the province of Quebec, and comprise about 600 square miles of timber, composed largely of spruce, pine, birch, hemlock and ash. The number of men employed during the past season was 250, while the output is about 30 million feet, the bulk of which is shipped to Great Britain and the United States.

The principal mill is located at Charlemagne, some 12 miles below Montreal, at the junction of the L'Assomption, Ottawa and St. Lawrence rivers, and is shown by the accompanying illustration. It is operated by steam power, being equipped with 2 Prescott band mills, a gang and twin circular saws, cutting about 2,000 logs per day of 11 hours, or nearly 3,000 logs per day with band saws running at night. It is lighted by electricity, and a day and night gang have been working steadily for the past two or three months. This mill is considered one of the most modern and complete of its kind in the country.

They have also a fine water power lumber mill at Montcalm, where they engage in the manufacture of clapboards for the American markets, also at Montcalm a stone flour mill and a mill for cutting farmers' logs and lumber for local wants.

The company own the powerful tug "Charlemagne" and a number of barges, and owing to the close proximity of their Charlemagne mill to Montreal, lumber can be brought up to the city in a few hours.

The company are going largely into the manufacture of dressed spruce lumber, feeling sure that the demand for same will keep on increasing yearly.

The president of the company is Mr. Robert Reford, of Montreal, senior member of the firm of Robert Reford & Co., large shipping agents and owners. Mr. Reford is also president of the Mount Royal Milling & Manufacturing Co., of Montreal and Victoria, B. C., and a director of the Bank of Toronto.

The manager is Mr. Alexander McLaurin, formerly of

East Templeton, who is well known to the lumber trade throughout the country. Portraits of both these gentlemen are presented on the previous page.

THE CHAUDIERE MILLS.

Of the gigantic saw mills which once existed in the vicinity of Quebec city, few now remain, the denudation of the forest having necessitated their removal to the more densely timbered districts. One of the old establishments which is still to be seen is the Chaudiere Mills, which were built in 1845 by the late H. D. Breakey, on the banks of the Chaudiere river. The present proprietor is Mr. John Breakey, who has become renowned as a manufacturer of spruce lumber for export. Mr. Breakey's limits are located about ninety miles from the mills, and while spruce timber predominates, there are also to be found a fair quantity of pine and cedar.

Although the mill is of ancient design, its equipment enables the proprietor to manufacture a good quality of lumber at a minimum of cost. The village in which it is located is called St. Augustin. At this point the river is divided by an island of trees. On the east side a channel one thousand feet long retains the water and drives it into a narrower channel, where are the sluices or floodgate of the mill. Power for the mill is furnished by four horizontal turbines, two of 100 h. p. each, and two of 50 h. p. each, and two Rose wheels of 75 h. p. each. The logs are first delivered to a pair of twin circulars, after which the lumber is cut to the necessary length by another circular. The capacity of the mill is about 200,000 feet per day of twenty-four hours, the average yearly output being thirty-three million feet. This is manufactured almost exclusively for export, and consists of deals, boards, planks, laths, telegraph and telephone poles, etc. During the sawing season over two hundred men are employed at the mill, while the logging operations give employment in the winter to 600 men.

A railway six miles in length is owned by Mr. Breakey, which intersects the Grand Trunk and Intercolonial railways, and extends to the dam of the Chaudiere. There the lumber is conveyed, by three slides of 350 ft. fall, onto two wharves level with the water, from whence it is loaded on the steamers for shipment.

The mill and premises are lighted by an electric plant, comprising 225 Edison lamps of 16 candle power each, at 110 volts, and 4,000 feet of wire. Mr. George Breakey, a brother of the proprietor, is the owner of the store in connection with the mill, and Mr. D. Breakey is accountant.

J. BURSTALL & COMPANY, QUEBEC.

The Burstall firm is one of the oldest engaged in the export of wood goods from Canada, having been established in the City of Quebec by the late Henry Burstall in the year 1832, 64 years ago. He came from Hull, England, and was shortly afterwards joined by his brother Edward. The business was carried on for many years under the firm name of H. & E. Burstall. Upon the retirement of Mr. Henry Burstall in 1856 it was changed to E. Burstall & Co. In 1857 Mr. John Burstall, a nephew of the brothers, was admitted a partner, and when a few years afterwards Mr. Edward Burstall retired, it was again changed to J. Burstall & Co., and has so remained ever since.

About the year 1863 Mr. H. Stanley Smith, of Liverpool, joined the firm and remained a partner for some ten or twelve years, when he retired. Mr. W. H. Robinson then became a member as representing Messrs. Harrison, Robinson & Co., of Liverpool. Mr. Robinson died in 1876, and the following year Mr. F. Billingsley, for many years in the employ, was admitted into partnership, along with Mr. H. T. Walcot, who remained in the firm for ten years. Mr. John Burstall, who had been head of the firm, for some 35 years, died in England on the 26th Feb'y. last.

The business is now conducted by Messrs. F. Billingsley, who has been connected with it for over forty years, and John F. Burstall, a son of the late Mr. John Burstall.

The firm has a branch office at Montreal, and another in London, England. For more than half a century they have done a large annual export trade, and before the advent of steam carrying trade, for a long series of years exported annually to Great Britain from 100 to 200 cargoes of timber and deals. Since the introduction of steam a large portion of the business is done at Montreal.

SUCCESSFUL TIMBER CULLERS.

THE following is a list of successful candidates at the examination of timber cullers held at Quebec on the 15th of September last :

F. N. Ritchie, Moose Parke ; S. C. Knowles, Forestdale ; Geo. R. Johnson, St. John, N. B. ; Malcolm McCallum, Charlemagne ; E. A. Belisle, Garthley ; Alfred Pepin, Lake Megantic ; Patrick J. McIneuley, Montreal ; Joseph Lachapelle, Les Dalles ; Philip Giroux, Three Rivers ; John A. Richardson, L'Orignal, Ont. ; Thoedule Rene, Drummondville ; Joseph Palmer, East Angus ; G. Honore Fournier, St. Jean Port Joli ; Joseph Hamel, Lake Megantic ; Fred'k. Hy. Stevens, Charlemagne ; Donat Brassard, Chicoutimi ; L. N. Towers, R'ver du Loup ; Jas. T. Eardley, Sellery ; Edward Laplante, Three Rivers ; Joseph Roy, Lake Megantic ; Edward Gobeil, St. Alexis, Chicoutimi ; Edward E. Moore, Lake Megantic ; John D. Roche, North Wakefield ; Casimir Samson, Lauzon ; Leon Terrein, Amqui ; Lewis Hall, Beconcourt ; Munroe McLaren, St. Etiencie du Saguenay.

If you have been intending to subscribe for THE LUMBERMAN, but have been putting it off, put your intention into practice to-day.

THE NEWS.

—The Price mills at Chicoutimi, Que., have closed down for the season.

—Rainville & Son are building a steam saw mill at Sherbrooke, Que.

—J. Matchett, Orrville, Ont., has completed improvements to his saw mill.

—Ross Bros. are building an extension to their mill at Buckingham, Que.

—A new planing mill will be erected at Georgetown, Ont., by J. C. Drinkwater.

—Alvin Mitson will put a new engine and boiler in his saw mill at Cherry River, Que.

—The Hawkesbury Lumber Co. are rebuilding their picket mill at Hawkesbury, Ont.

—Mr. Louis Bouchard, Bay St. Paul, Que., has commenced the construction of a steam saw mill in that locality.

—C. T. Wolfe, of Point Wolfe, N. B., has recently placed a new water wheel in his saw mill and made other improvements.

—The Katrine Lumber Co. has isssued writs against several insurance companies to recover $39,000 insurance on their mill recently burned.

—Prof. Macoun, of the Geological Survey, Ottawa, recently delivered a lecture in the Y. M. C. A. hall, Ottawa, on "The Forests of Canada, their Extent and Importance."

—The partnership existing between Hanbury & McNea, lumber and planing mill, Brandon, Man., has been dissolved. The business will be continued by Mr. Hanbury.

—Thos. Robinson, of Newbury, Ont., is offering for sale his saw mill and property in connection therewith. The mill is a 60-inch circular saw, with edging and butting saws, stave machinery, etc.

—The incorporation of the Cascapedia Pulp & Lumber Co., with a capital of $300,000, is announced. The promoters are J. M. Fortier, James Stubbs and Thomas Harkness, of Montreal, and Alphonse Charlebois and C. H. J. Maguire, of Quebec.

—The erection of two large pulp mills in the Lake St. John district is said to be contemplated by the Glen Falls Paper Co., of Glen Falls, N. Y. Mr. W. E. Speer, president of the company, recently examined probable sites at River 'a Pierre and Miquick.

—The pulp factory in process of erection at Windsor Mills, Que., comprises two large buildings, each 172 x 32 feet, situated near the dam constructed last year. They will have a capacity of sixteen tons of pulp a day, with 8,000 horse-power as a motor, and when finished will give employment to between 150 and 200 men.

—The authorities at Sault Ste. Marie, Ont., complain that the lumbermen in that district contract typhoid fever in their camps, come into the border towns and spread the contagion. The Provincial Board of Health will urge that steps be taken by the Government to erect hospitals for the benefit of the men working in the woods.

—Merritt & Hamill, who have operated a saw mill at Blenheim, Ont., for some years, have removed to the United States. Their new location is near Albany, in the state of Georgia, 160 miles south-east of Atlanta, where they have purchased timber limits. The difficulty in obtaining a supply of timber near Blenheim prompted them to take this action.

—A change is being made in the lumber firm of Hughes & Co., of this city and Souris, says the Brandon Times. J. H. Hughes takes into partnership Wm. Long, of Lincoln, Minnesota, and the new firm will be known as Hughes & Long. Mr. Long is an old lumberman of Minnesota, and brings into the new firm 2½ million feet of lumber, which is being shipped to Brandon as fast as the cars can be unloaded. Mr. Long is also a manufacturer and his plant, tugs, etc., are to be taken to the Rainy river, where they will be combined with the Hughes mill.

—In the October issue of THE LUMBERMAN it was stated that Mr. Hamilton had taken over the plant of the Imperial Lumber Company at Warren, Ont. From this the inference might be drawn that the above company were withdrawing from the lumber business, which is not correct. On the other hand, they are just completing their new mill and extending their logging railway, and propose adding a planing and matching department. The mill when completed will have an annual capacity of ten million feet, will cost $40,000, and will be supplied with the latest and most improved machinery from the Wm. Hamilton Mfg. Co., of Peterboro'. A contract has been given to Mr. Alex. Hamilton to take out the logs and manufacture the lumber. Mr. Hamilton was for sixteen years manager of the mill business of Irwin & Boyd, at Peterboro, and later manager for Davidson & Hay at Cache Bay.

CASUALITIES.

—Charles Campbell fell on a split pulley in Murdock's saw mill at South Indian, Ont., and was killed.

—An employee of Grandbois' saw mills at Portneuf, Que., met his death by falling across the saw.

—Mr. Gastonguay, a mill owner of Bay St. Paul, Que., was killed by the bursting of a fly wheel.

—Patrick Moran lost two fingers while feeding the planer in Sewall & Johnston's mill in North Bay.

—A man named Cantin was accidentally killed in Walsh's saw mill at Hadlow, Que., by a plank striking him on the head.

—David Dunham, an employee of Miller & Woodman's mill, at St. John, N. B., fell in the timber pond and broke four of his ribs.

—While working in the furniture factory of Watson & Malcolm, at Kincardine, Ont., Harry Anning fell against the knife of the planer, which severed his left arm below the shoulder.

—Peter Grant, of Moose Creek, narrowly escaped death in McRae & Co.'s saw mills at Greenfield. His foot caught in a chain and he was thrown against the saw, by which his hip and leg were terribly lacerated.

—Joseph Girouard, employed in Booth's mill at Ottawa, was caught by a rolling log and pitched several feet. He fell through an opening in the floor into the mill-race, and was swept over the falls and drowned.

PERSONAL.

The death occurred recently at Petitcodiac, N. B., of Mr. Hiram Humphrey, of the firm of Humphrey & Trites, mill owners.

Mr. R. Thackray, of Ottawa, and Mr. Mitchell, of Mitchell Bros., Berkeley, Ont., returned on the 26th ultimo from England by the steamship Sardinian.

Hon. R. R. Dobell, of Quebec, with his wife and daughter, will leave shortly for Europe. They will spend a couple of months in the south of France, returning home in the spring.

Mr. Edward Haynes, Director of Wm. Rider & Sons, publishers of the Timber Trades Journal, London, Eng., is at present on a visit to Canada securing particulars of the timber trade of this country.

Mr. Alexander Mitchell, a leading timber merchant of Glasgow, Scotland, died in that city on the 24th ult. He had been engaged in business since 1845, and was well known and highly respected in Canada, the United States and Burmah.

Mr. W. R. McRossie, who has conducted a wholesale and retail lumber business at Kingston, Ont., for many years, is dead. Deceased was 57 years of age, and was a prominent citizen, representing Sydenham Ward as alderman for seven years.

The news comes to hand of the death of Mr. Bartholemew J. Driscoll, of St. John, N. B., at the age of 56 years. Deceased was a member of the firm of Driscoll Bros., ship-owners and lumber merchants, and was confidential clerk for Mr. W. Malcolm Mackay.

Mr. J. H. Walker, local manager at Toronto for the Canadian Rubber Company, of Montreal, was recently granted extended leave of absence to enable him to regain health. It is gratifying to his friends to see him, with renewed vitality, again at the post of duty.

Mr. Thomas Southworth, Clerk of Forestry of Ontario, and Mr. A. Blue, of the Bureau of Mines, recently returned from a somewhat extended tour through the north eastern part of Ontario. Mr. Southworth is contemplating a scheme for the prevention of forest fires.

Dr. Robert Bell, of the Geological Survey, Ottawa, returned a fortnight ago from a summer's exploration of the country in the vicinity of James Bay. Going by C. P. R. to Mattawa he went from this point northward a distance of about five hundred miles in a canoe. He explored Bell river, which has a course of nearly three hundred miles and is as large as the Ottawa river. The country along its banks is well wooded. Although pine is very scarce there is an abundance of other marketable woods.

Don't put off till to-morrow what had better be done to-day. Write us immediately to enroll you on the list of LUMBERMAN subscribers. $1.00 pays the cost.

THE MARIA PULP AND LUMBER COMPANY.

The above company have just put in operation their saw mill at Maria, Que., and the fact of it being supplied with all the latest modern appliances for the sawing and handling of lumber from the log to the pile, warrants a somewhat detailed description. There being no photographer in the vicinity, your readers will have to rely on their imagination to fix in their minds the ideas that your correspondent can only imperfectly convey on paper. The mill is situated near the mouth of the Grand Cascapedia river, in Bonaventure county. This is one of the principal rivers on what is called the Gaspe coast, and empties into Bay de Chaleur. Until within a couple of years this river has not figured to any extent in connection with the manufacture of lumber, but has been noted for the sport it was capable of giving to the devotee of the rod and fly. The inhabitants here have a lively and pleasing recollection of the visits to this river of the representatives in Canada of Her Majesty, in quest of the king of fish—the salmon—and relate with pleasure the many incidents that would naturally be fixed in their minds in connection with such eminent personages. It is to be hoped that the log driving on the river, and the other devices of this utilitarian age, will not be the means of turning the salmon away and forcing them to seek other and quieter quarters. As the mill is built on the shore of the bay, without natural protection for the logs, the company were forced to build an artificial pond, enclosing some three acres, with a sea wall having an opening to admit rafts of logs at high water, the sill of which is some three or four feet above the bed of the pond, thus keeping the logs afloat at all times.

The mill proper is about 40 × 80 ft., with an L projecting from the off shore end about 22 × 60 ft. The boiler house and engine room is separated from the main building by a passage-way some ten feet wide, and has a corrugated iron roof and concrete floor. Great care has been taken in its construction and arrangement to make it absolutely fireproof. To guard against any contingency the company have sunk a well some 275 feet deep alongside the boiler house, from which water flows into a large tank sunk in the ground to feed the boilers and have ready in an emergency to draw from, with a suitable steam force and pressure pump. Besides this, the company have erected, at a great expense, a tower 85 ft. high some distance from the mill, on which is placed a tank that will hold some 45 to 50 tons of water; this is supplied with water by a steam pump and will only be used when steam is off, or when occasion demands. Plenty of suitable hose leading to all parts of the mill and yards seems to make the fire risk practically nil.

The equipment of the mill is of the most complete character. An endless chain, with projecting points some four feet apart running at the bottom of a V sluice, catches the log when the pond man gets it in the proper position and delivers it in the mill; the haul-up man controls a lever that starts and stops the chain—but in practice with expert men it seldom stops; when the log is advanced in line with the circular saw carriage the haul-up man steps on a pedal projecting a couple of inches through the floor, when instantly two iron arms shoot out of "somewhere" and the log is thrown off the chain onto the inclined roll-way, on which it rolls until brought up against two peculiar blocks of cast iron some two or three feet from the carriage. The sawyer then makes motions to the men riding the carriage, at the same time touching a lever, when, lo and behold, the cast iron block drops away from the front of the log and another comes up like a shot in the rear, throwing the log clear of everything onto the carriage; the men on the carriage each press down a lever operating bent or hooked steel teeth or dogs. These teeth are alternately bent up and down and the compound motion of the lever presses the teeth into the log, holding it firmly in place. The "setter" then operates another lever, forcing the log out to place so the slab will give proper face to the log, or "stock," as it is called. After the two slabs are taken off, the sawyer then touches another lever, when instantly the carriage moves the log towards the large circular saw, when, before one could say "Jack Robinson," the slab is dropped and the carriage returns to its first position. Instantly the carriage stops; what seems to be a post with iron teeth rises through the floor engaging the side of the log, the effect of which is to turn the log over so that the flat side is toward the head blocks of the carriage. The men operate the levers again, the log is moved out to give the thickness of stock log will make, carriage goes forward again, and slab drops off and shoots away towards the further end of the mill. By this time the carriage has passed the saw, the levers are raised and the stock falls onto live rolls and begins to move rapidly in the direction the slabs have gone. The "take off" man now watches the stock with his hand on a lever; the right moment having arrived, he presses it and the stock is transferred sideways onto inclined rollways, which carry it to the rolls in front of a larger stock gang, in which are from 30 to 40 saws. This gang being very large, taking from four to eight logs, we wait until some more stock comes along.

The various processes the log was going through on its way from the pond to where we left it so engages one's attention that he only knows that the work is being done, and while waiting for a gang full of logs we begin an investigation as to the causes of what we do not understand, and seeing that the levers operated on have connections underneath, we go below. The first thing that attracts our attention is an upright steam cylinder, bolted to a heavy post, the piston of which flies up; then we see a rod connecting with an arm on a large shaft just under the mill floor. There are two more arms on the shaft at about right angles to the first one, to which are connected the two iron arms shot out of "somewhere" which threw the log off the chain. Now we begin to see that it was not altogether "sleight of hand," as we had some suspicion at first—and so we go on a few steps to another steam cylinder, which we find was the cause of the log being so violently thrown on the carriage—a very simple and inoffensive looking thing in itself. The principle is a modification of the previous description. They are called "kickers.'

The next thing to investigate is the post that rose through the floor; it is called the canter. We found that the lower end of the post had an L piece of iron attached, connecting with the piston of a long steam cylinder, which, when the valve was moved, admitted steam to the lower side of the piston and raised all up, the whole dropping at once, as soon as the steam was released below the log bed. The carriage is driven by the "shot gun" steam feed. A cylinder about 30 feet long by 9 inches bore lies on the floor of the mill, the piston of which is attached to the carriage, the sawyer's lever operating the valve, thus moving the carriage forward or backward according as the lever is pushed one way or the other. This system of steam feed is said to be the best yet devised, allowing the log to be taken forward at any speed desired by the sawyer, and the return is so quick that the men riding the carriage require considerable experience to preserve their centre of gravity. The proper number of stocks having been prepared we now watch their progress through the gang, or "gate," as the mill men term it.

The stocks being small, eight are put through at once, four in width and two in depth. The head gang man touches a lever and the stock moves forward until the ends are on a corrugated feed roll. When he touches another lever two large pressure rolls are lowered until they press hard enough to move the whole stock forward, and the saws moving up and down very rapidly cut their way. As soon as the end of the stock shows through the back of the gate, other rolls are brought down in like manner to the front rolls. These rolls are so arranged that two different thicknesses of stock can be put through at the same time, and the pressure on each being the same, the feed of the stock to the saw can be regulated to suit the conditions. Upon the stock emerging from the gate it rests on rolls that carry it forward clear of the following stock, and two men place the sawn lumber on live rolls, which carry it forward and automatically dump it on the trimming table or equalizer; that portion of the lumber requiring to be edged is thrown on a platform alongside the parallel edger, is there edged and carried forward to the trimming table on live rolls and dumped in the same manner as the previous description. When the lumber is dumped it falls on transverse chains and is carried sideways to the saws, a man examines the end next him, and places it where it requires cutting off. When past the first saw a man at the other end pushes or pulls the lumber to certain stops on the table that give the length the piece will make. The lumber is being moved forward all the time, so that the men have to act quickly. On the lumber passing the second saw it is ready for the sorter. On a platform level with the mill floor there are a system of rolls, on which the lumber is placed, each length and size separate. When the pile on any set of rolls has the required quantity the men who run the cars from the mill to the piling ground run the car alongside of the platform, but with the side of the car facing the end of the lumber; they then swing the frame with rolls built on the top of the car, in line with the lumber, and push the whole on the car—move the car along until they have a full load, then run out on elevated track to the piles, when the slab from the circular saw or any piece from the gate, from ⅝" to 3" thick, are taken on the run of live rolls to the re-saw, where they are carried by transverse chains to the sawyer's hands, and after going through, the board is dropped on transverse chains and taken to the edger, and put through the process related before.

Slabs, edgings and refuse are thrown from the different machines on the slab slasher table, and are placed conveniently at the rear of the edger, just a little above the floor, with the saws near the side of the mill. Transverse chains carry all to be sawn to and under the arbor, the saws being four feet apart. This material is dropped in a line with trap doors, and then carted away for fuel, wharf filling, etc. Sawdust carriers are placed through the mill, so that all the sawdust goes to the boiler furnaces and enables the under part of the mill to be kept clean at little expense.

The whole system of sawing and handling the lumber from the water to the pile is very complete. The idea was to make the mill so handy that lumber could be sawn at the least possible expense, and judging by appearances this result has been obtained.

Mr. J. N. Kendall, of Ottawa, was the superintendent, and it goes without saying, with those who know the thorough character of the work he passes, that it is first-class in every respect. The Wm. Hamilton Mfg. Co., of Peterboro, Ont., supplied the power and machinery throughout, which is a sufficient guarantee that it is good.

Mr. J. C. Langlier is the business manager at Maria, while Mr. C. H. J. Maguire is the secretary-treasurer, with head office in Quebec. The enterprising owners are residents of Montreal.

W. J. P.

THE CANADIAN PULP INDUSTRY.

To the Editor of the Canada Lumberman:

Dear Sir: I am glad to see that a start is being made by some of our Canadian capitalists towards the construction of sulphite pulp mills in Canada. This is destined to be the greatest industry that Canada has ever known.

Not more than seven years ago it was the universal opinion that to get a sulphite mill equipped, we had to go to Europe, then more recently to the United States. This increased the cost of sulphite mills in Canada 30 per cent., besides the enormous prices charged. This has all now been exploded by the construction of the new sulphite mill here last summer by Engineer Thomas R. Allison, of Chatham, N. B., who designed the mill and personally superintended the construction, and fitted it throughout with Canadian machinery, which started off without a hitch, making the finest fibre ever produced on this continent. The cost of the mill was fully 50 per cent. less than most mills, and 80 per cent. less than some. And yet with these mills which cost so much more, the same quality of fibre has never been made. This was accomplished only after years of the hardest practical work, and has, no doubt, demonstrated the possibility of great things for Canada. It shows that those who intend going into the pulp industry can now obtain all the necessary machinery in Canada at the lowest possible price, and that a 30-ton sulphite mill can be built at a cost no exceeding $140,000; whereas most of them have, in different places, cost all the way from $250,000 to $800,000.

In New Brunswick we have the finest black spruce in the world, which is the best wood for sulphite pulp manufacture, and can be had for $2.75 per cord of 138 feet, whereas most American mills have to pay $7.00 to $8.00 per cord for their wood. The Americans are shipping thousands of cords of pulp wood out of Canada every year, and getting the cream of our timber lands, and our late government have shut their eyes to the matter in the past. It is to be hoped that the new government will attend to the matter at once, and put an export duty on pulp wood going into the United States of, say, $2.00 per cord. If the Americans want to put a higher duty on pulp going into the United States from Canada let them do so. It will not affect Canada in the least, as a good market can be found in England for all the pulp we can manufacture. Some Canadian capitalists should form a strong company and secure the services of Engineer Allison, and build one of the largest pulp mills in the world. Such a mill could be built, costing not more than $600,000. New Brunswick can furnish a variety of sites suitable for such a mill, and in proximity to practically inexhaustible forests of the best spruce, with ample railway and water facilities for shipping the manufactured product.

Yours respectfully,

A. N. McKay.

Chatham, N. B., Oct. 19th, 1896.

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

MONTHLY AND WEEKLY EDITIONS

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ADVERTISING RATES FURNISHED ON APPLICATION

THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

TO VISITING LUMBERMEN.

Lumbermen visiting Toronto are invited to use the office of the CANADA LUMBERMAN as their own. We shall take pleasure in supplying them with every convenience for receiving and answering their correspondence, and hold ourselves at their service in any other way they may desire.

TO OUR READERS.

FOR nearly eighteen years THE CANADA LUMBERMAN has been engaged in printing the current history of the lumber and kindred industries of Canada. In the present number it has been attempted to present, as it were, a pen picture of these industries as they exist in the various provinces of the Dominion. By means of statistics, and descriptions and illustrations of leading mills, we have sought to convey to the minds of our readers at home and abroad a truthful idea of the location, extent and character of Canada's timber resources, which are second only to the agricultural interest of the country, and which entitle the Dominion to a place in the front rank of the timber producing and exporting countries of the world.

Every year witnesses an increase in the volume of our foreign trade, especially with Great Britain, and as the supplies from other countries become exhausted, foreign importers are looking with increased attention to Canada. In view of these conditions, it is hoped that the information presented in this number of THE LUMBERMAN may prove to be a useful factor in the development of our lumber industry, and as such be welcomed and appreciated. Users of machinery and appliances of all kinds employed in saw and planing mills will find the advertisement pages not the least interesting feature of this number. Most if not all the requirements in this line can be obtained in first-class quality from our home manufacturers, and to them the money of Canadian purchasers should go.

Copies of this number will be placed in the hands of many persons in Canada, as well as in the United States, Great Britain, Germany, France, and other foreign countries, who have not been accustomed to receive the journal regularly. Such persons are requested to carefully examine and preserve for future reference the present number. If desiring to know what conditions prevail in the trade in Canada, they should see to it that authority is given us to send THE LUMBERMAN regularly to their address in the future.

THE LUMBER TRADE OF SOUTH AMERICA.

CANADIAN manufacturers of lumber who contemplate making an effort to do an export business with South America would do well to acquaint themselves with particulars concerning that market which have lately been made public by Mr. Edgar Schramm, United States Consul at Montevideo. This gentleman reports that through the efforts of a comparatively small number of importers, whose object is to control the sale of lumber to the wholesale dealers, a lot of customs and practices have been established, involving numberless vexations, which renders it almost a matter of impossibility for a foreign manufacturer or dealer to sell direct to the South American dealer. For the benefit of our readers we will briefly outline the methods on which the trade is conducted in this market, and the disadvantages with which the foreigner has to contend will be at once apparent.

First of all, lumber must be sold and delivered on six months credit from the time it has been officially accepted by the dealer. All lumber on arrival in South America must undergo inspection at a cost of 50 cents per thousand feet at the hands of a public inspector, half of whose fees must be paid by the shipper. Mr. Schramm asserts that according to the standard of inspection employed at South American ports, the lumber is supposed to be absolutely faultless, and that experience has shown that 4 per cent. is the lowest reduction which is likely to be placed upon it, no matter how high may be its quality. On the other hand, should the reduction amount to upwards of 10 per cent., the purchaser has the right to reject the whole cargo.

Freight charges, which have to be paid by the seller, average about $12 per thousand, to which must be added customs duties ranging from $8.25 per M. on pitch or yellow pine to $15 per M. on white pine, plus custom house charges of about $2.25 per M.

The purchaser pays for his lumber with a six months' note, which to turn into cash involves considerable discount.

The foregoing will show the great difficulties, as well as the probability of loss, which confront the foreign manufacturer and dealer who seeks an outlet for his products in this market. Notwithstanding these obstacles, however, several Canadian firms have done a considerable business in South America in recent years. In all probability, their shipments have passed through the hands of the native importer, who, so long as he gets a good slice of the profit, can be relied upon to steer clear of many of the hindrances which block the way of the uninitiated foreigner.

COMPETITION FROM SOUTHERN WOODS.

A VISIT to the wood-working factories of Ontario proves that considerable quantities of woods from the Southern States are being utilized in the construction of our buildings, to the exclusion of native timber. It seems almost incredible that it should be possible to place Tennessee whitewood on the market in Toronto at a lower cost than a suitable quality of Ontario white pine, yet such is the case. The increased stumpage which has recently been paid for pine by Ontario lumbermen has afforded the Southern manufacturers just the opportunity they were looking for to place their woods upon our market. The price paid at the Government sale in 1892, over $3,600 per mile, renders it almost impossible for the licensee to dispose of his product at a figure which will permit of successful competition with Southern woods, notwithstanding the distance at which the latter are removed from this market. Lumbermen, we believe, realize that the prices paid of late for timber limits leave too small a margin of profit in manufacturing. The low through rates of transportation given by the American railways have also aided the Southern producer in getting a foothold in the Ontario market. Instances have been brought to our attention where persons have specified that whitewood or other Southern woods be used in the finishing of their buildings, thereby shutting out native timber. In such cases the cost is usually a secondary consideration, the idea simply being a fanciful one.

WHEAT AND LUMBER.

THE recent sustantial rise in the price of wheat should bring a feeling of hopefulness to lumbermen. In an agricultural country like Canada, nothing will give so quick and substantial an impetus to business of all kinds, as a brisk demand at good prices for the products of the soil.

It is unfortunate that the recent rise in wheat came at a time when Canada was somewhat short of supply—the Manitoba crop, for example, being only about 14,000,000 bushels, in comparison with 25,000,000 in former years. As the result of the extremely low prices which have prevailed for some time past, however, it may be taken for granted that there is a considerable accumulation of wheat in the hands of the farmers throughout the country which should now be turned into money. It is estimated that even on the short crop of the present year the farmers of Manitoba will realize an extra profit of two and a half million dollars. As the result of the more plentiful distribution of money, there will be developed increased business confidence, which in turn will lead to improvements being undertaken for which considerable quantities of lumber will be required.

The same causes will operate to increase the demand for our lumber in the United States, presuming of course, that with the probable advent of Mr. McKinley to power at Washington may come a re-imposition of the duty on Canadian lumber.

EDITORIAL NOTES.

AN unusually large amount of lumber and mill property has been destroyed by fire in Canada the present year. Among the principal sufferers from this cause may be mentioned the Katrine Lumber Co., of Katrine, Ont., the Georgian Bay Lumber Co., Waubaushene, Ont., the Imperial Lumber Co., Warren, Ont., Ross Bros., Buckingham, Que., and Messrs. Howry & Sons, Fenelon Falls, Ont. The latter company were visited twice during the season and lost heavily on both occasions.

THE efforts of Canadian furniture manufacturers to place their goods upon the English market are meeting with success. A representative of an Ontario firm, while in Belfast, is said to have received orders in one week amounting to $5,000. The method adopted by manufacturers of sending abroad agents who have a thorough knowledge of the trade is worthy of commendation. There is to be found in the province of Ontario large quantities of black birch admirably adapted to the manufacture of furniture, and with an abundant supply of the raw material, the possibility of further development is evident.

THE input of logs in Ontario during the approaching season promises to be unusually small, with the exception, perhaps, of the Ottawa valley. The present stock of lumber is likely to go a long way towards supplying the demand next season, unless unusual activity should characterize the market. Many logs taken out last winter have been held over for next season's sawing, which, with the limited quantity taken out this winter, will provide an ample supply for an average season. These remarks refer especially to pine, reports to hand indicating that hardwood manufacturers will operate upon much the same scale as last winter.

IN our British Columbia letter reference is made to the dissatisfaction which exists with the working of the Central Lumber Company, but which is, we are pleased to observe, confined to a few members. No definite arrangements for a continuation of the association after the present year have been consummated, but daily sessions are now being held at the head office in San Francisco with a view to completing organization for a period of five years. Since the combine was formed the foreign cargo trade has greatly improved, and prospects are considered promising for a still greater trade in 1897. It is hoped that this fact will not prompt shippers to take the view that it is unnecessary to maintain the organization beyond the close of the present year. On the other hand, a strong argument is thus advanced in favor of continuing its operations.

THE attention of Canadian pulp manufacturers is now directed to the action of the United States custom authorities with respect to the valuation of Canadian pulp, which is subject to a duty of ten per cent. upon entering the United States. The basis of such valuation is usually the market price in the exporting country, but as there is little or no home demand for Canadian pulp, difficulty is experienced in arriving at a satisfactory valuation. About six months ago a United States Customs officer visited Canada for the purpose of arriving at a uniform valuation, and after a thorough investigation fixed the sum at $12 per ton. Previous to that time Canadian pulp was entered at the different ports at prices ranging from $6 to $18. It is now claimed that since the valuation of $12 was struck, prices of Canadian pulp have lowered. In the case of the Sault Ste. Marie mill, the product has been laid down in Quebec at $12, which goes to show that its value at the point of manufacture does not exceed about $10. This valuation, it is believed, would be satisfactory to the Canadian manufacturers, and will in all probability be adopted. Should this prove to be the case, the export of pulp from Canada to the United States will receive a stimulus. At first glance the difference in duty between a valuation of $10 and $12 a ton does not seem to be sufficient to seriously affect the trade, yet a comparison of figures removes this supposition. The Sault Ste. Marie company alone, when their new mill is in operation, would be affected to the extent of $40 a day, or $12,000 a year.

UNLOADING LUMBER.

AT the lumber yard of Richardson, Dana & Co., in Portland, an ingenious contrivance for unloading lumber from vessels is being used with the greatest success. This is an electric hoist attached to the lumber derrick, which performs its work with neatness and despatch. By the old way, a crew of four men was necessary to operate the derrick, two men for each end of the handles, and even then it was slow and laborious work. This electric hoist revolves with the derrick, and is arranged so that the stick or the broom of the derrick can be hoisted at will. One man can easily operate this electric hoist alone, and it is not necessary to be a skilled man either, as the attachment is a very simple one. The electricity is used only to raise the stick, as it is lowered by its own weight controlled by a brake, also operated by the same man. With the hoist a 3000-pound stick can be raised at the rate of 45 feet a minute, and lighter sticks in proportion. By the old way four men had hard work to hoist a 3000-pound stick three feet a minute. At the old rate it took about five minutes to hoist and place a heavy stick, and the two teams employed in pulling the lumber from the vessel would soon fill the roadway with lumber and cause loss of time and inconvenience. The electric hoist takes care of the lumber faster than the teams can pull it out. This new hoist is the only one in operation in the state, and, in fact, it is said to be the only direct attached hoist ever manufactured, and promises to revolutionize the handling of lumber by derricks.

THE ROAD TO THE BUSINESS OFFICE.

THE British-American Business and Shorthand College of Toronto is probably the best known institution of its kind in Canada. It is owned by a number of the leading business men of that city, among whom are Stapleton Caldecott and Frederick Wyld, wholesale drygoods merchants; S. F. McKinnon, wholesale milliner; E. R. C. Clarkson, chartered accountant; Edward Trout, president of Monetary Times Co.; Wm. McCabe, manager of North American Life Assurance Co., and D. E. Thomson, Q. C. The various courses are thus guaranteed to be the most practical that can be devised for the purpose of properly training young people for business offices. Persons interested in this line of educational work should write the secretary, Mr. David Hoskins, for the prospectus.

EMPLOYER'S LIABILITY.

A WORKMAN does not assume a risk where he knows there is some danger without appreciating it.

An employer is bound to use reasonable care to see that machinery used by his workmen is in proper condition.

The mere fact that a workman received an injury raises no presumption of negligence on the part of his employer.

A workman does not assume the risk of injuries from a latent defect in machinery, because his opportunity of discovery is the same as his employer's.

An employer is bound to give notice of latent dangers among which the employee is required to work, and to which the employer has knowledge or should have had knowledge.

A person entering the service of another assumes all risks naturally incident to that employment, including the danger of injury by the fault or negligence of a fellow-workman.

Where a workman knows that the appliances with which he works are defective, and does not complain to his employer or representative of their condition, he assumes the risk of their use.

The fact that a superintendent assures a workman that there is no danger, and tells him to return to work, does not relieve the workman of the assumption of the risk, he being of full age and knowing the danger.

The mere fact that a manufacturer hires an unlicensed engineer to run his boiler does not render him liable to other employees for personal injuries caused by the explosion of the boiler.

An employer is not required to use the most improved kinds of machinery in his factory. It is sufficient that the machinery was reasonably safe and suitable for the purpose for which it was used.

An employer is not bound to anticipate every probable risk which may happen in the use of a machine, but discharges his duty if he give such general instructions as will enable the employee to comprehend the danger.

When an employee's duty to inspect and repair machinery is incident to his use of the machinery in a common employment with other workmen, the employer is not liable to fellow-workmen for the negligence of such employee.

An employer who calls a surgeon to aid an injured employee is not liable for the negligence or malpractice of the surgeon, provided the latter had knowledge and skill ordinarily possessed by other surgeons, and the employer had no reason to suspect that the surgeon would fail in his duty.

An employee of mature years, who was removed from one employment to another without objection by him, cannot recover from his employer for injuries received through his unfamiliarity with the machinery which he was required to operate, unless his employer knew of his inexperience in that direction, or was informed of it by the employee.

When the conditions of a mill and the relative situations of the deceased and his fellow-workmen would suggest to a person of common intelligence menacing and obvious perils from the use and operation of the machinery, an employee who continues to work in it assumes the risk, though it arises from the negligence of the employer, and the latter is not liable for the death of the employee.—The Manufacturer.

ARBOR DAY—OF WHAT BENEFIT IS IT TO THE COUNTRY?

By H. G. Joly de Lotbiniere.

Little, probably, if judged only from the number of trees planted ; much if it is remembered that in Canada, for two centuries, the only thought has been to remove the forest trees, at any cost, as enemies, which recklessley encumber the ground. A celebration, therefore, of a day in their honor, is a great point gained. Those who reflect least must be struck in seeing, on this day, the representatives of the Queen, and our most eminent men, planting trees with their own hands. Arbor Day is looked for with impatience by our school chiidren, and is a holiday for them ; but what is still more important, more than one child who is shown how to plant a tree on that day, becomes attached to it, takes care of it from year to year, and thus learns insensibly the secret of success in life ; to plant with care, to cultivate with perseverance.

I think I do not exaggerate in saying that today the majority of the people of the Dominion suffer, more or less, from the scarcity of wood for building and even for fuel. Arbor Day comes apropos to remind them that it is not impossible to repair the evil, and at the same time, it serves as a warning to those who still have wood on their property, teaching them the value and necessity of using it with judgment and economy. I now address myself particularly, not to those who desire to plant ornamental trees—although I sympathize with them, with all my heart ; they can easily find the small number of trees they need—but to those who suffer seriously from the scarcity of wood, and who can only obtain relief by planting extensively, that is, several thousand trees.

At first sight the task seems impossible to the large majority of growers. Where will they go to look for this large number of trees? When could they ever find time to select them, one by one, in the forest, to dig them up with the necessary care, and carry them to their homes? One usually goes to the forest to get trees, sometimes at a great distance. All those who have tried it know how difficult it is to find what they want, how much time and trouble is required to dig them up, and how many of the roots are injured in spite of their precautions. They know also, how often all this work is an entire loss. Trees dug up in the woods and transplanted so often perish that those who plant them are discouraged and consider the task too difficult to repeat. However, when the season is propitious and the ground is favorable for the kind of tree you wish to plant, if the tree is in good condition, you will, with care, succeed. Trees which are found in the woods are rarely in good condition, and cost too much in time lost, if not in money. If you wish to have good trees in large numbers, which will easily take root, without trouble and without expense, take them from a nursery, and let that nursery be your own. Every farmer can establish in a corner of his garden a nursery of forest trees, by sowing the seeds of the trees he wishes to have. With a little attention, it is easy to tell when the seeds are ripe. Thus toward the end of June and early in July, the seeds of the elm and those of the plane are ripe ; if you sow them at once, they will shoot up nearly a foot that same summer. The seeds of the maple, ash, oak, wild cherry and walnut mature in the autumn ; it is better to sow them immediately than to keep them in the house all winter. Sow, let us say, maple seeds, half an inch deep, and others in proportion to their size, two or thres inches for nuts Sow thickly and after the first year you can thin them by transplanting some. At the end of four or five years (more or less, for there are some kind of trees which grow more rapidly than others) you can plant your young trees where they are to remain. You should select cloudy or rainy weather in the spring, and without going from home, without trouble, without breaking the roots, you dig up and replant immediately, without giving them time to dry, a hundred young trees, which will certainly take root again, and you will have spent less time than it would have required to get five trees in the woods which may or may not live. The trees will cost nothing, your children will soon learn to weed them, and to take care of them with pleasure, if you encourage them a little by your example. At home the young children amuse themselves of their own accord, in planting acorns, and in seeing the little oaks grow. By means of seeds you can procure without expense an unlimited number of trees, and plant, little by little, all your land which is unfit for cultivation, and which should have been left in wood. But do not forget to protect your nursery and your young trees, when planted, against the ravages of cattle, by means of a good fence. Do not plant without a fence. There are enough causes for annoyance in life without creating new ones, and nothing is more vexatious than the sight of a lot of cows in the act of destroying a beautiful plantation of young trees. In many cases you can even spare yourself the trnuble of sowing. Where the ground is favorable, in July or August, along the ditches, the woods, the fences, in the moss, in damp places, in the neighborhood of the elms and the planes, you will find hundreds of little shoots, which have sprung from the seeds fallen from the trees ; plant them in your nursery. Try it next summer. The seeds of the elm are so small and delicate that it is much better to use this means than to try and sow seed yourself. Among the maples, the soil is covered with young shoots, as with a thick carpet. One can easily pull them up with the hand, in the autumn or early in the spring, when the ground is still damp, without breaking any of the little roots. Plant them in your nursery immediately. The seed of the pine is very difficult to gather. Early in the spring, in the pastures near the pines, you can pull up, when the soil is damp, as many little trees as you will wish to plant ; for this kind it will be better to take the precaution to shelter them from the sun until they have taken root. All those who have gardens mus have noticed that if there are maple or ash trees in the neighborhood, the ground of their garden, if it has been spaded in the autumn, is covered in the spring with young shoots grown from the seeds fallen from these trees. Little time is required to transplant hundreds of them, and all will take root again without exception. They must be taken up carefully, so that the small roots may not be broken ; if the ground is too hard use a trowel. It is well, as much as possible, to secure them when they yet have only the first two leaves, which can be easily recognized ; they are an inch and a half to two inches long, and about a quarter of an inch wide. For several years I have sought the least expensive, and at the same time the surest means of renewing the woods where they have been destroyed, and what I now recommend is the result of personal experience. I appeal to those who suffer from the lack of wood, and who have the courage and patience to try to remedy the evil. The trial will cost them nothing, and it will give me pleasure to answer all those who need advice ; but let them try next summer ; let them sacrifice a half or a quarter of a day ; it will be time well spent.

ANNUAL RINGS ON TREES.

In the British Museum of Natural History there is a section of the trunk of a large fir tree from British Columbia, the growth rings of which indicate that it was more than five hundred years old when it was cut down in 1885. A correspondent of Nature calls attention to the fact that about twenty of the annual rings of growth, marking the latter part of the first hundred years of the tree's existence, are crowded together in a remarkable manner, indicating that during those twenty years some cause was in operation greatly retarding the growth of the tree. On looking into the history, the correspondent found that nearly all the time when the tree in question was evidently suffering from very adverse conditions, Asia and Europe were undergoing extraordinary disturbances from earthquakes, atmospheric convulsions, the failure of crops, pestilential diseases, etc. China, in particular, suffered even more than Europe. He therefore suggests that possibly the crowded rings in the trunk of the tree may be a record of the existence of the same unusual conditions affecting animal and vegetable life at that time in North America also ; and he shows that if the tree had reached its full growth, and ceased to form new rings a few years before it was felled in 1885, the correspondence in time would be complete.

QUESTIONS AND ANSWERS.

A subscriber, Penetanguishene, Ont., asks : "Could you inform me of the price of bird's-eye maple logs, per thousand feet B. M., delivered in New York city?"

Ans.—It is a difficult matter to quote a price which could be taken as a guide. The present market price ranges from $40 to $60 per thousand feet, delivered in New York, the price depending, of course, on the grade. The smaller the heart, the more white lumber will be obtained, which is about the only kind that is in good demand at the present time.

"R. A.," Katrine, Ont., writes : "I understand there is a market for balsam, spruce and basswood, cut into lengths of 4 ft. 4 in., for box making. I am desirous of getting a contract for taking out a quantity, which will enable us to make better use of our timber in the process of clearing the land than burning it. Can you inform me where I might dispose of this class of timber?"

Ans.—The principal lumber used for box-making is white pine (the lower grades). Balsam is very little used, owing to the small quantity taken out. Spruce is used in some quantities in Ontario, and in Quebec it is the principal material for box making. Basswood is used for biscuit, starch, baking powder, and such boxes, and the higher grades are becoming quite valuable. Parties wishing to cut basswood in short lengths should first contract for it, as the consumer generally desires it cut to specified lengths, such as 4 ft. 2 in., 4 ft. 6 in., etc. The names of several box manufacturers have been forwarded to our correspondent.

CANADA LUMBERMAN

WEEKLY EDITION

The Lumberman Monthly Edition, 20 pages } $1.00 PER YEAR { The Lumberman Weekly Edition, every Wednesday

THIS PAPER REACHES REGULARLY THE PRINCIPAL LUMBER MANUFACTURERS AND DEALERS THROUGHOUT CANADA, AND WHOLESALE BUYERS IN THE AMERICAN AND FOREIGN MARKETS.

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Weekly Lumberman, published every Wednesday. Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

Lumberman, Monthly. A 20-page journal, discussing fully and impartially subjects pertinent to the lumber and wood-working industries. Contains interviews with prominent members of the trade, and character sketches and portraits of leading lumbermen. Its special articles on technical and mechanical subjects are especially valuable to saw mill and planing mill men and manufacturers of lumber products.

☞ Subscription price for the two editions for one year, $1.00.

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VEST-POCKET

INSPECTION BOOK

Containing Rules for the Inspection and Measuring of Pine and Hardwood Lumber in the leading markets of Canada and the United States. Embracing also many useful tables and calculations of everyday service to lumbermen.

Prepared by the Editor of the "Canada Lumberman."

Toronto, Canada
C H. MORTIMER, Publisher
1895

THE above is a fac simile of the title page of the latest and most complete Lumber and Inspection Book published.

We shall be pleased to send you a copy on receipt of four 3 cent Canadian postage stamps

THE CANADA LUMBERMAN,
Toronto, Canada

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue.

FOR SALE.

A MILLION X AND XX 18" CULL CEDAR Shingles, at your own price. No reasonable offer refused if sold atonce. NAPANEE PULP AND PAPER CO., Fenelon Falls, Ont.

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CAR LOAD LOTS OF SLICED CUT BASSwood, 1-12 inch to ⅜ inch thick; state price per 1,000 feet, F. O. B. New York, lighterage free. Address P. O. BOX 2569, NEW YORK CITY.

WANTED.

ONE TO FIVE CARS OF 2½" COMMON AND No. 1 and 2 Soft Elm. Send list, with price delivered on cars at Buffalo. BUFFALO HARDWOOD LUMBER CO., 940 Elk St., Buffalo, N. Y.

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100,000 FT. 1" AND 1¼" BASSWOOD, 100,000 ft. 1" and 1½" Ash, 50,000 ft. 1" and 1½" Soft Elm, 30,000 ft. Oak, 25,000 ft. Pine, 25,000 ft. Birch and Maple, 100,000 ft. Hemlock. J. & T. SCOTT, Allan's Mills, Ont.

FOR SALE.

LARGE STEAM SAW MILL AND STAVE Mill at Essex, on M. C. R. R. Capacity per day, 25,000 ft. of lumber and 35,000 staves. Two spurs in mill yard of 15 acres; also barns, sheds and dwelling houses. A quantity of timber near by can be bought. Proprietor has invested on Pacific Coast and is closing out here. Must be sold. For particulars apply to

T. H. DECEW, Essex, Ont.

CURRENT TRADE CONDITIONS.

ONTARIO

As the year draws nearer to a close lumbermen are naturally devoting considerable time to studying the trade conditions, in the hope of arriving at a basis for next season's operations. There cannot be pointed out indications of immediate revival from the depression through which the trade is passing, and which would result in a great enlargement of business, but it is, nevertheless, generally believed that there are visible signs of improvement which will place the lumber trade of the province on a much better footing, and enable manufacturers to secure more remunerative prices. Up to the present time the preparations for work in the woods indicate that the input of logs will be curtailed from twenty-five to fifty per cent. It is probable, of course, that some operators may yet put in camps, but it is safe to say that the quantity of logs taken out during the winter will be fully one-quarter less than last year. Lumber has also been imported in large quantities into western Ontario from Duluth and Michigan points, to the exclusion of the Ontario product. This competition will be removed to some extent at least by the resumption of consuming industries in the United States. Prices for farm products give evidence of being more remunerative, a strong demand for same being experienced from European countries, and this will increase the demand for lumber. It is not unlikely also that a greater quantity of Ontario lumber will be consumed next year both by Great Britain and the United States. In addition to the above, it is noteworthy that within the past few days lumbermen have been in Toronto chartering vessels for next season's business, a fact which seems to indicate a strong feeling of confidence. While present trade is not all that could be desired, there is a fair demand from retail yards for light stocks. Common lumber is selling better than at any time during the fall season. A small quantity of hardwoods is being used for furniture making and finishing purposes, but there is very little life exhibited, orders being principally for mixed lots.

QUEBEC AND NEW BRUNSWICK.

There is very little stock going forward to the British market from Quebec, owing to the excessive freight rates. Nothing of account will be shipped until the opening of spring trade, excepting such goods as are required on contract account. The steamers from Montreal are still carrying a fair proportion of lumber, some shippers feeling disposed, in view of the strength of the European market, to pay the increased rates. Local trade exhibits little activity and is, perhaps, below the usual fall business. Operations in the woods have been commenced in most districts, and promise to exceed those of last season. A large quantity of pulp wood will be taken out. In New Brunswick shippers are now less anxious to secure stocks, and as a result spruce deal prices are weakening. One steamer left last week for Cork and one for Buenos Ayres. Small quantities of boards, planks, cedar shingles and clapboards were shipped to the United States, but that market is as yet overstocked. It is probable, however, that a considerable quantity will be removed to the retail yards, which have been getting along with the smallest possible stock until the election was over.

BRITISH COLUMBIA AND MANITOBA.

It is now believed that the lumber combine known as the Central Lumber Company will be re-organized on the first of January next, and that in the early spring an attempt will be made to increase prices to a still higher figure. The British Columbia Mills, Timber and Trading Company, of New Westminster, after standing out for a year, has joined the association, in the hope of facilitating a reasonable advance upon present quotations. But the domestic mills are likely to offer opposition to the combine, and may persist in breaking up the pool. Logging is at a very low ebb in the coast district. In the mining regions lumber is in good request, and the small local mills are reaping quite a harvest. But the cost of transport is preventing mining developments from benefitting British Columbia coast lumbering to any considerable extent at present. Manitoba trade is in a healthy condition, a good demand for common lumber coming from the farmers, who are now disposing of their farm products.

UNITED STATES.

A greater movement of lumber at many of the principal distributing points, an advance in the prices asked by manufacturers, and the stronger feeling of confidence observable, were the principal features of the lumber trade of the United States for the past week. In view of the attention which was given to political matters, the month of October was productive of a satisfactory amount of business. Consuming industries have been partially closed down, retailers have purchased only for actual wants, and wholesale dealers have held aloof until the election was over. Therefore the most sanguine could scarcely expect a brisk demand in the face of such unfavorable conditions. But the past few days has experienced a greater number of inquiries for stock at eastern points, while the demand in the north-west for low grade lumber suitable for corn cribs, such as piece stuff and 12-inch boards, is greater than for some years, and has induced mill men to mark up prices from 50 cents to $1 per thousand. Spruce is improving at Boston, Portland, and other New England points. At Albany a marked improvement is reported, and business is apparently approaching its usual volume at this season of the year. The New York market seems to be affected in a large degree by the national election, and business in most lines is at a standstill. In Michigan a better feeling prevails, and both lumber and shingles are moving with more freedom. Cedar shingles have advanced 25 cents. There is also more inquiry for hardwoods, especially oak and rock elm. Birch is a little stronger, but no trade of significance has developed. Basswood is dull and featureless.

The victory achieved by the Republican party on Tuesday last, and the maintenance of the gold standard, will, it is believed, hasten the return of prosperity to

the commercial industries of the United States, and the lumber trade will be among the first to revive.

FOREIGN.

Much attention is now being paid in Great Britain to transactions in connection with next season's business, and varying opinions are held regarding the course which the market will take. The conviction which seems to be most general, and which appears to be borne out by a review of existing conditions, is that if the market is not overburdened with stock by shippers, the consumption and demand next season will be fully equal, if not in excess, of the season now closing. Canadian goods at the present time are only in moderate supply, and the advanced freight rates are checking further shipments to a considerable extent. Some importers who have more than the usual amount of faith in the market are paying the increased freights, but this is the exception rather than the rule. The pine market remains steady, and for some lines there is brisk inquiry. Second pine regulars are moving freely, dry stocks being scarce. A quantity of inferior stock is on the market which will probably be disposed of by auction, but superior class goods are not in too heavy stock. Dealers in birch squares are now placing contracts, and it is probable that a fair portion of the supply will come from Canada, the quality being said to be superior to the Baltic wood. An advance has taken place in spruce in Liverpool, as a result of increased freight and insurance rates. The market is bare of 4-inch spruce deals, and red and pitch pine have been substituted in some cases, at a greater cost. Holders of Quebec goods are not anxious sellers, believing that winter prices will be still higher. At West Hartlepool the demand for mining and square wood is especially in evidence. The consumption of mahogany has increased of late, which it is believed will result in higher values.

STOCKS AND PRICES.

CANADA.

All the drives on the Nashwaak river, in New Brunswick, are now in the booms.

Robert Brewen, of Stanley, N. B., has contracted to cut about 1,000,000 feet of lumber for Mr. Richards.

The bark Minnie G. Whitney carried 1,037,428 ft. of deals and 337,139 ft ends from Parrsboro, N. S., for Fleetwood.

The steamship Mantinea, which sailed last week from St. John, N. B., for the Mersey, carried 1,049 standards of deals.

G. D. McPherson, of Forest, Ont., last week shipped 81,000 feet of elm logs to the Anderson Furniture Co., of Woodstock.

Messrs. Howry & Sons, of Fenelon Falls, will operate three camps this winter. They have 50,000,000 ft. of logs now on hand.

By the breaking of Prescott's boom at Albert, N. B., caused by a freshet, ten thousand dollars worth of logs were carried out to sea.

The Central Lumber Company, of Saginaw, Mich., has commenced logging operations at Blind River, Ont. They expect to put in about 5,000,000 feet.

A decree has been issued from the equity court ordering the sale of 7,000 or 8,000 acres of timber lands on the Taxis river, in New Brunswick, owned by the late Edward Jack. The sale is to satisfy a claim of nearly $10,000 by the People's Bank of Fredericton against the estate.

FOREIGN.

Cedar shingles are still held at Manistee, Mich., at $1.60 to $1.70.

Shingles are in better demand at Buffalo. Haines & Co. report the sale of 2,000,000 last week.

The Brown & Robbins Lumber Co., of Minneapolis, have sold their stock of 5,000,000 feet of white pine, mill run, to eastern parties.

Upwards of 15,000,000 feet of lumber was shipped from Menominee, Mich., last week. A portion of the amount, however, was sold earlier in the season.

Up to the 31st of October last there were shipped from Alpena, Mich., 74,013,075 feet of lumber, 5,020,000 shingles, 2,340,000 pieces of lath and 834,000 pieces of cedar.

A sale of 250,000 deals is reported from Manistee, Mich., the purchasers being the Eastern Lumber Co., of Tonawanda. The price was $40 for firsts and $30 for seconds.

Several large shipments of Canadian goods, consigned to Messrs. Holme, Wainwright & Co., Liverpool, Eng., by W. & J. Sharples, of Quebec, are being looked after by Hon. John Sharples, who recently arrived at Liverpool.

The United States government has requested bids for the breakwater extension at Buffalo. Over 16,000,000 feet of white pine will be required for this work. Considerable timber will also be used on the canal improvements.

John Larkins, of Bingham, Mich., reports the sale of 500,000 feet of hardwood to Canadian parties at a figure 50 cents per thousand in advance of the price offered him for the same lumber in Chicago. The stock will be shipped by vessel.

At the last auction sale of Foy, Morgan & Co., London, Eng., a small lot of 3 x 11 Canadian 1st pine, ex Adelgunde, realised £22 10s., 2nds £15 10s., and 3rds £9 15s., and a parcel of 11 ft. 3 x 11 3rd pine, ex Aloedene, from Quebec, made £8 15s., and the 10 ft. 10s. less. A large line of 3x9 2nd spruce, ex Deptford, from Quebec, fell at £7 15s.

BUFFALO AND TONAWANDA.

It is hoped that this is positively the last report to be made during the political campaign. Never in the history of the country has there been a greater disturbance of business created by political agitation, though the presidential struggle is usually reckoned detrimental to trade. The campaign has not been conducted in any very unusual spirit of bitterness, but the chief issue has been made the status of the currency, and with any prospect of a cheapening of the dollar there has been an increased disposition to hold back and see what the result of the election would be.

This has brought the lumber trade nearly to a standstill. The vacation season in the summer months is reckoned the slowest in the trade, but it is a fact that sales of lumber have rather dropped off than otherwise ever since August, till now practically every lumberman in this market will say that he is doing no business. He does not really expect the statement to be accepted literally, but he is not saying it idly by any means. Buyers are holding off as they never have done with us at this time of the year.

As the supporters of McKinley have taken up the cry for "sound money," they have naturally arrayed all business interests on that side. There is any amount of orders booked by dealers contingent on the election of McKinley. As this state of things makes all business semi-political just now, it is not possible to make a true report without constant reference to the fact, little as business and politics are usually supposed to coincide.

George W. Stevens, who lately came down from Duluth to act as sales agent for the Midland cut of lumber of the Arthur Hill Company, said in an address last week that he had come east to get away from the populism and free silver heresies that prevailed in some parts of the west. The Arthur Hill Company are laying down a large amount of lumber here this season. From the reports of lake receipts it looks as though they had received more than any other concern. They keep one tow running all the season, and lately had several other boats in, including the Parry Sound Lumber Company's steamer Seguin, from which it appears that the latter company is not pushing its own shipments by lake this season.

Buffalo has not received within about 25,000,000 feet of lumber by lake this season of last seasons's amount to date, the entire lake receipt being 138,000,000 feet. The receipt of 90,000,000 shingles is considerably in excess of last season, and shows that there has been a fairly healthy trade in them this season, which is in line with the running reports from the dealers. The trade in them from both Canada and the Pacific coast has been good and is still fair, though no one appears to have found out why this occurs with such a discouraging state of the lumber trade in general. It is hoped that a good building season is indicated.

Trade with Canada has been somewhat strained by the idea somewhere on that side of the line that there was to be a smash-up here after election. Several dealers state that they have notices from Canada that they must agree to pay for what they buy in gold or Canadian money. Some of them are inclined to laugh at such fears, but others say that if the silver agitation is capable of demoralizing business at home as it has, there ought to be still more uncertainty as to our condition abroad. It is to be hoped that the election will have put an end to such nonsense before this report gets into print.

There is no reason for accusing the lumbermen of contributing to the uncertainty since the "sound money" parade of Saturday, for both Buffalo and Tonawanda dealers turned out and furnished more than a thousand men in the big procession. Never before have they tried to unite on politics.

There is still small need of speaking of the run of prices for anything in lumber. Buyers are making their own prices practically. The eastern buyers are waiting for election, and when our dealers are buyers they look for the producer who is hard up, and they usually find him. One mill reports that certain lumber can be bought for more than $1.00 off last year's price, when the price was anything but satisfactory to the seller then. Our people are making no predictions of the month's trade. Some think that there will be something of a boom after election if it goes their way, but others are afraid that the season is too far spent, especially as there is talk of closing the canal early in order to get ready for the extraordinary repairs to be made next winter.

There is a better report from the timber dealers than from the trade generally, as there are large public works to be started soon. Besides the local demand, which is good, the new breakwater demands over 16,000,000 feet of hemlock and pine, and the canal improvement will take quite a large amount. None of this has yet been bought. The breakwater bids will be received till the end of the month. As a good timber demand is a still better indication of coming business than can be shown by a brisk sale of shingles, it would seem that there is hope for the business before long, whatever happens in politics.

The sudden death last month of Secretary Baldy, of the Buffalo Lumber Exchange, leaves the office not only vacant, but hard to fill, as he was a man of a thousand for such a place. So far no one has been suggested who is acceptable. Mr. Baldy had been the secretary of the exchange since its organization.

BUFFALO, Nov. 2, 1896. J. C.

SHIPPING MATTERS.

Bark Stranger has been fixed to load lumber at St. John, N. B., for Buenos Ayres at $9.

Sch. Athlete has been chartered to load lumber at Tusket, N. S., for St. Johns, P. R., at $4.75 and port charges.

The schooner Fred H. Gibson will go to Five Islands, N. S., to load for Buenos Ayres or Rosario, at private terms.

Ship Forest King, now at Barbados, has been chartered to load deals at St. John, N. B., for w. c. England, at 52s. 6d.

The schooner Rebecca F. Lamdin has been chartered to carry lumber from Bridgewater, N. S., to three ports in Jamaica, at a lump sum.

Schooner James E. Woodhouse has been chartered to load pine at St. John, N. B., for Berbice at $6.50, with free towage, wharfage and lighterage.

The Government cruiser Petrel, which arrived in Port Stanley recently, brought the news that the schooner Sandill, loaded with lumber for Tonawanda from Wiarton, went down in Lake Erie.

Canal freights at Tonawanda are inclined to advance. The rate from Tonawanda to New York is $2.25, and difficulty is found in gettir boats even at that figure. The figure to Albany, $1.50, is also likely to be raised.

Several gentlemen from Kingston interested in the timber trade were in Toronto last week looking for vessels to engage in the trade when navigation opens next spring. They chartered the schooner Sir C. T. Van Straubenzie and several of the Mathew's fleet to make several trips from Georgian Bay and Lake Superior to Kingston. The terms of the charters were private, but are understood to be favorable to the vessels. It is rather unusual for lumbermen to be looking for vessels at this season of the year, and this is looked upon as a good business sign. It is expected that some further charters will be made.

BUSINESS NOTES.

J. H. Hann & Co., lumber, McMurrich, Ont., have assigned to J. H. Knifton.

J. W. Hunter, a lumberman of Leamington, Ont., is reported to have assigned, with liabilities of $10,000, and assets $3,250.

FIRES.

Two million feet of lumber at Ingalls, Mich., the property of Ira Carley, were burned on Monday last. The loss is $50,000.

The grist and saw mill at Calumet, Que., was burned on Tuesday of last week. The mill had lately been purchased by Mr. Wilson.

Telephone 5332 Established 1851

JOHN B. SMITH & SONS,

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LUMBER Lath, Shingles, Doors, Sash, Blinds, Mouldings, Boxes, &c.

BILL LUMBER a Specialty

Cor. Strachan and Wellington Avenues, TORONTO.

MILLS

Having Brown Ash 12, 14 and 16 ft. firsts and seconds, inch Bass firsts and seconds 12 feet, or any other Hardwood Lumber, can sell same for cash by addressing

H. D. WIGGIN

No 89 State St., BOSTON, MASS.

Inspection at mill.

We Want to Buy

1 to 2 in.	*1 and 2*	*Red Birch*	*6 in. and up.*
1 to 4 in.	"	*Brown Ash*	"
1 to 2 in.	"	*Plain Oak*	"
1 to 3 in.	"	*Soft Elm*	"
1 to 4 in.	"	*Hard Maple*	"

Send lowest cash prices and full description of stock as to width, length and dryness.

LAWRENCE & WIGGIN

Hardwoods and Mahogany BOSTON, MASS.

WANTED 2in. No. 1 and No. 2 Rock Elm

BOSTON LUMBER CO.

No. 27 Kilby St. - BOSTON, MASS.

RONAN LINE

HUDSON RIVER LUMBER TRANSPORTATION. Water Connection from Albany with lumber points in Canada via Canadian Pacific Railway to New York Harbor, Long Island Sound and inland waters of New Jersey. . . .

CONNECTION—Canadian Pacific Railway; Rome, Watertown & Ogdensburgh; New York Central & H. R. Rd. Ronan Line.

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MILLMEN—Send us list of dry hardwoods.

Huntsville Lumber Co., Ltd.

MANUFACTURERS OF LUMBER LATH AND SHINGLES

—: HUNTSVILLE, ONT. :—

WE are open to cut White Pine and Hemlock Bill Stuff. Have for Sale a Quantity of Dry Mill Stocks and Sidings, also 16 in. Pine Shingles and 4 ft. Lath 1½ in. wide.

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THE PEMBROKE LUMBER CO. LTD.

MANUFACTURERS AND WHOLESALE DEALERS IN

DIMENSION TIMBER OF ALL SIZES AND KINDS, JOISTS, CAR DECKING, CAR SILLS, SHIP DECKING, AND ALL KINDS OF ROUGH AND DRESSED LUMBER.

Write us for Quotations on all Bills PEMBROKE, ONT

FOR SALE

Red Pine Dimension Logs, can be any length up to 50 feet to suit purchaser, and would contract for two to three million for next summer delivery at Spanish River. Special long lengths could be loaded on cars at Rayside, C. P. R. Will have five to six million feet of WHITE PINE, first cut on limit at Spanish River. And have about five million feet at mouth French River which could be delivered at opening of navigation . . . . . .

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State Lowest Price f. o. b. Cars or Delivered in Toronto for whole or part.

About 300 cords 2 foot Hardwood, 1-2 Beech and 1-2 Maple, last winter's cut; also 150 cords of 4 foot all No. 1 Wood.

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YES, Everything Sold but Mill Culls of all thicknesses; Shorts of all thicknesses; Shingles in four grades (Made from Live Timber) and Lath in two grades. We are also prepared to make close quotations on Box Shooks, delivered at all points in Canada.

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1", 1¼", 1½", 2", 3" and 4" 1sts and 2nds Grey Elm. Also 1⅛" Rock Elm, Log Run.

Please quote prices delivered Black Rock, Buffalo, N. Y

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50,000 ft. of 2½" No. 1 and 2 and common Soft Elm. } WANTED { *100,000 ft. of 1¼" No. 1 and 2 and common Red Oak.*

Are also in the market as CASH BUYERS for other kinds of Hardwoods. CORRESPONDENCE SOLICITED.

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WHOLESALE PRICES CURRENT.

TORONTO, ONT.

TORONTO, November 4, 1896.

CAR OR CARGO LOTS.

1¼, 1½ and 2 inch cut up and better	30 00	33 00
2 inch picks and uppers	33 00	36 00
1x12 dressing and better, 60% 16 ft	22 00	24 00
1x10 fine dressing and better	21 00	23 00
1x10 and 12 Canadian dressing and better	20 00	22 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 1-4 in. cut up and better	32 00	35 00
1x10 and 12 mill run	16 00	18 00
1x10 and 12 common	12 00	14 00
1x10 and 12 mill culls	9 00	10 00
1 inch clear and picks	28 00	30 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	11 00	12 00
1 inch siding ship culls	10 50	11 50
1 inch siding mill culls	8 50	9 00
Cull scantling	8 00	9 00
1 inch strips 4 in. to 8 in. mill run	13 00	14 00
1 inch strips, common	11 00	12 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX pine shingles, 16 inch		2 25
XX pine shingles 16inch		1 40
Lath, No. 1		1 60
Lath No. 2		1 30

OTTAWA, ONT.

OTTAWA, November 4, 1896.

Pine, good sidings, per M feet, b.m	$29 00	35 00
Pine, good strips, " " "	24 00	30 00
Pine, good shorts, " " "	18 00	25 00
Pine, No. 1 dressing sidings, per M feet, b.m.	17 00	20 00
Pine, " " strips, " " "	15 00	18 00
Pine, " " shorts, " " "	13 00	14 00
Pine, 10 s.c. and better stock, " " "	13 00	15 00
Pine, 8 s.c. " " " " " "	11 50	13 00
Pine, " sidings " " "	13 00	15 00
Pine, " strips " " "	9 00	12 00
Pine, " shorts " " "	7 00	9 00
Pine, box culls " " "	9 00	11 00
Pine mill culls " " "	7 00	10 00
Lath per M No. 1	90	1 25
Lath per M No.	80	1 15
1x10 No. 1 barn	18	20
1x10 No. 2 "	16	18
1x8 & 9 No. 1 "	16	18
1x8 & 9 No. 2 "	15	17

QUEBEC, QUE.

QUEBEC, November 4, 1896.

WHITE PINE—IN THE RAFT.

	cts.	cts.
Common and railroad, for interior and ordinary according to average, quality, etc., measured off	20 @	22
For 40 to 45 feet average, measured off	24	26
For good and good fair average, measured off	28	32
First class " "	34	36
In shipping order " "	36	42
First class Ottawa waney, 18 inch average	36	38
" " 19 to 21 inch average	40	42
First class Michigan waney board, 18 inch average	40	42
" " " " 19 to 21 inch average	42	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	22	26
In shipping order, 35 to 45 feet " "	38	40

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	47	49

ELM.

By the dram, according to average and quality, 45 to 50 feet	28	30
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average an quality	22	30
To average 16 inch	28	3

BIRCH.

14 inch average		18
16 " "		21
18 " "	24	25

TAMARAC.

Square, according to size and quality	17	19
Flatted. " " "	15	18

DEALS.

Bright spruce, according to mill specification, $42 to $44 for 1st, $28 to $30 for 2nd, $25 to $27 for 3rd, and $21 to $23 for 4th quality. F.O.B. batteau

SAGINAW AND BAY CITY, MICH.

SAGINAW, Mich., November 4, 1896.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$45 00	Selects, 1in., 8in. and up wide	$40 00
1¼, 1½ and 2 in.	45 00	1¼, 1½ and 2 in.	41 00
2½ and 3 in.	53 00	2½ and 3 in.	47 00
4 in.	56 00	4 in.	50 00

FINE COMMON.

1 in., 8 in. and up wide	33 50	2½ and 3in., 8in. and up wide	42 00
1¼, 1½ and 2 in.	35 00	4 in.	45 00

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	23 50	2½ and 3in., 7in. and up wide	37 00
1¼, 1½ and 2 in.	31 00	4 in.	40 00

STRIPS. A AND B (CLEAR AND SELECTS).

1¼ in., 4, 5 and 7 in. wide	34 00	1 in., 4, 5 and 7 in. wide	32 00
6 in. wide	36 00	6 in. wide	36 00

FINE COMMON OR C.

1¼ in., 4, 5, 6 in. wide	30 00	1 in., 6 in. wide	30 00
1 in., 4, 5 in. wide	25 00		

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24 00	1 in., 4, 5, 6 in. wide	22 00

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in	16 00	1¼ in., 4, 5 and 7 in.	15 00
1 in., 6 in.	17 00	1¼ in., 6 in.	17 00

NO. 2 FENCING OR NO. 4 FLOORING.

1 in., 4, 5 and 7 inch	13 50	1¼ in., 4 to 7 inch	14 00
1 in., 6 inch	14 00	No. 3 Fencing, 1 in., 6 inch	12 00

SHELVING.

No. 1, 1 in., 10 in. stocks	25 00	No. 2, 1 in., 7 and 8in. stocks	19 00
1 in., 10 in. and up wide	26 00	1 in., 10 in. stocks	21 00
1 in., 12 in. stocks	29 00	1 in., 12 in. stocks	24 00
1 in., 12 in. and up wide	30 00	1 in., 10 in. and up wide	22 00
1¼ in. 1½ and 2in., 8in. and up wide	29 00	1 in., 13 in. and up wide	25 00

BARN BOARDS OR STOCKS.

No. 1, 12 in.	21 00	No. 2, 9 in.	13 50
10 in.	16 50	8 and 7 in.	13 50
9 in.	16 00	No. 3, 12 in.	12 50
8 and 7 in.	16 00	10 in.	11 00
No. 2, 12 in.	16 00	9 in.	11 00
10 in.	14 00	8 in.	11 00

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$8 50	1 in., 13 in. and up wide	$11 00
1 in., 6 in. wide	9 50	1¼, 1½ and 2 in., 7 in. and up wide	10 50
1 in., 7 in. wide and up	9 50		

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9in. wide	17 00	1 in., 10 in. and up wide	18 00
1 in., 6 in. wide	18 00	1¼, 1½ and 2 in., 8in. and up wide	20 00

COFFIN BOARDS.

No. 1, 1 in., 13in. and up	20 00	No. 1, mill culls	8 00
No. 2	17 00	No. 2, or red horse	6 50

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23 00	No. 2	18 00
No. 1 (nearly clear)	21 50	No. 3	14 00

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16ft.	$8 50	Hemlock, 2x4 to 10, 12 to 16 feet	8 00
18 ft.	10 50	2x12.	8 50
20 ft.	11 50	Add $1 to each additional 2ft. in length.	
22 and 24 ft.	12 50		

SHINGLES, 18 IN.

Fancy brands, XXXX	3 00	Standard brands, river made, XXXX	2 75
Clear Butts	1 90	Clear Butts	1 75

WHITE PINE LATH.

No. 1	1 50	No. 2	1 00
		Hemlock	1 00

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N. Y., November 4, 1896.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in.	$46 00	47 00	
2½ and 3 in.	50 00	54 00	
4 in.	55 00	57 00	
Selects, 1 in.	38 00	40 00	
1¼ to 2 in.	40 00	42 00	
2½ and 3 in.	47 00	50 00	
4 in.		52 00	
Fine common, 1 in.	35 00	37 00	
1¼ and 1½ in.	35 00	38 00	
2 in.	34 00	36 00	
3 in.		45 00	
4 in.		45 00	
Cut'g up, No. 1, 1 in.	26 00	27 00	
1¼ to 2 in.	32 00	33 00	
No. 2, 1 in.	16 00	17 00	
No. 2, 1¼ to 2 in.	22 00	23 00	
No. 3, 1¼ to 2in.	17 00	18 00	
Shelving, No. 1, 13 in and up, 1 in.	30 00	@33 00	
Dressing 1¼ in.	24 00	26 00	
1¼x10 and 12		26 00	
1½ in.	24 00	25 00	
2 in.	26 00	28 00	
Mold st'ps, 1 to 2 in.	32 00	34 00	
Barn, No. 1, 10 and 12 in.	18 00	21 00	
6 and 8 in.	17 00	21 00	
No. 2, 10 and 12 in.	16 00	17 00	
No. 3, 10 and 12 in.	13 00	14 00	
6 and 8 in.	12 50	13 50	
Common, 1 in.	16 00	18 00	
1¼ and 1½ in.	18 00	20 00	
2 in.	18 00	20 00	

WHITE ASH.

1st & 2nd, 1 inch,	33 00	33 00	
1¼ to 2 in.	33 00	35 00	
2½ to 4 in.	36 00	40 00	
Strips	17 00	18 00	
Culls	9 00	10 00	

BLACK AND BROWN ASH.

1st & 2nd, 8 inch up,	20 00	22 00	Com. & good culls 10 00 12 00

BIRCH.

1st & 2nd, 6 inch & up, red	28 00	30 00	1st & 2nd, white, 6 in. & up, 18 00 Com & good culls 10 00 12 00

ELM.

1st & 2d, rock, 8in. & up,	18 00	22 00	1st & 2d, soft, 8 in. & up, 16 00 18 00

MAPLE.

1st & 2d, hard, 6in. & up	18 00	20 00	1st & 2d, soft, 6in. & up, 17 00 19 00

WHITE OAK.

1st & 2nd, plain, 8 in & up	26 00	28 00	Clear squares, 5x5 to x8 35 00
Good common	15 00	17 00	1st & 2nd quartered,
Good culls	10 00	12 00	6 in. up 45 00 50 00
			Common quartered 25 00 30 00

RED OAK.

1st & 2nd	25 00	27 0	Quartered 1st & 2nd 42 00 44 00
Common	14 00	16 00	Common 22 00 26 00
Cull	9 00	10 00	

NEW YORK CITY.

NEW YORK, N. Y., November 4, 1896.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$28 00	@ 40 00	Building orders $27 00 @ 37 00
Decking	44 00	50 00	

SPRUCE.

6 to 9 in.	14 00	14 50	10 to 12 in.	16 25	17 00
6 to 12 in.	14 50	15 75	Lath	1 85	1 95
9 to 12 in.	15 75	16 25			

HARDWOOD.

4/4 and thicker, No. 1 and 2	Black Ash, 10 to 16		23 00
" " "	Soft Elm, "		17 00
" " "	Hard Maple, "		21 00
" " "	Basswood, "		20 00
" " "	Birch, "		23 00
" "	Black Ash, Com. and Shipping Cull, M.C.O.		14 00
" "	Soft Elm, " "		12 00
" "	Hard Maple, " " "		14 00
" "	Basswood, " " "		12 00
" "	Birch, " " "		14 00

ALBANY, N.Y.

ALBANY, N. Y., November 4, 1896.

PINE.

Uppers, 3 in. up	$52	$55	Dressing boards, narrow	$19	$21
2½ in.	52	55	West India shipping boards.	15	17
1 to 2 in.	45	48	Box boards.	10	12
4 inch uppers		55	10-in. dressing and better	26	34
Selects, 2½ in. up		45	10-in. common	14	15
1 to 2 in.		40	12-in. dressing and better	26	32
Fine common, 2½ in. and up	40	42	Common, 1x12	14	16
1 to 2 in.	36	40	No. 1 barn, 1x12		20
No. 1 cut, 1 to 2 inch	25	35	1x10	18	21
No. 2	18	25	1x8	16	18
No. 3	17	20	No. 2 barn, 1x12	16	17
No. 1 molding, 1 to 2 in.	33	36	1x10	15	16
No. 2 molding, 1 to 2 in.	25	28	1x8	13	15
Stained saps		20	Shaky or star clear, 1 to 2 in.	19	21
Bracket plank	30	35	Dressing	16	18
Shelving boards, 12-in. up	30	32	Common	11	15

LATH.

Pine	$2 25	Spruce	$2 00

SHINGLES.

Sawed Pine, ex. XXXX	$4 25	$4 30	Bound butts, 6 x 18	$6 00	$6 15
Clear butts	3 25	3 35	Hemlock	2 15	2 30
Smooth, 6 x 18	5 40	5 50	Spruce	2 20	2 30

OSWEGO, N.Y.

OSWEGO, N. Y., November 4, 1896.

WHITE PINE.

Three uppers, 1¼, 1½ and 2 inch	$45 00	@46 00	
Pickings, " "	37 00	38 00	
No. 1, cutting up, " "	32 00	34 00	
No. 2, cutting up, " "	23 00	25 00	
In strips, 4 to 8 wide, selected for moulding trips, 12 to 16 ft.	30 00	32 00	

SIDING.

1in siding, cutting up picks and uppers	32 00	@39 00	1¼ in selected	37 00	@40 00
1in dressing	19 00	21 00	1¼ in dressing	20 00	22 00
1in No. 1 culls	12 00	14 00	1¼ in No. 1 culls	13 00	15 00
1in No. 2 culls	11 50	13 00	1¼ in No. 2 culls	12 00	13 00
			1 in. No 3 culls	9 00	10 00

1X12 INCH.

12 and 16 feet, mill run				20 00	23 00
12 and 16 feet, No. 1 and 2, barn boards				18 00	19 00
12 and 16 feet, dressing and better				25 00	30 00
12 and 16 feet, No. 2 culls				13 00	14 00
Mill run, mill culls out	$19 00	@21 00	1¼x10 INCHES. No. 1 culls	16 00	17 00
Dressing and better	24 00	28 00	No. 2 culls	13 00	14 00

1X4 INCHES.

Mill run, mill culls out	16 00	20 00	No. 1 culls	13 00	14 00
Dressing and better	23 00	29 00	No. 2 culls	11 00	12 00

1X5 INCHES.

6, 7 or 8, mill run, mill culls out	17 00	23 00	6, 7 or 8, No. 1 culls	14 00	15 00
			6, 7 or 8, No. 2 culls	12 00	13 00
6, 7 or 8, drsg and better	21 00	27 00			

BOSTON, MASS.

BOSTON, November 4, 1896.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$11 50	12 00	¾ inch	$ 9 25	9 50
Coarse No. 5	15 00	15 50	11-16 inch	8 50	8 75
Refuse	13 00	13 25	⅝ inch	8 00	8 25
Outs		9 00	Clapboards, sap ext.	45 00	48 00
Boxboards, 1 inch	10 00	10 50	Sap clear	41 00	43 00
⅞ inch	9 00	9 50	Sap, 2nd clear	32 00	35 00
			No. 1	23 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in.	$50 00	@52 00	Fine com., 3 and 4 in	46 00	52 00
1¼, 1½ and 2 in.	52 00	53 00	No. 2, 1 in. Fine com.	29 00	31 00
3 and 4 in.	58 00	62 00	1¼, 1½ and 2 in.	30 00	32 00
Selects, 1 in.	44 00	45 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in.	45 00	47 00	No. 2	36 00	39 00
3 and 4 in.	52 00	55 00	No. 3	28 00	30 00
Moulding boards, 8 to 11 in. clear	37 00	39 00	Cut ups, 1 in.	20 00	32 00
60 per cent. clear	32 00	34 00	Cut ups, 1¼ to 2 in.	24 00	38 00
Fine common, 1 in.	40 00	41 00	Coffin boards	19 00	22 00
1¼, 1½ and 2 in.	40 00	42 00	Common all widths	22 00	26 00
			Shipping culls, 1 in.	14 50	15 50
			do 1¼ in.	15 50	16 50

SHINGLES.

Spruce	1 30	1 50	Second Clear	1 75	1 90
Cedar, extra	2 65	2 90	Extra No. 1	1 25	1 50
Clear	2 25	2 40			

HEMLOCK.

Boards, rough	11 00	@11 50	No. 2	9 00	@ 10 50
Planed	11 75	12 00			

LATH.

Spruce			By cargo	1 30	@ 1 90
By car	1 80	@ 2 00			

BRITISH COLUMBIA

THE HOME OF THE DOUGLAS FIR AND RED CEDAR.—FOREST TREES OF IMMENSE PROPORTIONS. — LOCATION OF THE PRINCIPAL VARIETIES OF TREES AND THEIR ADAPTABILITY.—THE EXPORT TRADE OF CONSIDERABLE IMPORTANCE TO THE WESTERN PROVINCE.—DESCRIPTIONS OF SEVERAL OF THE LEADING MILLS.

NATURALLY in the consideration of the economic products of British Columbia comes the timber wealth. Apart from minerals it represents the most important and most readily available results. British Columbia may now be said to possess the greatest compact area of merchantable timber on the North American continent, and if it had not been for the great forest fires that have raged in the interior in the years gone by, during which a very large portion of the surface has been denuded of its forest, the available supply would have been much greater than it is. That was an exigency, which, in the unsettled state of the country, could hardly have been provided against, if at all. However, as the coast possesses the major portion of the choice timber and that which is most accessible, the ravages of fire have not had, by reason of the dense growth and the humidity of the climate, any appreciable effect on that source of supply.

As far north as Alaska the coast is heavily timbered, the forest line following the indents and river valleys and fringing the mountain sides. Logging operations so far have extended to Knight's Inlet, a point of the coast of the mainland opposite the north end of Vancouver island. Here the Douglas fir, the most important and widely dispersed of the valuable trees, disappears altogether, and the cypress, or yellow cedar, takes its place. North of this, cedar, hemlock and spruce are the principal timber trees. It will be of interest to know that Douglas fir (Pseudo-tsuga Douglassi) was named after David Douglas, a noted botanist who explored New Caledonia in the early twenties of this century. It is a very widely distributed tree, being found from the coast to the summit of the Rocky mountains. On the coast it attains immense proportions, is very high and clear of imperfections, sometimes towering three hundred feet in the air and having a base circumference of from thirty to fifty feet. The best averages, however, are one hundred and fifty feet clear of limbs and five to six feet in diameter. This is the staple timber of commerce, often classed by the trade as Oregon pine. It has about the same specific gravity as oak, with great strength, and has a wide range of usefulness, being especially adapted for construction work. It is scientifically described as standing midway between the spruce and the balsam, and in the opinion of Prof. Macoun, the Dominion naturalist, is a valuable pulp-making tree.

Perhaps the next two most important representatives of our forest wealth are the red cedar (Thuya Gigantea) and the yellow cedar (Thuya Excelsa). The former is found all over the province, but reaches its greatest development on the coast, where it out-girths all others. In addition to its commercial value for shingles and finishing purposes, it is the friend of the settler, inasmuch as out of its straight-grained logs he can build his house, make his furniture and fence his farm, and that with the use of the most primitive of tools only—an axe, a saw, and a froe. It is especially valuable, however, for interior finishing, being rich in coloring and taking on a beautiful polish. For this purpose it is finding an extended market in the east of Canada, and no doubt its merits will soon find appreciation far beyond these limits. Important as the red cedar is, the yellow cedar, though much more limited in area and quantity, is still more important, and I was going to say useful. It is very strong, comparing with the Douglas fir in this respect, is wonderfully durable, finishes to perfection, and grows to great dimensions. Lying farther north, it will not be probably as soon in demand as the more ubiquitous red variety, but is already occupying attention. During the past year an extensive timber limit was disposed of in England, and a company has undertaken its manufacture. The cypress is found in great quantities in the interior of Vancouver island, and on Mount Benson, near Nanaimo, comes within 1,200 feet of the sea. Towards the north of the island, on Queen Charlotte islands, and on the north coast of the mainland, it is found lower down and is very plentiful. It is out of the cypress that the Hydah Indians build their celebrated war canoes, some of which have an eight-foot beam, are sixty feet long, and can stem the heaviest seas of the coast waters.

Coming next in usefulness—and economically considered this may be taken exception to, as there are many who might class it as the most useful of all our timbers—is the white spruce (Picea Sitchensis). Its habitat is principally low, swampy and delta lands, usually interspersing the forest of fir and other trees, but in no place is it found in very large or compact bodies. From its comparative scarcity and the many uses to which it may be put it is commercially more valuable than the Douglas fir, to which it is first cousin. It attains a circumference almost equal to the latter, but does not grow so tall or so clear of branches. It is utilized largely for making doors, finishing salmon boxes, barrels, fruit cases, and many other similar purposes, being, as it is, the best adapted for these uses of all the native timbers. It is par excellence, too, the wood for pulp manufacture, which some day or other will be one of the most important industries of the province, and concerning which more may be said at a later date. It increases in quantity as you go northward.

Hemlock (Tsuga Mertensianna) is a common timber, and up the coast is found in considerable quantities. It is a useful tree, and answers about the same purposes as the Douglas fir. For that reason it will not be in general demand until the latter has become to some extent exhausted. White pine (P. Monticola) for cabinet purposes and general utility is very valuable, but is limited in quantity. Balsam (A. Amabalilis) is widely distributed, being found principally in river valleys, but is commercially of little value, except for pulp. With the exception of the yew (Taxus brevifolia) and tamarack, of which there are several varieties, principally (L. Accideulalis), the foregoing are the principal representatives of the family of coniferous trees.

Of deciduous trees, the large leaf maple (Acer Macrophyllum), vine maple (Acer circinatum), alder (Alnus rubra), crab apple (Pirus rivularis), oak (Quercus Garryana), two varieties of poplar or cottonwood (Populus balsamifera) and (trichocarpa), aspen poplar (Populus tremuloides), arbutus (Arbutus Menziesii), birch (Betula Occidentalis), willow and juniper are the principal. The maple, alder and arbutus make first-class cabinet woods, though they are not abundant enough to be extensively used for this purpose. They also make popular finishing woods. Poplar, or as it is more commonly called, cottonwood, has been principally used in the past for the manufacture of "Excelsior," but its greatest use will be in paper-making. The aspen poplar is common in Vancouver island and the northern interior of the province. It is also a good paper-maker. The oak is mainly confined to the southern end of Vancouver island. It is a stunted gnarled species, of little use, but very picturesque. Crab apple is plentiful in swampy places around ponds, beaver meadows and along river banks. The hardwoods are usually found in bottom lands and indicate fruitfulness of the soil. There is no part of British Columbia where the timber supply is not sufficient for local demands.

The principal timber limits and the great bulk of the timber are located on: Vancouver island, running up the valleys of the Cowichan, Chemainus, Nanaimo, Englishman's, Little Qualicum, Big Qualicum, Comox, Oyster, Campbell, Salmon, Adams, and Nimkish rivers, and French and Black creeks, and along other streams and tributaries of the foregoing rivers, and in the Alberni valley; in Westminster district—along the Fraser and Pitt rivers, on Burrard Inlet, in South Vancouver, and on

HASTINGS SAW MILL, VANCOUVER, B. C.

[For description see next page.

Howe Sound ; the principal inlets of the coast as far as Knight's Inlet ; and on the islands in the Gulf of Georgia—notably Cracow, Valdez and Harwick. North of Knight's Inlet, as already stated, comes the cypress and considerable spruce that will yet be largely utilized in commerce.

One feature of the forests of the coast are their density. As high as 500,000 feet of timber have been taken from a single acre, which seems almost incredible to a lumberman of the east, where twenty thousand is considered not a bad average.

There are over fifty saw mills in the province, big and small, with a daily capacity of about 3,000,000 feet ; over thirty are on the coast, and have a daily capacity of between 1,750,000 and 2,000,000 feet, but this limit has never been reached, the annual cut running between 50,000,000 and 100,000,000 feet. Various estimates have been made of the amount of timber in sight. These range between 40,000,000,000 and 100,000,000,000 feet, a guess that is only practicable as showing the possible limits of supply as extremely wide. The acreage of timber under lease is about 1,175 square miles, and the total area of forest and woodland is put down by the Dominion statistician as 285,554 sq. miles, but this must not be taken as all of commercial value, as much of this is covered with small trees, suitable only for a local supply of fuel and lumber.

For some time the lumber industry of the province has suffered a severe depression, but at the present time the indications are favorable to a speedy revival, and to assist in this a lumber trust has been formed, which includes all the principal export mills of the Pacific coast, 35 in all, and as a consequence lumber has risen in price $2 per thousand feet. This combination is called the Central Lumber Company, with headquarters at San Francisco, and a branch agency in each of the large centres. The operations are in the nature of a pool through which orders will be distributed and results divided. It represents a capital of $7,000,000, and a daily capacity of 3,520,000 feet. Some 150 sailing ships are under its control.

The future of the lumber industry is very great for British Columbia, and when foreign demand fully revives, and the Nicaraguan canal has been completed, it cannot fail to receive an immense impetus. As it stands at present the province will be the last resort of the lumberman on this continent, and those who own timber limits will reap rich harvests. Perhaps not the least remunerative will be the by-products, and particularly that of pulp.

LUMBER PILED FOR RAIL SHIPMENT—HASTINGS MILL, VANCOUVER, B. C.

HASTINGS SAW MILL, VANCOUVER.

There are no larger foreign shippers of lumber and its products than the British Columbia Mills, Timber and Trading Company, who own the above mill. It is also safe to say that they are the largest concern in operation in this province. This mill, shown in the illustration on the previous page, is the chief one of the establishment ; the other mills owned by them being the Royal City Planing Mills, located at New Westminster, and the Royal City Mill, located at False Creek, Vancouver. The establishment of the Hastings mill dates back at least a quarter of a century. Its location on Burrard Inlet is well chosen, both for its extensive foreign shipments and on account of having the Canadian Pacific Railway tracks running through its shipping yard.

The premises occupy several acres of ground. The mill and machinery have undergone many changes since its inception, and to-day we see one of the most modern and best equipped mills on the coast. Eighteen boilers and six engines furnish the motive power. The capacity of the mill is 200,000 feet per day, giving employment to from 150 to 200 workmen. The wharfage is sufficiently extensive to allow eight vessels to lie and load at the same time. Steamers of 3,000 tons have already been dispatched from these wharves. The extent of the shipments of this firm to the North-west Territories and British Columbia are sufficiently large to have two sidings from the main line of the Canadian Pacific Railway.

The dry-kilns are on the most improved plan for keeping and handling a large quantity of lumber. A planing mill has lately been added to this plant. The manager's house, workmen's dwellings, machine shop, forge, general store and office complete the buildings.

The branch above mentioned, located on False creek, has a daily capacity of 50,000 feet. Besides the large local trade which it caters to, it also caters to the North-west. The sash and door factory in connection with this establishment is most complete, and, with the glazing rooms and finishing shop, turn out the finest finished work for the interior finishing of stores and offices. There is also a box factory and shingle mill in connection with this plant.

The timber limits owned by this company are of the most extensive and valuable character. The greater part of their output is obtained from these limits, but they also buy from loggers and jobbers. Three tugs are owned and consequently employed in the towing of vessels and booms of logs. They are amongst the largest employers of labour in the province.

BRUNETTE SAW MILLS COMPANY, NEW WESTMINSTER.

One of the largest industrial enterprises on the mainland is the Brunette Saw Mills Company, Limited, lumber manufacturers, whose plant is located at Sapperton, and within the corporation limits of New Westminster, on the Fraser river. Some years ago this company was organized, and from the start was successful. Each year has seen their volume of trade increase, their trade limits expand, and their hold upon popular favour grow stronger, until to-day their trade is a very large one, coming as it does from all parts of the province. A considerable export business is also done. Last year the mills were destroyed by fire, which, although necessarily causing a great temporary loss, has in the long run proven a benefit, for to-day the new mill is, without exception, the most perfectly equipped of its kind on the mainland.

Immediately after the fire, with characteristic enterprise, the management began the rebuilding. With the utmost rapidity the new structure was completed, and the machinery that has been provided represents the very highest triumphs of mechanical skill in this direction. Powerful steam engines provide the motive force. A large staff of skilled workmen are employed. The company manufacture lumber, sashes, doors, mouldings, etc. An idea of the extent of their operations may be gleaned from the fact that the output of lumber alone amounts to 100,000 feet daily.

Shipping facilities of the highest order are provided, and direct shipments are made to all parts of the world. The Canadian Pacific railway track runs immediately through the company's shipping yard.

About eighty men are usually employed. A large feature of the output consists of salmon boxes, which employ several additional hands each season.

POINT ELLIS SAW & PLANING MILLS, VICTORIA.

One of the manufacturing plants from which this city derives considerable benefit is the above establishment, owned and operated by Messrs. James Leigh & Sons. Although the business was only established some six years ago, it has assumed large proportions throughout the island. It is very seldom that a shipment outside the local market is made.

The mill is 180 × 52 feet. The planing mill, dry kiln, store houses, machine shop, finishing rooms and offices complete the buildings of this establishment. The products are all kinds of manufactured lumber, and the machinery is of the most modern and perfect description.

BRUNETTE SAW MILLS, NEW WESTMINSTER, B. C.

The average daily capacity of the premises is 40,000 feet, and from fifteen to thirty skilled workmen are continuously employed.

Some ship building has also been done by the firm, who deserve the patronage so liberally bestowed upon them.

ROYAL CITY PLANING MILLS, NEW WESTMINSTER.

This property is owned and operated by the same company as the Hastings Mill in Vancouver. These mills at New Westminster are well situated for shipping both by water and by rail. The river frontage is 1,650 feet, while the Canadian Pacific Railway track runs through their yards. The machinery is all of the most modern description in each of their buildings.

The buildings consist of two saw mills, sash and door factory, two planing mills, glazing and store room, general store, boarding house, stable, dwellings, office, dry-kilns and machine shop.

The output consists of lumber in all its forms, both finished and unfinished, sashes, doors, blinds, mouldings, mantels, laths and shingles. The capacity of the saw mill is about 70,000 feet per day. A large number of salmon boxes are made every season for the canning industry. From 100 to 150 men are employed.

The limits from which the timber is obtained are situated on the coast and up the Fraser river, but at a distance of some fourteen miles from the bank, to which they are conveyed by a logging railroad operated by steam. This also gives employment to a number of men.

The management of this branch is in the hands of Mr. R. Jardine, originally of New Brunswick. Three tugs are owned and used in the towing of their ships, scows and logs.

The majority of the shipments from this establishment are of a local nature, to Ontario and the Northwest Territories, the foreign shipments being mostly hand'ed by the Vancouver branch.

LEMON, GONNASON & COMPANY, VICTORIA.

The planing mills, sash and door factory, finishing shops and offices of this firm are situated on Government street, corner of Orchard street, and cover almost an entire block. It is known by the name of the Capital Planing Mills, and has been in existence and kept constantly busy for the last five years.

The main factory is a substantial two-story building, 100 × 50 feet, operated by steam, where a large staff of men are continually employed. The output consists of doors, sashes, blinds, window and door frames, mouldings, brackets, mantels, newel posts and stair railings. Scroll sawing, turning and planing is done very extensively for stores and dwellings, and executed to order.

The firm are the patentees for British Columbia for the automatic clothes dryer and clothes reel, the latter being for outside purposes. The sale of these devices is considerable throughout the province.

The water frontage is 300 feet on the inner harbor. The main store-house is 150 × 44 feet, besides which there are two smaller ones. The dry kiln, shipping sheds and office complete the buildings of this concern. The trade is to a great extent local.

CHEMAINUS, VANCOUVER ISLAND.

The Victoria Lumber & Manufacturing Co. own the mill at this point. It is a large two-story building, with metal roof, completely detached from all other buildings, and with the best of shipping facilities both for deep sea vessels and by rail on the Esquimalt & Nanaimo railway. The firm have a lumber yard at Laurel Point, Victoria city.

OX TEAM HAULING LOGS, ROYAL CITY MILLS CAMP.

It is worthy of note that this is the only mill in British Columbia which did not join the combine entered into between the California, Puget Sound and British Columbia mills some fifteen months ago. They are at present very busy loading vessels, the greater number of which are destined for China.

KOOTENAY LAKE SAW MILL.

This establishment is situated at the head of the little bay that forms Kaslo harbor. The site consists of five acres of ground, fully occupied by the buildings, tracks and piling ground. The Kaslo & Slocan railway depot is on the adjoining land, and their tracks encircle this property. It is only half a mile to the centre of the city of Kaslo.

The saw mill is operated by a 75 horse power engine. Sawdust is fed automatically to the fire-box. The machinery consists of a 60 inch circular saw, gang saw, edger, trimmers, shingle and lath machinery, and a heavy double surfacing planer. The mill is of a most improved description, having live rolls and other modern machinery. A heavy force pump and full complement of hose is kept, in case of fire.

The planing mill is 400 feet distant from the saw mill, connected by a tramway. It is 100 × 40 feet in size, two stories high, and is operated by a 45 horse power engine. On the lower floor are a heavy planer and matcher, a resaw, a rip-saw, moulding machine, dado machine and turning lathe. On the upper story there is a full outfit of sash and door machinery.

The dry kilns, lumber sheds and warehouse are of the most convenient description. The other buildings are a boarding house, dwellings and office.

The daily capacity of the mill is about 30,000 feet. About forty hands are employed in all the departments. The lumber comes from extensive limits on the Lardeau river, consisting of fir, hemlock, pine, cedar, spruce and tamarac. Considerable quantities are also purchased from jobbers from Kootenay lake and neighborhood.

The shipping facilities are such that the largest boats of the Kootenay Lake Navigation Company can call at the wharves.

The development of the upper country is largely due to the enterprise of the proprietor of this establishment, Mr. G. O. Buchanan. It is almost needless to say that the trade is of a local nature.

COWICHAN HARBOR, VANCOUVER ISLAND.

One of the very best mills in this province is situated at this point, which has excellent shipping facilities for vessels of the largest draught. It belongs to Messrs. M. M. Boyd & Co., of Bobcaygeon, Ont. The saw mill is a two-storey structure 296 × 44 feet, with two additions of 171 × 24 feet and 78 × 54 feet respectively. It is operated by steam, and contains the best possible machinery and labor-saving devices obtainable.

The firm own extensive timber limits up the Cowichan river and on the borders of Cowichan Lake. They are in a position to manufacture lumber as cheaply as any mill in the province. The mill is at present idle, but it is to be hoped that it will soon be in operation.

MOODYVILLE LAND AND SAW MILL COMPANY, VANCOUVER.

Situated on Burrard Inlet, immediately opposite the city of Vancouver, is the mill owned by this company. The concern was originally started by Mr. Seth Moody, who was drowned by the sinking of the steamer Pacific off Cape Flattery in November, 1875. The style of the firm was Moody, Deitz and Nelson. Some 15 years ago the property was acquired by the late Andrew Welch, of San Francisco, and in 1891 the present proprietors assumed control.

TRAIN OF LOGS, ROYAL CITY MILLS CAMP.

A large area of land is occupied by these premises, which consist, besides the mills, of stores, hotel, manager's residence and dwellings for the employees. The equipment of the saw mill is of the most modern description, and it has a capacity of 120,000 feet per day.

The area of the timber lands owned by this firm is extensive and valuable. Besides the timber cut on their own limits, they also buy from loggers and jobbers. The

output of this company is chiefly shipped to foreign ports, but they have a yard in Vancouver city that supplies the local demand. The company maintains offices in London at 53 Coleman street, of which Mr. Wm. C. Jefferys is in charge. The head offices for British Columbia are in Vancouver, Messrs. Robert Ward & Co., Ltd., being the managers and agents.

ALBERT HASLAM, NANAIMO.

The city of Nanaimo derives a direct and tangible benefit from such an establishment as Haslam's saw mill.

HASLAM'S SAW MILL, NANAIMO, B. C.

The property was purchased by Mr. Haslam, as agent of the Royal City Planing Mills, of New Westminster, thirteen years ago. In 1888 Messrs. Haslam & Lees took over the business for themselves, and a year later Mr. Haslam purchased his partner's interest and became sole proprietor. Under his management the saw mill has developed from a primitive arrangement, almost archaic in its simplicity, into a large and thriving institution conducted on a sound commercial basis and provided in every department with the best of modern machinery and appliances. In the early days it used to be one of the small boy's greatest pleasures in life to take a ride upon the logs while they were being sawn up into lengths. The small boy of 1896, whose adventurous disposition prompted him to try a similar experiment would, in all likelihood, share the fate of the log.

The mill comprises an area of nearly two acres and has a capacity of 55,000 feet in ten hours. The saw mill proper is further supplemented by a planing mill, and a sash and door factory with a capacity of about 100 doors and 200 windows per day. The whole mill employs on an average about thirty men. Mr. Haslam gets his logs from his fir and cedar limits, 19,000 acres in extent, situated on the island and the mainland. There are perhaps 400,000 feet in a boom, and the logs when required are towed up the mill-stream in small quantities. The saw mill proper contains a large circular saw, a gang saw, an edger, a trimmer and a lath saw. The engine room is beneath the saw mill and contains four stationary engines measuring respectively 18x24, 15x24, 16x20 and 12x16. The boiler house has only recently been detached from the mill and transferred into a separate, substantially built structure of brick and stone, the risk of fire being thus practically obviated. It is equipped with three tubular boilers, two being 60x16, and one 48x16, manufactured by the William Hamilton Company, of Peterboro', and the B. C. Iron Works, of Vancouver. Sawdust and slabs are used for fuel.

In the planing mill are two large planers, manufactured by Cowan & Co., of Galt, Ont., two stickers, a rip saw, a picket machine and a cut-off saw. The machinery in this building is operated by one 12x16 engine.

The drying kiln is situated at a convenient distance from the saw mill and measures 30x60 feet. The roof of the kiln is lined with zinc, which draws off the moisture from the piled-up planks and deposits it in a liquid form in the gutters, which run along the angle formed by the roof and connect with the outside. The sash and door factory is also provided with a drying kiln on a somewhat smaller scale.

SAYWARD SAW MILL, VICTORIA, B. C.

The sash and door factory is in an entirely separate building, 75 feet in length and 60 feet wide. Its mechanical equipment is as follows: Pony planer, rip saw, cross-cut saw, shaper, band saw, two stickers, a buzz planer, a door machine, sand-paper machine, lathe, door cramp and grinding, all of which are operated by a 10x16 engine. A glazing shop completes the different departments into which the mill, as a whole, is divided.

Mr. Haslam depends to a large extent upon the local market, though he occasionally makes foreign shipments, the last of these being to Alaska in April of this year.

SAYWARD MILL AND TIMBER COMPANY, LIMITED.

The extensive premises of this company are situated within the limits of the city of Victoria, on one of the most convenient points of the inner harbour, with a view of catering to the local trade and foreign shipments. The business was established by Mr. W. P. Sayward many years ago, but was formed into a joint stock company in 1893, with a capital of $500,000.

The saw mill is 220 × 110 feet, and is a two-storey building, equipped with the most modern woodworking appliances and machinery. The daily capacity is 60,000 feet. Besides the ordinary products of rough and dressed lumber, laths and shingles are also manufactured. This firm has made several shipments of choice spars. The principal countries to which they export are Australia and China. A view of the mill is shown herewith.

PACIFIC COAST LUMBER COMPANY, NEW WESTMINSTER.

One of the largest of the lumbering enterprises of the province is the Pacific Coast Lumber Company, Limited, whose plant is located at New Westminster, on the Fraser river. Five years ago this company was incorporated under the Companies Act. The officers are: President, W. J. Sheppard, a well-known lumberman residing in Waubaushene, Ont.; manager, Mr. J. G. Scott, residing in New Westminster.

The plant includes several large buildings, covering over an acre of ground, and the equipment of the various departments is perfect. Everything in the line of machinery and appliances that can be in any way conducive to rapid or thorough work is provided, and powerful steam engines furnish the motive force.

The specialties of the company are red cedar lumber and shingles. The output of the former is 15,000 feet a day, and of the latter 150,000 feet a day. On an average 30 workmen are employed. The trade extends through the Northwest Territories, Ontario and the United States.

The shipping facilities, both by rail and water, are of the best order, vessels being able to load at the mills for any part of the world. Red cedar lumber and shingles of British Columbia are too widely known to require any lengthy comment, suffice it to say that no similar product in the world excels them, and that in all markets they find ready sales.

In addition to the well-equipped saw mill, the facilities for drying shingles in the dry-kilns are first-class. There are also large shipping sheds, where the manufactured product is stored, keeping it from the bad weather.

Many orders for the product of this establishment were refused this year, on account of the low prices offered. It is hoped that this will soon be a story of the past.

Messrs. Cimon & Co. are building a steam saw mill at Murray Bay, Que., to saw spool-wood.

Shipping reports from British Columbia indicate that the mills of that district had loaded up to the end of August, 1896, 76 cargoes of lumber. Of this number one has gone to Nova Scotia, one to the Baltic, 8 to Ireland, 17 to Australia, 21 to China, 21 to South America, and 7 to South Africa.

MANITOBA
AND THE NORTH-WEST TERRITORIES

FOREST POSSESSIONS OF THE DOMINION GOVERNMENT.—NATIVE TREES.—WESTERN RETAIL LUMBERMEN'S ASSOCIATION.—D. E. SPRAGUE'S MILL.

THE forest lands of Manitoba and the Northwest Territories, together with a tract 40 miles wide by 500 miles long in the Railway Belt of British Columbia, are owned by the Dominion government. So far as Manitoba and the Territories are concerned, in comparison with their vast area, lumbering operations are less extensive than in the other provinces of the Dominion.

The great western region, from the Lake of the Woods to the Rocky Mountains, and from the international boundary to the Arctic Ocean, although containing a vast amount of prairie, is by no means destitute of forest land. The rivers and streams passing through the prairies are fringed with poplars and other timber, and the ridges and hills possess spruce, black pine, poplar, etc., which supply the local saw mills. Spruce of large size is to be found north of the prairie region, where the balsam, fir, Banksian pine, the poplars and other similar trees abound. Confined to the south-east corner of Manitoba, which touches the forest region of Eastern Canada, are the white and red pine, the white cedar, the basswood, the maple, and the white elm. These species, however, are not to be found in any abundance. In the western part of Manitoba are located several species of trees not to be found elsewhere in the province. These are the ash-leaved maple and the green ash, while the burr oak re-appears here after a wide interval. The territories bordering on the Rocky Mountains contain some of the trees of British Columbia, such as the Douglas fir, the mountain pine, the spruces, etc. These are being largely utilized by lumbermen.

MR. D. N. McMILLAN, Morden,
President Western Retail Lumbermen's Association.

There is a considerable number of saw-mills and wood-working establishments, but the principal timber supply is drawn from the adjoining Lake of the Woods district, where timber is found in abundance.

The Crown receipts from forest lands in Manitoba and the Territories range from $60,000 to $70,000 annually. Licenses to cut the timber are disposed of to the highest bidder, subject to an annual ground rent of $5 per square mile and a royalty of five per cent. on the amount of the sales of all products of the berth, or on the value of the lumber in the log. The Crown dues are as follows :

Fence-posts 7 ft. long, and not exceeding 5 in. at the small end	1 cent each.
Fence-rails of poplar, and not exceeding 5 in. at the butt end	$2 per thousand.
Rails of any other wood not exceeding 3 in. at the butt end	½ cent each.
Building logs of poplar when not exceeding 12 in. at the butt end	½ cent per lineal ft.
Building logs of pine, spruce, tamarac and any other wood unenumerated when not exceeding 12 in. at the butt end	1 cent per lineal ft.
Building logs of oak, elm, ash, or maple when not exceeding 12 in. at the butt end	1½ cts. per lineal ft.
Shingles	40cts. per thousand.
Telegraph poles 22 ft. long	5 cents each.
Telegraph poles, each lineal foot over 22 feet	1 cent per foot.
Railway ties 8 feet long	3 cents each.
Square timber and saw-logs of poplar.	$2 per M. ft. B. M.
Square timber and saw-logs of pine, cedar, spruce, tamarac and other woods unenumerated	$2.50 per M. ft. B. M.
Square timber and saw-logs of oak, elm, ash or maple	$3 per M. ft. B. M.

The product of the local saw mills is disposed of entirely in the home market, no shipments to foreign countries being made ; in fact, considerable British Columbia lumber finds a market in Manitoba.

MR. I. COCKBURN, Winnipeg,
Secretary Western Retail Lumbermen's Association.

WESTERN RETAIL LUMBERMEN'S ASSOCIATION.

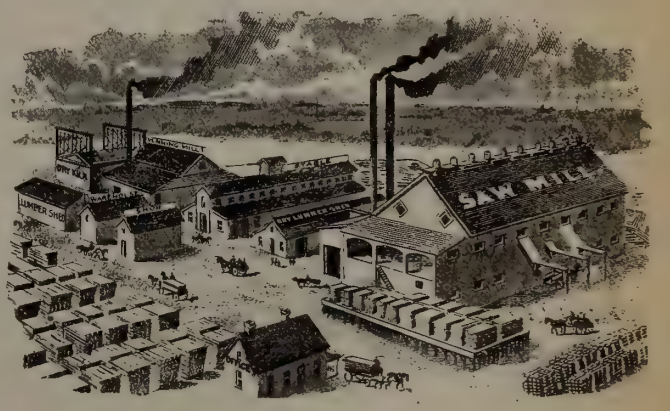
To Manitoba and the Northwest belongs the credit of possessing the most active lumbermen's association of the Dominion ; indeed, it might almost be said to be the only association existing to-day, one or two others apparently existing in name only. The organization of the Western Retail Lumbermen's Association was effected in September, 1891, the main object of which being the protection of its members against sales of wholesale dealers and manufacturers to contractors and consumers, and the giving of such protection as may be within the limits of the co-operative association. Wholesale dealers and manufacturers are admitted as honorary members. At the end of seven months, when the first annual meeting was held, the membership consisted of 130 active members and 15 honorary members, which embraced nearly all the dealers within the jurisdiction of the association.

The first president was Mr. Alex. Black, of Winnipeg, and this position he held until the annual meeting in February of 1895, when Mr. J. L. Campbell, who had been vice-president, was made chief executive officer. The first secretary-treasurer was Mr. G. B. Housser, of Portage la Prairie, to whose energetic efforts, at the inception of the organization, is very largely due its success. At the end of the first year he was succeeded by Mr. I. Cockburn, who has since filled the position with much satisfaction to all the members. At the fifth annual meeting in February last, Mr. D. M. McMillan, of Morden, was elected president, and Mr. T. A. Cuddy, of Minnedosa, vice-president. Portraits of the president and secretary are presented herewith.

Since the organization of the association much important work has been accomplished, and dealers have been enabled to maintain prices at a remunerative figure.

MR. D. E. SPRAGUE.

Mr. D. E. Sprague, of Winnipeg, whose mill we illustrate, commenced business in that city in 1872, in connection with Mr. J. W. Macauley. Previous to his arrival in the Northwest he was connected with the Georgian Bay Lumber Co. at Orillia and Waubaushene. In 1882 he established his present business, which has since steadily grown to its present large proportions. The saw and planing mills contain machinery of the latest and most approved type for the manufacture of lumber and its preparation for the market. In fact the mills possess every facility for the successful operation of the business, the plant altogether being compact, and the most perfect system prevails in all departments. The mill has one circular saw, which, running ten hours, cuts fifty thousand feet of lumber, shingles and lath. The dry kiln has a capacity of 48 thousand ft., and when operated on green pine lumber has a capacity (drying) of eight thousand feet per day. The sheds for dry and planed lumber have a capacity of about one million feet. The mill has been running night and day this season and will cut about seven million feet, about half of which is from American and half from Canadian pine logs. His trade is of a very extensive nature, extending throughout all parts of Manitoba and the Northwest. The total number of men employed is about ninety.



D. E. SPRAGUE'S MILL AT WINNIPEG.

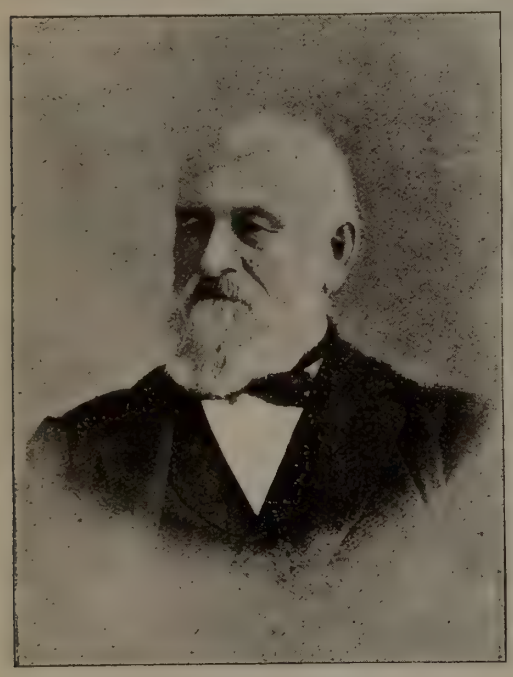
In all affairs of a public nature for the advancement of the city Mr. Sprague figures conspicuously, and is looked upon as one of the city's most enterprising and progressive business men. He is vice-president of the Winnipeg Agricultural and Industrial Exhibition Association, and one of the board of directors of the Winnipeg general hospital.

NEW BRUNSWICK AND NOVA SCOTIA

THE SPRUCE PRODUCING PROVINCES OF THE DOMINION.—EXTENT OF FOREST LANDS.—DIFFERENT METHODS OF DISPOSING OF THE TIMBER.—ENTERPRISING PULP AND LUMBER COMPANIES.

NEW BRUNSWICK.

NEXT to British Columbia, New Brunswick possesses the largest percentage of forest lands in proportion to the total area. Of the 28,100 square miles contained within her boundaries, 14,766 miles are timbered lands. Spruce predominates in nearly every section, while there are also to be found quautities of pine, white cedar, hemlock, larch, balsam, and a variety of hardwoods, such as maple, birch,



MR. ALEXANDER GIBSON.

ash and poplar. Owing to the rapid development of the pulp industry, and the strong demand in the United Kingdom for deals, spruce timber is now receiving a great deal of attention, and the cut during the present year promises to exceed that of any previous one.

The forest lands of New Brunswick are owned by the government, and the right to cut the timber thereon is disposed of by auction. An upset price of eight dollars per square mile is fixed, and the limit is sold to the highest bidder, subject to stumpage regulations and restrictions, the lease being granted for a term of twenty-five years. The stumpage paid upon logs, timber or lumber is as follows :

For spruce, pine, hardwood or hacmatac saw logs, per M superficial feet	$1 00
Hardwood timber, up to average of 14 inches square, per ton	0 90
Hardwood timber, above 14 inches, per inch additional, per ton	0 10
Pine timber, up to 14 inches square, per ton	1 00
Pine timber, additional per inch, per ton	0 25
Hacmatac timber, per ton	0 50
Spruce timber, per ton	0 50
Cedar logs, per M superficial feet	0 80
Or per M on the shingles sawed from same, for the first three grades, each	0 10
Shaved shingles, per M	0 20
Railway ties, ordinary length, each	0 02
Boom poles, each	0 02
Brackets, each	0 01
Spruce or pine spars, for ship masts, etc., per lineal foot	$0 01
Spruce or pine piling, per lineal foot	0 00¼
Hemlock, per M superficial feet (full scale)	0 40
White birch logs, for spool wood per M superficial feet	0 65

And for other descriptions of lumber, such as knees, foot hooks, cordwood, etc., etc., twelve and one half per cent. of the market value thereof at the mill, place of shipment, or place of consumption in the province.

No spruce trees are allowed to be cut under license which will not make a log at least 18 feet in length and ten inches diameter at the small end. Licenses are subject to renewal by the first day of August in each year.

According to the twenty-fifth annual report of the surveyor-general, the receipts from the sale of timber licenses during the year ending October 31st, 1895, were $13,886.25, against $6,122.33 for the previous year. Renewals of timber licenses produced a revenue of $25,974.00, and net stumpage $100,142.39. In the year 1892 an extension of the term of leases was made from ten to twenty-five years, and since the introduction of this system the sales of timber licenses have largely increased. Of late there has been greater competition at sales of Crown lands, and lumbermen are said to evince a strong desire to protect from fire, as far as possible, the lands purchased by them.

It is estimated that there are within the province upwards of 700 saw mills and 150 shingle mills, but these figures cannot be taken as accurate. Situated on the St. John and Miramichi rivers are some of the finest mills to be found in Canada. Excellent shipping facilities are afforded for catering to the European and other foreign trade, which gives promise of more rapid development in the future.

The following figures show the exports to Europe for the past ten years :

	Ft. B. M.		Ft. B. M.
1886	276,000,000	1891	253,000,000
1887	250,000,000	1892	325,000,000
1888	277,000,000	1893	312,000,000
1889	369,000,000	1894	326,000,000
1890	293,000,000	1895	291,000,000

Among the principal shippers to the foreign market may be mentioned Hon. J. B. Snowball, of Chatham ; Alex. Gibson, of Marysville ; W. M. Mackay, Geo. McKear, J. & L. B. Knight and Cushing & Co., of St. John.

MR. ALEXANDER GIBSON.

Mr Alexander Gibson, of Marysville, whose portrait we again present, is known as the lumber king of New Brunswick. His mills are situated on the Nashwaak river, near Fredericton.

Mr. Gibson is the owner of thousands of acres of timber lands, five saw mills, a large cotton mill and the Canada Eastern railway. He is the shipper annually of upwards of one hundred million feet of lumber to different markets, chiefly to Great Britain. Over a thousand persons are directly in his employ in summer, and upwards of two thousand in winter, in connection with his lumbering operations. Six hundred men are employed stream driving in the spring, and about the same number in the cotton mill constantly.

At Marysville he owns three saw mills, one cutting long lumber, another shingles and another lath. The spruce is cut into deals for the English market, being towed down the St. John river to the harbor of St. John for loading on steamers. The cedar logs are cut into shingles, the clears and extras for the United States market and the other grades for the provincial market. The laths and hemlock also go to the United States market.

He has two mills at Blackville, one cutting hemlock and the other spruce. Last year the cut was 5,000,000 feet each of spruce and hemlock, and about 3,000,000 feet of cedar.

Besides the cut of his own mill Mr. Gibson buys large quantities of lumber for shipment to the British market. His cut averages about 40,000,000 feet annually, while the amount of his shipments to the British market alone exceed 80,000,000 feet per year. Since he began operations on the Nashwaak he is said to have marketed fully a thousand million feet of lumber from his own mills there and at Blackville.

Like many other men who have been eminently successful, Mr. Gibson began life without any capital, working with his axe for the ordinary woodman's wage. Afterwards he commenced business at Milltown, and later on removed to Lepreaux, where he acquired a small fortune. Not feeling satisfied he removed to the Nashwaak, where he laid the foundation of the extensive establishment which exists to-day.

THE ABERDEEN MILLS, FREDERICTON.

THE ABERDEEN MILLS.

The Aberdeen Mills are located at Fredericton, and were built some three years ago by Messrs. Donald Fraser & Sons, the firm consisting of Donald Fraser, sr., and his two sons, Donald and Archie. They acquired wealth and fame as lumbermen at River De Chute, where they still have a very fine water power saw, shingle, clapboard and lath mill, which they run to its full capacity. Their experience in the manufacture of clapboards led them to make radical improvements in the machinery required for the purpose, and while making and testing those improve-

ments they saw where changes for the better could still be made if building anew. Some years ago they began looking around for a suitable site for milling, as they found it difficult to hold the logs they required for the season, and after consideration decided to build at Fredericton. The mill is about one mile above the provincial parliament buildings, and very prettily situated. So far as scenery from the mill is concerned, there is perhaps nothing to compare with it in Eastern Canada. The grand St. John river is just in front; on the opposite side the placid and enchanting Nashwaak river unites its waters with the St. John; a mile or so above in the main river are to be seen beautiful islands; looking down the river on the opposite side is the village of St. Marys; a little further is the village of Gibson, where the Nashwaak river empties into the St. John. Some three miles up this river is to be seen a great cloud of black smoke, which comes from the chimney of A. Gibson & Son's great cotton factory at Marysville; the long spans of the wooden bridge from Fredericton to St. Marys show up nicely, while a mile further down the splendid iron railway bridge catches the eye—both bridges being about three-quarters of a mile in length. One cannot get a very good view of Fredericton from the mill, as the location is flat. Across the river the land rises gradually from the river bank, where are nicely cultivated farms with neat houses and surroundings for a few miles; then as far as the eye can reach can be seen the rich green of the spruce, with here and there a patch of hardwood, the leaves of which are now in all the variegated hues imaginable. Taking in the whole as a panorama one cannot help feeling that he is near the "Celestial City."

Fearing that our readers cannot enter into the spirit of the picture as herein very imperfectly painted, it is hoped that this description of the beauties of this earthly "celestial city," Fredericton, New Brunswick, may be the means of inducing the western people who contemplate a summer trip to stop over at that point, and for a certainty they will confirm all that has been said, and will say that the colors used were not half bright enough.

The Messrs. Fraser having selected the location, erected a very convenient building and equipped it with the best class of machines. Their circular has a capacity of 40,000 sup. feet, clapboard machines of 8,000 pieces, shingle machines—of which they have two "Dunbar"—of 30,000, and lath machines ot 40,000 per day of ten hours. During the greater part of this season they have been running night and day to keep up with orders. The power is steam, a pair of quick motion engines driving the main shaft, from which counter shafts are driven for the various machines throughout the mill. Beginning with a quick motion main shaft, the pulleys are very small as compared with some of the mills using the slow motion engines. The firm make a specialty of clapboards, and have a reputation in that line that only time and a close attention to the business can give. In connection with this branch of their business they have a fine dry house, with a capacity equal to their cut, the clapboards going direct from the saw to it, and from there to the planers, then to the warehouse.

HON. J. B. SNOWBALL.

The firm are also large lumber operators on the Tobique river, getting out from eight to ten million feet per year.

In connection with the mill they are building up quite a village and the business is of great importance to the city of Fredericton.

HON. J. B. SNOWBALL'S MILLS, CHATHAM, N. B.

HON. J. B. SNOWBALL.

The largest producer of lumber on the Miramichi river is the Hon. J. B. Snowball, whose mills are located at Chatham. His annual shipments, principally spruce deals, vary from twenty million to twenty five million feet. His mill is equipped with three gangs, with a complement of trimmers, and has an output of 30,000,000 ft. per year. The product of three other mills in the district is also handled by Mr. Snowball, and is shipped largely to Great Britain, Messrs. Farnworth & Jardine being his representatives there.

Mr. Snowball, whose portrait may be seen on this page, is a native of Nova Scotia, having been born at Lunenburg in 1837. His family is of German origin, but for several generations were residents of Yorkshire, Eng. His connection with the lumber business of the maritime provinces is of long duration, and the vicinity in which he lives owes much of its success to his characteristic enterprise and enduring qualities. In addition to his lumber business, he is also largely interested in several railways of the province and other financial enterprises. He represented the county of Northumberland in the House of Commons from 1878 to 1882, when he retired, and on May 1st, 1891, was called to the Senate. In politics he is a Liberal-Conservative.

C. M. BOSTWICK & COMPANY.

As is the case with many other settlements throughout the Dominion, the village of Big Salmon River owes its existence to the lumbering industry. It is located a distance of ten miles from St. Martins, and the river of the same name is one of the largest on the coast. The estate of C. M. Bostwick & Co. in the vicinity comprises 100,000 acres, or 156 square miles. The site of the mill, with a square mile or so of territory about it, was granted in 1834 to Allen McLean. Mr. McLean sold out soon after to Messrs. Budd & Robinson, who built two small mills of the "jack-knife" variety. The property came into the hands of the late Henry Chubb, by whom it was sold in 1841 to the late Wm. Davidson and James Adams. Mr. Davidson bought out Mr. Adams and remained sole proprietor until his death. He built a modern mill, fully up to date. The site was a considerable distance above the present mill and the lumber was carried to the shore by a tramway.

The first Davidson mill, with the dam, the cook house and other buildings, were carried away in the great flood of 1854. Mr. Davidson built again on the spot where the new mill stands. This mill was burned and in its place was erected a large and well equipped establishment, which was on the property when the Bostwick firm took possession, more than thirty years after. This spring, just as operations were commencing, while five million feet of logs were in the pond and contracts made for the sale of all the lumber as fast as manufactured, another fire swept away the whole structure. A small steam mill on the beach, built by the Davidsons, had been burned some years before.

The property as purchased by the Bostwick firm in 1890 from the Davidson estate included these two mills and a small property with a mill

at Martin's Head. The price paid was the round sum of $100,000.

Preparations for rebuilding were made at once and a few weeks ago the new mill was put in operation. Like its predecessors, it is run by water power, two water wheels driving the machinery. One of these is a 66 inch turbine which was in the old mill. The other is a Blake or Cleveland improved 60 inch wheel, made in St. John. The two wheels are so arranged that either may be run separately, or by the shifting of a belt both may be connected together with the main driving shaft.

The first floor contains all the shafting and has ten feet posts. The action of the machinery is all made as direct as possible, so that the equipment is a model of simplicity and solidity.

The second story contains a gang adjusted for deals and boards, an edger, a deal trimmer, a trimmer to cut into lath stuff, and a lath machine. There is also a splitter to work up defective or broken timber into lath material. The edger was made by Waring, White & Co., of St. John; the lath machine is a Ross patent, built by Harry Allen. The belt is a 15 inch rubber from the Boston Rubber Belting Company.

The mill itself is 110 by 41½ feet. The frame was made under the superintendence of Mr. Robt. Armstrong. The machinery was built by Mr. B. F. Eagles, after plans devised and arranged by Mr. F. M. Anderson, the general manager.

The roof is heavily coated with fireproof paint. The refuse is carried by an endless chain, running in a trough to a dump built up to where the tide surrounds it, and is there burned. The cutting capacity is 50,000 feet per day.

Mr. C. M. Bostwick considers he possesses about the best timbered land on the Bay shore. He says that it has a perfect system of waterways, as the main stream takes in branches just where they are needed to bring in the timber. He has spent a good deal of money in perfecting an outfit of driving dams and is not troubled with having his logs hung up. The logs are cut and driven by contract. The quantity of standing timber suitable for sawing cannot easily be estimated, but Mr. Bostwick expresses the opinion that while he only takes five million a year

HARLOW & KEMPTON'S SAW MILL, MILTON, N. S.

off the property, the quantity standing will always increase, this amount being less than the annual growth.

FROM SOUTH AFRICA.

A letter has been received by the CANADA LUMBERMAN from a firm of timber importers in South Africa, requesting that lumber manufacturers and dealers in New Brunswick, who are in a position to supply the South African trade, should communicate with them, giving specifications of what they can supply. The address of our correspondents will be furnished upon request.

NOVA SCOTIA.

UNLIKE the neighboring province of New Brunswick, the Crown lands of Nova Scotia are purchased outright from the Government, there being no system of timber licenses. While the total area of the province is upwards of 20,000 square miles, or about 13,440,000 acres, not more than 6,500 sq. miles is timbered land, and even much of this is covered with small growth and unfit for lumbering. It is claimed that about 1,500,000 acres are owned by lumbermen, and the balance by farmers and the Crown in equal proportion. Some years ago the province possessed no inconsiderable quantities of white and red pine, but what remains to-day is almost wholly on private property. The spruce forests are now of the greatest value, and furnish an abundance of first-class timber. There is also to be found a fair proportion of hemlock, hacmatac, balsam, etc. Of the hardwoods there is perhaps the greatest supply of beech, birch, maple and ash, which are utilized both for home and foreign requirements.

In the year 1894 the number of saw mills operating in Nova Scotia was roughly estimated at 1,200, while of shingle mills there were over 200. The census returns show that the quantity of timber cut in 1870 amounted to 15,494,000 cubic feet; in 1880 to 27,745,000 cubic feet, and in 1890 to 46,408,000 cubic feet. It will thus be seen that each year the total cut is rapidly increasing. Of the quantity of timber produced, less than one-tenth is required for home consumption, the balance being shipped to foreign markets, principal of which are the United Kingdom and South America, the main shipping ports being Amherst, Halifax and Parrsboro. The shipments of deals, etc., from Nova Scotian ports in 1893 amounted to 109,252,930 sup. feet, and in 1894 to 106,327,250 feet.

The manufacture of pulp is an industry which has already largely added to the prosperity of Nova Scotia, and promises to further develop as the quality of the manufactured article becomes better known. By this means is utilized much of the product of the forest which is not adapted for merchantable timber.

THE LIVERPOOL RIVER.

The traveller along the southern coast of Nova Scotia is rather attracted by the pretty appearance of the town of Liverpool, with its streets overshadowed by rows of beautiful ornamental trees, and its well filled and well kept places of business, the more so as he has travelled over a long and uninviting piece of country before reaching it.

He naturally inquires what the industry of the place is to build up and support, amid apparently unfavorable conditions, such a snug little town.

Among other things, in answer to his question he is told that the river extending up through the town and into the country beyond is the life of perhaps the principal industry of the county of Queens, namely, the manufacture of lumber and pulp. Two miles up the river is the village of Milton.

At present there is a company constructing an electric railroad from Liverpool to the Milton Pulp Co.'s mills at Deep Brook, five miles up the river, which is expected to be in operation this winter.

KEMPTVILLE LUMBER MFG. CO.'S FACTORY, YARMOUTH, N. S.

Two bridges cross the river at Milton at a distance of nearly a mile apart, located at each of which are lumber mills. Principal among them are those of John Millard and Messrs. Harlow & Kempton, the former at the lower bridge and the latter at the upper or Potanoc bridge.

The mills of Messrs. Harlow & Kempton, which we illustrate, are doubtless the best on the river, and being owned by very enterprising men, are kept supplied with nearly all the modern appliances for cutting and manufacturing lumber of all descriptions.

At the time of writing these mills are undergoing quite a thorough repairing, under the supervision of Mr. Duncan Buchanan, of Apohaqui, N. B., a gentleman with large experience in mill building and thorough knowledge of his line of business. He is putting in two of his improved turbines, one of the same kind having been used by this firm for six years with the best of satisfaction.

This firm is now putting in another planer, a band saw and sash and door machinery, which will employ, all told, about forty men.

One mile above Harlow & Kempton's mill is the establishment of the Milton Pulp Co., the principal shareholder of which is the Hon. A. G. Jones, of Halifax. This mill is first-class in every respect, and appearances indicate that the company intend to be fully up to the times, as they are constantly adding the latest improvements in pulp mill machinery. The capacity of the mill is forty to fifty tons of pulp daily, which seems to be fully maintained as time goes by, under the able and skillful management of Mr. J. S. Hughes.

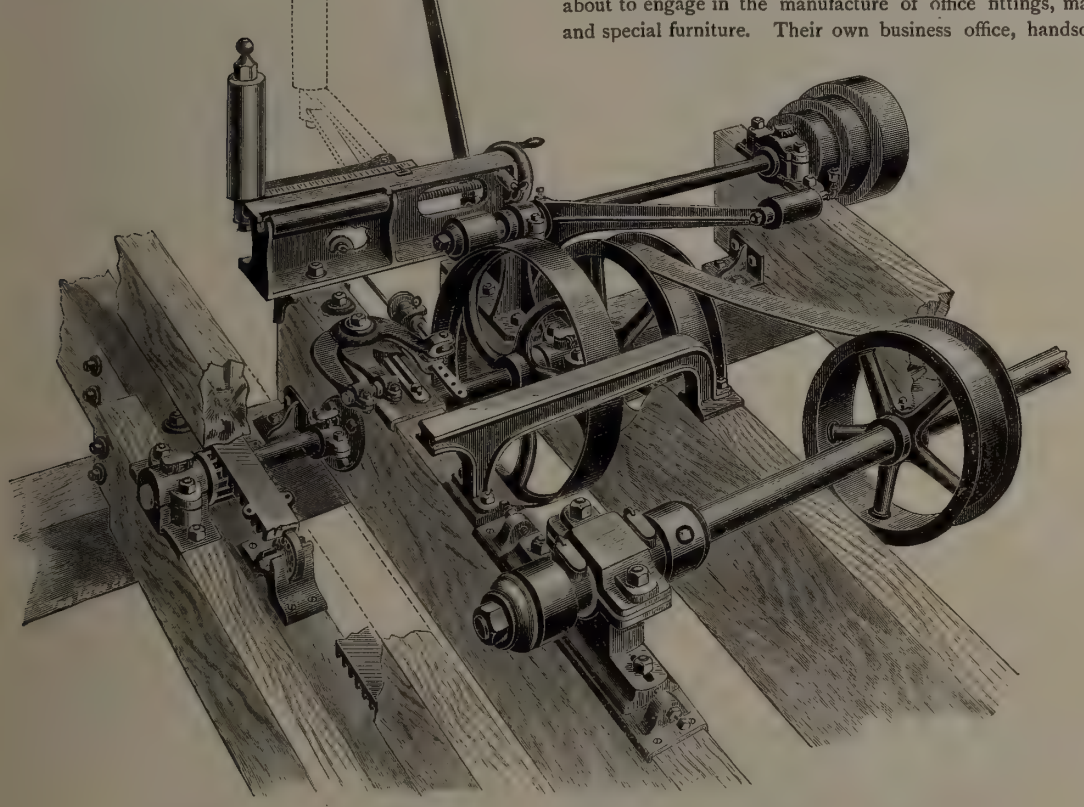
KEMPTVILLE LUMBER MANUFACTURING COMPANY.

The mills of this company are located at Kemptville, N. S., while they also have a large factory and warerooms at Yarmouth, a cut of which appears herewith. They are manufacturers and dealers in lumber of all kinds, kiln-dried sheeting and flooring, doors, sashes, mouldings, clapboards, shingles, brackets, ballusters, laths, box shooks, and builders' material generally. At present they are making a specialty of mantels in quartered oak and white wood, some of the designs being especially beautiful. The manager at Yarmouth is Mr. A. H. Poole, who reports the company's business as steadily increasing.

NEW PORTABLE SAW MILL.

THIS mill is designed to meet the wants of those requiring a mill adapted to a wide range of work, using either light or heavy power. The Sawyer & Massey Co., Ltd., of Hamilton, who are the manufacturers, claim that it is simpler and has fewer parts than other mills, is easier to set up and keep in order. The husk frame is a strong wooden frame with an extension to receive carriage tracks. This feature insures quick setting up and perfect alignment of the track with the saw. The frame will take saws up to fifty-six inches diameter. There are three heavy boxes for the saw mandril, one box on each side of the main drive pulley. All shafts are steel and large in diameter. Pulleys are large, with wide faces, so as to insure no slipping of belts. The lever for controlling the friction feed and gigging back are one; by simply throwing the lever back or forward, it throws the gigging back in or out of gear. The sawyer's set works on the carriage are so placed that each time the carriage comes back the lever comes to the sawyer's hand, so that he can set to saw any desired thickness without leaving his position at the feed and gig back lever, and by simply turning his hand he can throw all pawls out, and the opposite motion of lever which brought the knees forward will gig them back ready to put on the next log.

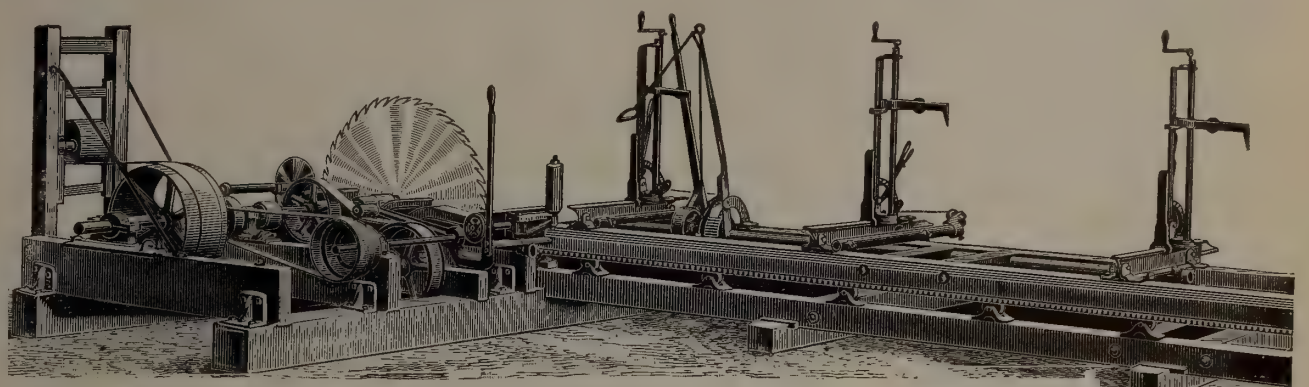
In connection with the set works there is a lumber gauge which attaches to the husk or saw frame within easy reach of the sawyer, so placed that any desired thickness can be quickly set and a uniform thickness preserved during any entire day's sawing. The set works have a two inch shaft running the full length of carriage, sustained under each head block by a hanging box bolted to the log seat. With each mill is furnished



SAW GEARING—NEW PORTABLE SAW MILL, MANUFACTURED BY SAWYER & MASSEY CO.

three of Inksetter's head blocks which can be set simultaneously, or each knee can be moved separately for tapered logs. Each head block is also provided with Inksetter's double ended gravity and screw dogs. This dog will securely hold any sized log down to the last board. The friction feed and gigging back lever, lumber gauge, set works, patent head block with sliding knees, and patent dogs are all under the control and eye of the sawyer.

The saw mandril boxes are long and strong, lined with the best composition metal, have a pivoted bearing and can be adjusted by set screws so as to give any amount of lead to the saw. The boxes are provided with large oil cavities in each end of box, so that oiling once a day is sufficient. The lumber rollers on the husk frame are carried by heavy stand boxes bolted to the frame. The revolving splitter is provided with means for adjusting endways. The saw guide is made so that both jaws can be moved together, so as to give lead to the saw inwards or outwards, as may be required, or either jaw can be adjusted independently. The carriage it 18 feet long and made of yellow pine, well seasoned, well put together, and of sufficient strength to hold the largest logs without the least tremble. The track ways are made of well seasoned lumber, coupled together with cast iron coupling so as to bring the track in perfect line when brought together.



NEW PORTABLE SAW MILL, MANUFACTURED BY SAWYER & MASSEY COMPANY

TRADE NOTES.

Messrs. John Starr, Son & Co. have just installed a fifty-light plant for the St. Croix Paper Mills Co., of Hartville, N. S.

The Small & Fisher Company, of Woodstock, N. B., received an order recently from the Pacific coast for three shingle machines. This firm had an attractive display at the recent St. John exhibition.

The S. Hadley Lumber Co., Ltd., Chatham, Ont., are about to engage in the manufacture of office fittings, mantels and special furniture. Their own business office, handsomely fitted up in quartered oak, is conclusive evidence of their ability to turn out work of the highest class in the lines mentioned.

Messrs. John Starr, Son & Co., Halifax, have recently installed a 200-light plant for Kilgour Shives, of Campbellton, N. B. This is used for lighting Mr. Shives' extensive lumber mills and yards.

The "Unique" telephones as manufactured by John Starr, Son & Co., Halifax, are having a large sale. This firm have recently supplied a number of telephones and switch-boards to Campbellton and Quebec, both of which orders were "repeats," which speaks well for the "Unique" telephones, which have now been on the market for several years and give perfect satisfaction.

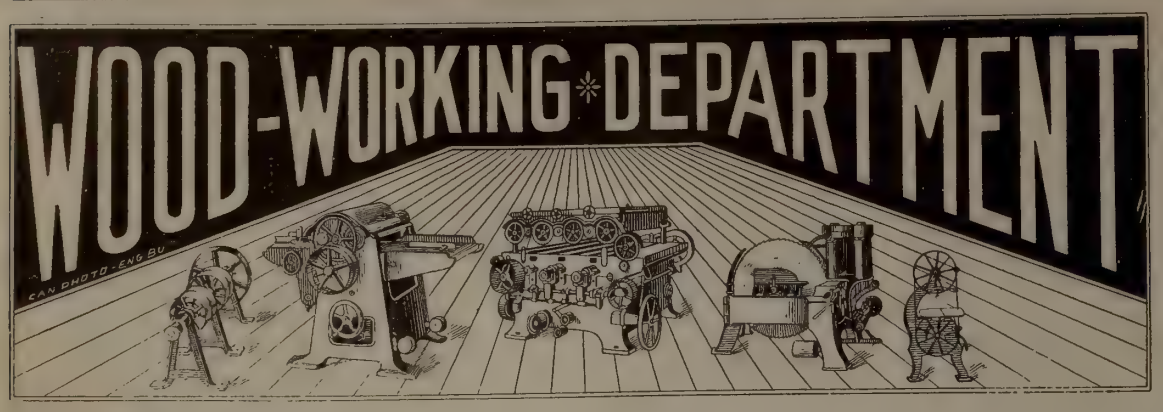
The Dodge Wood Split Pulley Co., of Toronto, have recently added a new department to their business, viz., the making of shafting, hangers, etc., and report a good outlook for business in these lines.

F. Stancliffe, of Flat Lands, N. B., has had a 50-light plant installed in his shingle mill. This plant was supplied and installed by John Starr, Son & Co., of Halifax, N. S.

The firm of B. R. Mowry & Son, of Gravenhurst, Ont., have attained a wide reputation as manufacturers of saw mill machinery, castings of all kinds, steam niggers, and general repairs. But perhaps their greatest success has been in connection with the "Boss" shingle machine, which is now being used by manufacturers in every part of the Dominion. They recently shipped a complete shingle machine, jointer and packer, to Mr. G. O. Buchanan, of the Kootenay Lake Saw Mill, Kaslo, B. C. An instance of the popularity of the "Boss" machine is shown by the fact that McLachlin Bros., of Arnprior, purchased two machines, and in the following year duplicated the order. The firm of B. R. Mowry & Son has been established since 1882, and is composed of Mr. B. R. Mowry and his three sons.

The Ottawa Saw Works Co., of Ottawa, inform us that they have, during the past year, made large additions to their plant, especially in the band saw department. They have erected furnaces and put in the latest improved machinery for the manufacture of band saws, and consider that they now have the best equipped band saw plant in America. They are supplying this class of saws to most of the large mills throughout Canada, and their increased trade speaks for the quality of the work. They have had to add to their staff several expert workmen who have come direct from the best American saw shops during the past year. In addition to band saws they make a specialty of circular, gang, shingle and all kinds of mill saws. This concern commenced operations about two years ago in Ottawa. The active members of the firm being practical saw men, it is not surprising that they met with success. Their trade extends throughout Ontario, Quebec, British Columbia and the maritime provinces.

Much attention has been attracted to a dry-kiln installation at Glen Jean, W. Va., in the plant of the Glen Jean Lumber Co. This mill is recognized as up-to-date in all its equipment, and the enterprising president of the company, Mr. J. J. Robinson, is a believer in advanced methods. The dry-kiln plant is the compression system installed by the Emerson Co., of Baltimore. We have received a sample of quarter-sawn oak flooring dried in this kiln. It is thoroughly dried and shows a splendid finish. The sample illustrates the advantages of the Emerson system, and lumber dried by this process should find a wide demand. Favorable comment regarding the Emerson system is heard on all sides. Recently the company received from Edward E. Rueter, superintendent of the Globe Furniture Co., High Point, N. C., the following letter: "After a person has used half a dozen or more of the various kinds of so-called patented dry-kilns without obtaining satisfactory results, he is calculated to become doubly cautious when desirous of making a change from former experience to another system in order to reach perfection in the drying of lumber. Such was the question with us last April, when we looked about for a method to dry lumber in a more perfect manner, and at the same time more economical in the long run. Past experience taught us to seek such results, if they could be obtained, regardless of first cost. This question now is solved, after having used your method of drying for several months. We congratulate your company on having a better method for the drying of lumber than any heretofore used by us. The kiln does what you guaranteed it would do, and it is with pleasure that we recommend its use to others in need of a first-class system."—Manufacturers' Record, Baltimore.



A COMPLETE WOOD-WORKING ESTABLISHMENT.

THE many improvements which have been made in recent years in wood-working machinery are forcibly illustrated by a visit to the establishment of Messrs. J. B. Smith & Sons, on Strachan avenue, Toronto. There the manipulation of lumber into the various classes of stock, such as doors, sashes, mouldings, blinds, boxes, etc., is carried on at a surprising degree of rapidity.

The firm is composed of Messrs. John M., Robert, William J. and James H., four sons of the late J. B. Smith, and the business has been established since the year 1851.

The lumber for the factory is obtained from their saw mill at Callendar, a siding from the Grand Trunk Railway running through the yard adjacent to the mill and affording track room for twenty-five cars. The yard covers an area of 3¾ acres, and is kept constantly filled with the various classes of lumber required for their purpose, some of which is obtained from the Southern States. The factory is a three-storey brick structure, 200 x 50 feet in size. The machinery is driven by a 150 h. p. Goldie & McCulloch engine, backed by two boilers. The factory and dry kiln is heated by hot air forced through coils of pipe with a separate engine and fan. This is accomplished by means of a Moffatt feed water heater and purifier, which also purifies the water and removes the scale, thereby preventing it from getting into the tubes of the boiler.

The machinery on the ground floor consists of four planers and matchers, three four-headed stickers, two band saws, circular re-saw and other cross-cut and wood saws. One of these matchers is capable of matching all four sides up to 6 x 24. The second floor contains a double set of sash and door machinery, including an "Invincible" polisher or planer, capable of dressing stock 60 inches in width and 8 inches in depth, which is done by means of sand-paper drums. This planer will perform, it is claimed, as much work as twenty-five men. At the present time the firm have large orders for veneered doors, which they manufacture in whitewood, black and white ash, and quarter cut oak. In a small room off this floor is the glueing department, where the veneers are glued together. This is kept warm by means of the system of coils before mentioned. The top storey is devoted to a store room for mouldings, sash and doors and kiln-dried material. The size of the dry kiln is 50 x 18 feet.

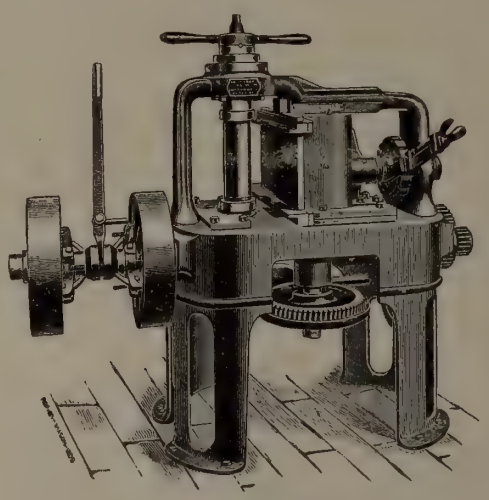
Fuel for the boilers is furnished by the shavings and sawdust, which are blown by fans through galvanized iron pipes running up the outside of the building to cyclone separators on the roof, which separate the dust from the shavings and sawdust, the latter dropping into hoppers and being carried to the boilers.

A machine shop is also in connection with the premises for repairing.

DROP CARVING MACHINE.

THE accompanying illustration represents a drop carving machine which is said to possess much merit, and which has been patented in the United States, Canada and European countries.

The machine is simple and easily operated. When the carvings leave the machine they are ready to be placed on the furniture. They can be made of any thickness from one-sixteenth to an inch thick. A furniture manufacturer who



DROP CARVING MACHINE.

has been using the machine says: "Prior to putting in a carving machine I employed eight hand carvers and five spindle carvers. I am now doing all of the carving formerly done by this force of men with one drop carving machine and one man, and am using far more carving on my furniture than when I used the old method; besides this, my saving is very large in that the machine does all of the scroll sawing and sanding of the carvings."

BAND VS. CIRCULAR-SAWN LUMBER IN THE PLANING MILL.

NOT many numbers since considerable was said comparing band and circular saws and their work. Some writers were quite hard on the band, condemning its work without scruple, and giving it no credit except that it could saw; and it was a foregone conclusion that it sawed badly.

Self interest looks only from one standpoint, and whatever comes under the scope of the individual observation is either all sunlight or all shadow. The drummer, selling for a house making only circulars, can see no good in the band, and, of course, the band drummer sees only perfection in the shining band, which saves half the stock in each cut—which may, or may not, be even the shadow of truth.

I haven't the least prejudice against either, having no interest in either except to have the work go through and come out of the planing machine as nearly perfect as possible. It makes no difference to me if a plank is two inches thick at one end and three inches thick at the other, or whether it is band or circular sawed. The question with me is the wear and tear of the machine in planing it, and the loss of time made necessary in such unevenly sawn stock.

I claim, as I will try to show, that all of this poor work comes from either not knowing how to keep saws and machinery in order, or from a desire to rush the work. No matter what shape it comes out, as long as it comes out and is counted and shipped. The stock is sawn and shipped and the planer does the rest. You planing mill machine men who make a specialty of running yellow pine stock, know how it is.

From this standpoint I give you a result of some of my observations running circular-sawed stock. Here is a lot of 5-4x3, sawed by Tift, Brunswick, Ga. The sawing is uniform in width and thickness on much of the stuff, only the cut of every tooth can be seen. So much circular-sawed work shows the feed that this is a very noticeable thing. Some of this stock is so nicely sawn that even the tooth-marks are scarcely visible. Of the 20,000 feet in this little order there were no poor pieces. The strips were very uniform in thickness and width, and the sawing was perfection itself.

This shows one fact in circular sawing: that it can be well done, and that some people can and do keep their saws in good shape. Timber from the same parties always comes sawed squarely, even in size from end to end, and only the tooth marks are to be seen.

About this tooth mark business, what I mean is this: Instead of the feed mark, which is almost invariably seen in sawing, and by which we tell how much the saw is feeding, we see only the cut of each single tooth. This lot under consideration showed just the tooth mark.

Put alongside of this another lot which was shipped us from Fernandina; the same kind of stuff, 5-4x3. All of this lot showed the feed mark very plainly. Some was so bad that you could put a straight-edge across and see one-sixteenth of an inch between the ridges, while the strips in width often vary an inch from end to end, and often almost as much in thickness. A considerable lot had to be thrown out from thin ends, or thin in the middle. Of the 15,000 feet in the lot, as much as 500 feet had to be thrown out on account of thin ends and thin centres.

Now take two lots of heavier stock, the shipment and sawyers of which are not known to me. The first lot of stuff, 3x12, from Fernandina, p4s, was even in thickness and width. The sawing was good, the feed marks showing about as usual, but not badly. We ran all day on this lot on a 40-foot feed, and not a belt slipped nor did we have to shut off feed to catch up speed. When the a st plank went through I knew we had made a remarkablv fine run.

Contrast with this what I shall call the gulf lot, 3x8, also p4s. This lot had all the qualities of the 5-4x3 spoken of, wide and narrow ends, thick and thin ends, and middles varying often more than an inch in both. We had to have the ends of much of it chamfered in the thickness. I took off the outside chip-breaker to prevent breaking it and waded through with the feeder's hand on the shipping lever. Of course we put it out, but when we shipped the last plank of this lot out I felt as the parson did who was called upon to make remarks at the funeral of a noted jockey and gambler. He began by reading one of Watts' hymns, the second line of which reads, "Thank God the curse's removed."

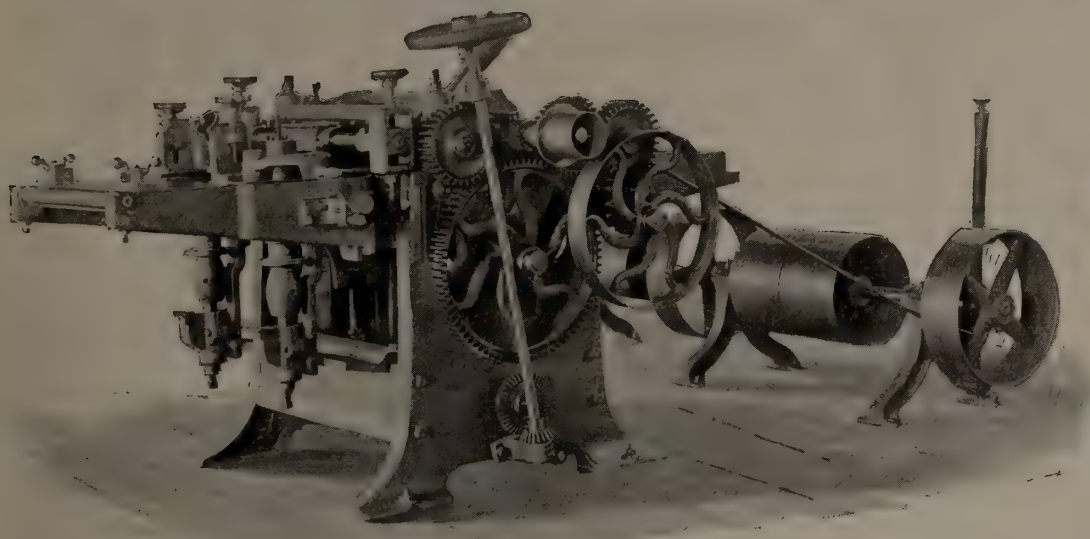
We are repeating these things from day to day as orders come in. I give these instances to show that the circular saw can do good work as well as poor. It all depends on the way it is handled. We see two lots of planed stuff come in, one nearly perfection, the other anything but desirable.

I might say the same about the band-sawed stuff that comes to us. We have lots of 5-4x12 North Carolina stock shipped us by two different parties. Both are band sawed. One is all ridges, the other as nice as can be sawed.

The trouble is with the man handling the machines. It is worse than folly to say that the band is a failure or that it cannot fairly compete with the circular in every place where they may be brought into competition. Place the trouble where it belongs. An old aphorism says: "What man has done, man can do;" hence, if one man can make a circular saw cut so that every tooth will show exactly the same cut, another man can if he has the right education and qualifications.—"E. L. O." in Woodworker.

WOOD-WORKING MACHINERY..

Suitable for Saw Mills



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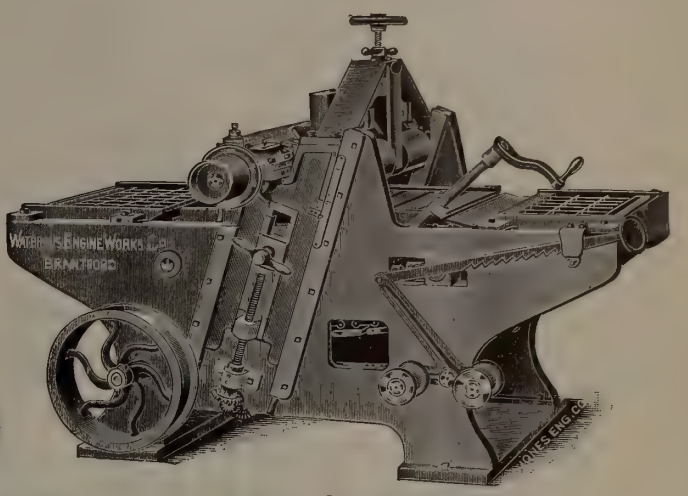

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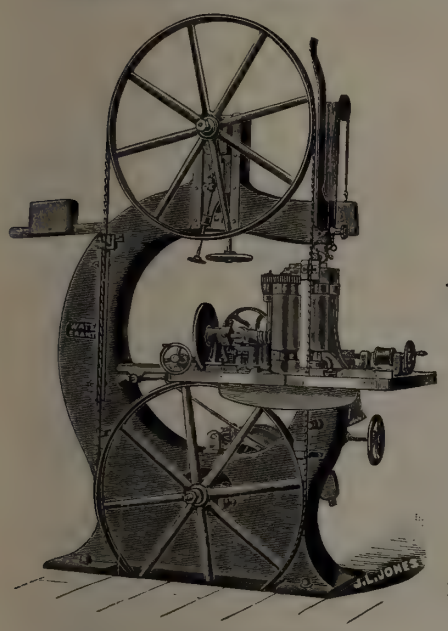

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Band Re-Saws

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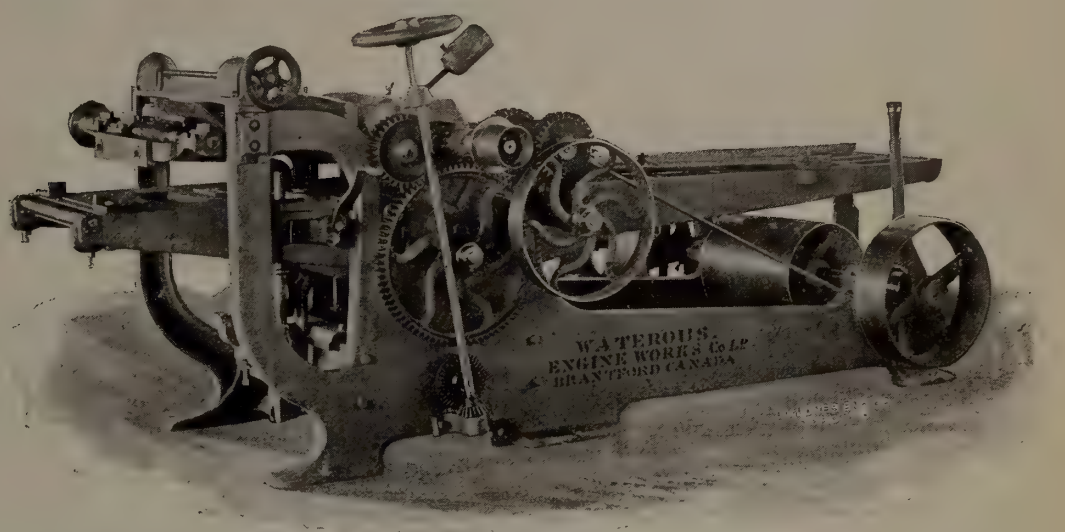
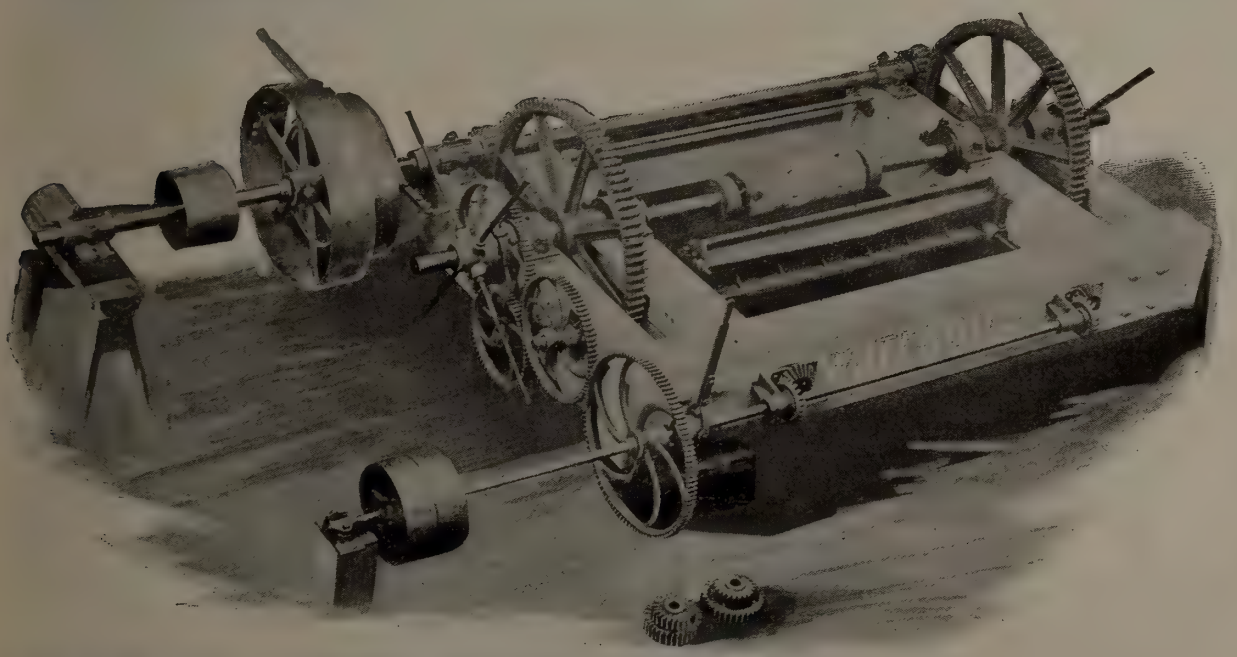


THE CHAMPION PLANER, MATCHER AND MOULDER, with Extended Frame and Table.—Mandrel Double Belted—all Feed-Rolls Driven—a Heavy, Fast and very popular Machine.



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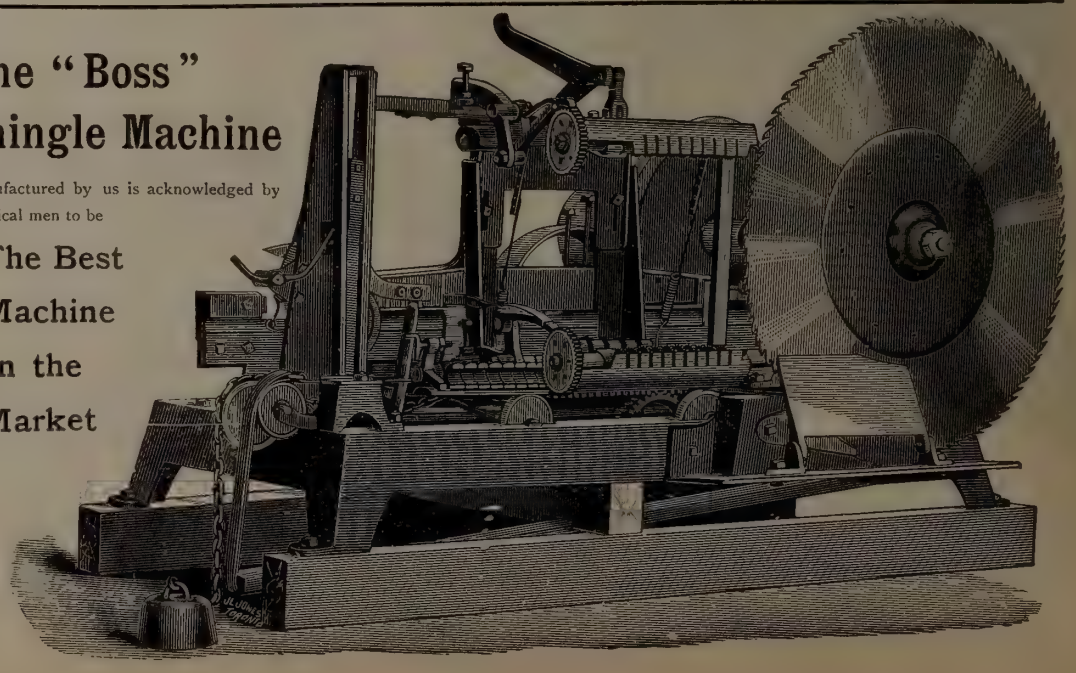

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The following are given as rules for calculating speed of pulleys :

I. The diameter of the driver and driven being given, to find the number of revolutions of the driven :

Rule. Multiply the diameter of the driver by its number of revolutions, and divide the product by the diameter of the driven ; the quotient will be the number of revolutions.

II. The diameter and revolutions of the driver being given to find the diameter of driven, that shall make any given number of revolutions in the same time :

Rule. Multiply the diameter of the driver by its number of revolutions, and divide the product by the number of revolutions of the driven ; the quotient will be its diameter.

III. To ascertain the size of the driver :

Rule. Multiply the diameter of the driven by the number of revolutions you wish to make, and divide the product by the revolutions of the driver ; the quotient will be the size of the driver.

WOMEN IN SAW MILLS.

The employment of female labor, says the London Timber Trades Journal, is not unusual in the box-making establishments of Great Britain, but the tending of saw mill machinery by the fair sex is an innovation yet to be made. They are ahead of us in this development in America —as usual—for we understand that the saw mill of the Missouri Lumber and Mining Company, of Grandin, Mo., is "manned" (if the term is allowable) by women. A few weeks ago they built a new mill for dealing with Beaver Dam soft pine, and it was decided that only gentle hands should touch the productions. A woman was placed in command of the engine, another took the steam feed, nigger and kicker in hand, others were placed in the band saw department, and even the lath room was not forgotten, that branch of the business obtaining its full complement of fair workers, all attired in neat blouses and skirts. The concern has frequently 25,000,000 feet of lumber in stock, and the annual capacity of the mill is nearly three times that quantity.

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Congou tea, good style and cup quality @	11c. "	Evaporated apples (choice brights)	5½c. "
Choice medium beans	80c. bus.	Dried apples	3¾c. "
		Dried peaches	5½c. "
		Dried plums	6½c. "
		½ brls fine quality rich syrup	2c. "

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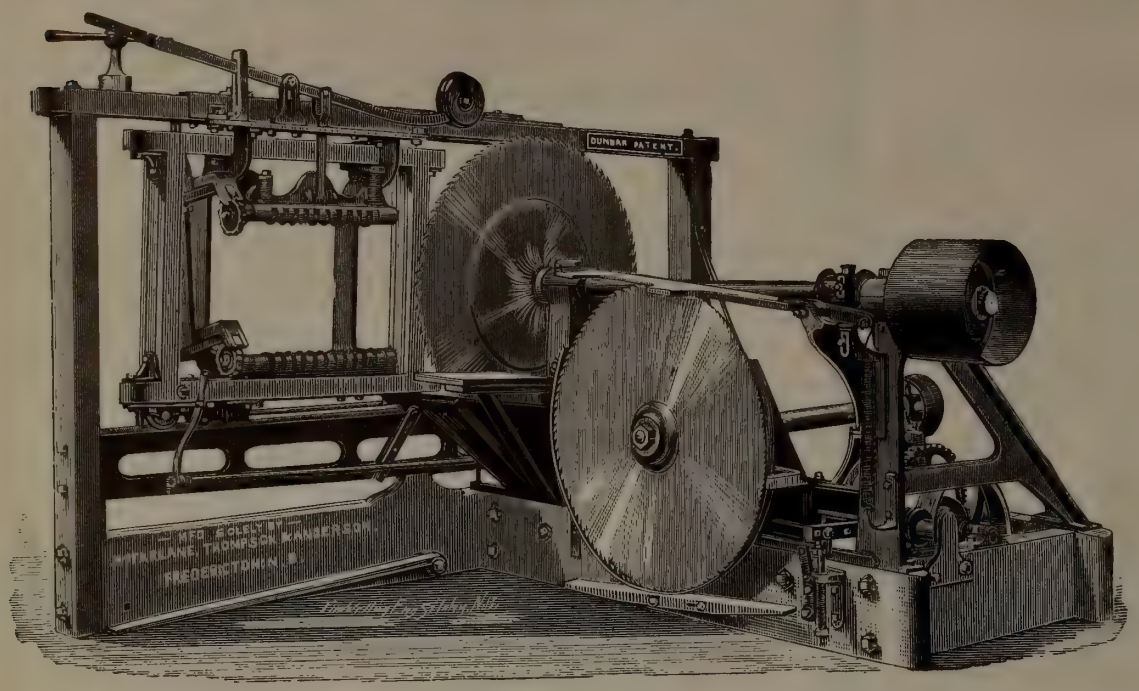

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DUNBAR SHINGLE MACHINE

Universally Admitted to be the Best Shingle Machine made

Read the Following Testimonials:

CAMPBELLTON, N. B , February 13th, 1896.

MESSRS. McFARLANE, THOMPSON & ANDERSON,

Gentlemen,—I have been from home and only received yours of 8th, this morning My opinion of the Dunbar Machine is as follows: I have been using the Dunbar Shingle Machines of your manufacture for these past ten years, and have found them most satisfactory machines, in regard to quality of work; quantity of shingles that can be sawn, and freedom from repairs. I have compared your machine with other makes and prefer yours to any others. All experienced shingle sawyers prefer your machine to work on, to those of other makes. I have received to-day, a letter from Allston Cushing, asking my opinion as to your machine, and I shall write to him and strongly advise him to take your machine, (he writes in re Sumner Co. Mill). Yours truly, KILGOUR SHIVES.

We have since sold Sumner Co. the four machines referred to above.—McF. T. & A.

CAMPBELLTON, N. B., February 12th, 1896.

McFARLANE, THOMPSON & ANDERSON,

Dear Sirs,—I want you to ship me two more of your Dunbar Shingle Machines this spring, which will make thirteen in my mill; have used nine of them for four years, and they have given first-class satisfaction. Three of these machines I run all the year. Have one of your large carriage machines cutting 18 inch shingles, and last July in 27 days cut 540,000 of 18 inch shirgles on it, an average of 20,000 each day, and I have cut 27,000 on one of your machines in ten hours. I find no difficulty in getting sawyers to work when they know you use Dunbar machines.

Yours truly, A. E. ALEXANDER

ST JOHN, N. B , February 12th, 1896.

MESSRS. McFARLANE, THOMPSON & ANDERSON, Fredericton, N. B.

Dear Sirs,—In reply to your favor of 8th inst., I beg to say, that I have used the Dunbar Shingle Machines for the past ten years or more and they have given me every satisfaction. I used two of them alongside of two American machines for a time, and so had an excellent opportunity of judging of their merits, and as they proved to be the best I took the American machines out and replaced them with the Dunbar. Yours truly, L. M. JEWETT.

JACQUET RIVER, N. B., February 14th, 1896.

MESSRS. McFARLANE, THOMPSON & ANDERSON, Fredericton, N. B.

Dear Sirs,—I have been using the Dunbar Shingle Machines the past four years, am well satisfied with them and believe them to be the best made. Yours truly, JNO. CULLIGAN.

NEWCASTLE, N. B., 14th Feb., 1896.

MESSRS. McFARLANE, THOMPSON & ANDERSON, Fredericton.

Gentlemen,—The Dunbar Shingle machines, purchased from you in 1886 and 1887, have been in constant use during summer months since that date. They have given perfect satisfaction and now look as strong and fit for work as when first set-up, and to all appearance will be good for another ten years. Yours truly, RICHARDS & HICKSON.

FREDERICTON, N. B., Feb. 13th, 1896.

MESSRS. McFARLANE, THOMPSON & ANDERSON, Fredericton, N. B.

Gentlemen,—In reply to your enquiry, we have to say that we have been using the Dunbar improved Shingle Mills, purchased from you for several years, to our entire satisfaction. We do not hesitate to recommend them to intending purchasers, as we believe they are the best Machine made They are easily kept in order; we have been using two of them seven years and they seem as good as new

Yours truly, SIMMONS & BURPEE.

DRUMMOND, N. B., May 13th, 1896.

McFARLANE, THOMPSON & ANDERSON, Fredericton, N. B.

Gentlemen,—Yours of the 7th came to hand a few days since, and in answer would say that we consider the Dunbar Shingle Machine the best in the market. We have used 4 or 5 different makes but find none to be as good as Dunbar's.

Yours truly, STEVENS LUMBER CO , By J. S. Stevens.

CAMPBELLTON, N. B., 12th Feb., 1896.

MESSRS. McFARLANE, THOMPSON & ANDERSON, Fredericton, N. B.

Dear Sirs,—In reply to yours of 8th inst., would say. that I have three (3) Dunbar Shingle Machines running in my mill for the last four years and have found them very fine machines, and have not needed much repair. I consider them superior to any shingle machine I have ever used and can safely recommend them to any one requiring a shingle machine.

Yours truly, DAVID RICHARDS, Per F. S Blair.

RIVER CHARLO, N. B., Feb. 13th, 1896.

McFARLANE, THOMPSON & ANDERSON, Fredericton.

Gentlemen,—Your favor received. We have six Dunbar Shingle Machines which we have run seven years, and in that time have never had to put any repairs on them and they are still running in good order. We pronounce them to be the best machines we have ever seen for cutting shingles.

Yours truly, GRAY & LAWRENCE BROS. CO.

FREDERICTON N. B., Feb. 13th, 1896.

MESSRS. McFARLANE, THOMPSON & ANDERSON, Fredericton, N. B

Sirs,—The Dunbar Shingle Machine manufactured by you is a thoroughly good and satisfactory machine. In comparison with other machines it is superior in the matter of construction, as regards getting out of repair and in even thickness of shingles made. JOHN A. MORRISON.

BRIDGEWATER, NOVA SCOTIA, Feb 13th, 1896.

MESSRS. McFARLANE, THOMPSON & ANDERSON, Fredericton, N. B

Dear Sirs,—We have yours of the 10th inst., inquiring our opinion of the Dunbar Shingle Machine. The machine, "Dunbar," we bought from you has been running the past five years, cutting pine and spruce shingles and during this time has not lost one-half hour by breaks, or cost ten cents for repairs. It is heavy, strong and well put up, does good work, and is, we think, the best shingle machine we have ever seen We are running two other machines of another style and would not give the Dunbar for both the others.

Yours truly, E. D. DAVISON & SONS, Limited, per C. H. Davison.

ST. JOHN, N. B., Feb. 13th, 1896.

McFARLANE, THOMPSON & ANDERSON,

Dear Sirs,—Yours of the 8th inst. at hand. We are running fourteen machines, six of them are Dunbars and they have given great satisfaction, and if we were going to buy more we should take the Dunbar in preference to any other in the market to-day. Yours truly, MILLER & WOODMAN.

CAMPBELLTON, N. B., Feb. 12th, 1896.

MESSRS. McFARLANE, THOMPSON & ANDERSON, Fredericton, N. B.

Dear Sirs,—Yours of 10th to hand, contents noted. In reply would say, after having some fourteen years experience in handling very many different makes of shingle machines the Dunbar crowns them all for a first-class shingle machine, and I could with every satisfaction recommend them to any person requiring a first-class machine, and to take no other. Yours truly, WM P. GRAY.

ST. JOHN, N. B., Feb. 13th, 1896.

MESSRS. McFARLANE, THOMPSON & ANDERSON, Fredericton, N. B.

Gentlemen,—Replying to yours 8th inst. I have had nine of your Dunbar Shingle Machines in my mill, in use for the past four years and they have given entire satisfaction, and I have found them first-class shingle machines in every particular, so that if I were putting in any more machines I would put in the Dunbar. Yours truly, CHARLES MILLER, per McDonald.

LOWER SOUTHAMPTON, Feb. 18th, 1896.

MESSRS. McFARLANE, THOMPSON & ANDERSON.

Dear Sirs,—The Dunbar Shingle Machine which I purchased from you has given perfect satisfaction. I would certainly choose it before other like machines, it being the strongest, most durable and easy running one I ever saw. I can highly recommend the friction wheels for running the edging saw, they being the cheapest and easiest set up. Respectfully yours, JUSTUS L. STAIRS.

METAPEDIA, P. Q., Feb. 13th, 1896.

McFARLANE, THOMPSON & ANDERSON, Fredericton, N. B.

Gentlemen,—We have been using the Dunbar Shingle Machine for eight years. We have had quite an experience with other shingle machines of different make. We feel to-day like saying, that we would not put in any other machine if we got it for putting it in.

Yours truly, C. B. CHAMPION & SON, per W. C.

ST.-MOISE STATION, Feb. 21st, 1896.

McFARLANE, THOMPSON & ANDERSON, Fredericton.

Dear Sirs,—I have been foreman in shingle mills for the last twelve years, and used different machines and would rather pay $50.00 (fifty dollars) more for the Dunbar Machine than any other machine. We have used 2 Dunbar Machines at Sayabec, in Messrs. Schell, Macpherson & Co.'s shingle mill, and for four years I was foreman there. I must say that we never made one cent's repair on the Dunbar Machines. NIL CAYOUETTE.

CONNORS, N. B., Feb. 14th, 1896.

MESSRS. McFARLANE, THOMPSON & ANDERSON.

Gents,—In reply to yours of Feb. 10th, 1896, I beg to say that the Dunbar Shingle Machines now in operation by me, in the Robert Connor's Mill, so called, that was purchased from you, has proved very satisfactory, and I believe them to be a m dern machine in all respects.

Yours sincerely, J. J. WHEELOCK

MARIA PULP AND LUMBER CO., MARIA, 12th March, 1896.

MESSRS. McFARLANE, THOMPSON & ANDERSON.

Gentlemen,—Our company will probably want nine shingle machines. After the experience which I had with the Dunbar bought from you, I feel disposed to recommend this machine for our new mill; as a matter of fact I did recommend it. On such a number of machines bought at one time, could you not make a reduct on on the ordinary price for one machine? However, I must confess that your Dunbar is by far the best shingle machine on the market; it runs so smooth, and especially it is built so strong and solid. On the one we have been using for the last four years, we have not had a single cent of repairs, although it was several times run by green hands, last summer. With a good sawyer and filer, we made 22,500 shingles in ten hours. We had good wood, but it was not picked, we took the logs as they came. Yours respectfully, J. C. LANGELIER, Manager M.P. & L. Co.

BOIESTOWN, N. B., Feb. 13th, 1896.

MESSRS McFARLANE, THOMPSON & ANDERSON, Fredericton.

Dear Sirs,—In reply to yours of the 8th inst., beg to say that the two Dunbar Shingle Machines we purchased from you in 1892. have been running in our mill every summer since and they have given entire satisfaction. They have been run under many disadvantages to the machines, in the way of green sawyers, &c., and yet in all these years of use they have cost us little or nothing for repairs. We consider them one of the best machines in use to-day.

Yours truly, RICHARDS & GUNTHER.

JACQUET RIVER, N. B., Feb. 15th, 1896.

MESSRS. McFARLANE, THOMPSON & ANDERSON.

Dear Sirs,—The two Dunbar Shingle Machines I bought of you in 1893, have given entire satisfaction. I had sawyers from Maine and St. John, N. B , working on them, each one saying that the Dunbar was the best shingle machine they ever worked on. JAMES P. DOYLE.

NEWTOWN, Feb. 22nd, 1896.

MESSRS. McFARLANE, THOMPSON & ANDERSON.

Gentlemen,—We have used the Dunbar Shingle Machine in our mil for two years and we can truly say, that it gives the best of satisfaction in every respect, and if properly attended will cut from fifteen to sixteen thousand shingles per day, and we can honestly recommend the Dunbar Shingle Machine to any person or persons who need a first class machine.

Yours truly, J. H. & R. O. MACE.

MARYSVILLE, YORK CO., May 6th, 1896.

MESSRS. McFARLANE, THOMPSON & ANDERSON.

Gentlemen,—We have used two of your Dunbar Shingle Machines since 1886, and since that time have added eight more, running them since 1892. They have proved entirely satisfactory as shingle cutters, and I question if in Canada, there can be found the equal of the Dunbar Shingle Machine. If making any addition to our present plant, no other machine would be considered.

Yours truly, ALEX. GIBSON, JR.

DUTY ON CANADIAN PULP.

There is friction again between the Canadian manufacturers of wood pulp who want to sell in the United States and the Federal custom authorities, over the valuation of pulp for the purpose of assessing duty. Strange to say, the usual basis of such valuation—the market price in the exporting country—does not serve the purpose in this case, as there is really no market price for pulp in Canada, excepting such as is fixed by the demand from the United States. Some time ago there was a great range of valuation at ports of import, the extreme being as low as $6 and as high as $18 per ton. At length it was decided, in a conference between the Federal customs officers and the Canadian manufacturers that $12 per ton should be adopted as the valuation at all ports of entry. But this figure has become unsatisfactory, especially to the managers of the big pulp mills at Sault Ste. Marie, and an effort is being made to have it reduced to $10 a ton. If the entire output of the Soo mills, when the new pulp mill is in operation, were to be sold in the United States, the difference in duty between the valuations of $10 and $12 a ton, would be something like $40 a day, or $12,000 a year, a sum that is well worth fighting for. The matter is now under consideration by the Canadian manufacturers and the United States customs officers.—The Paper Mill.

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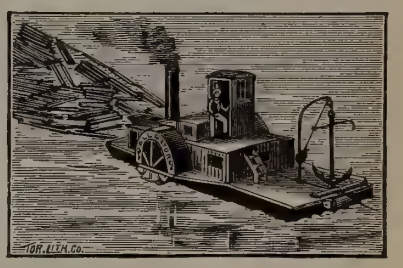

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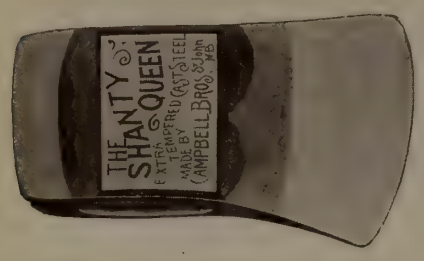

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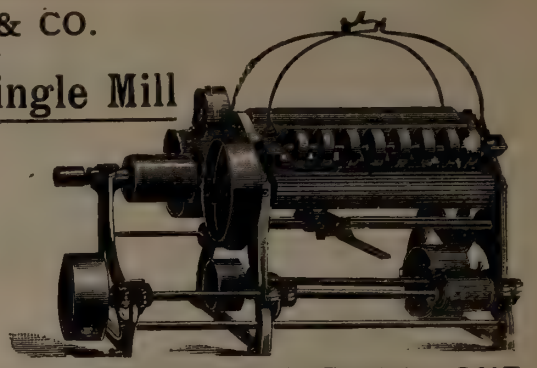

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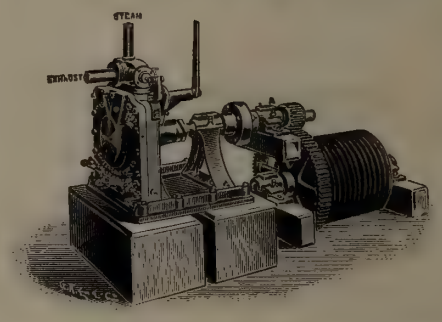

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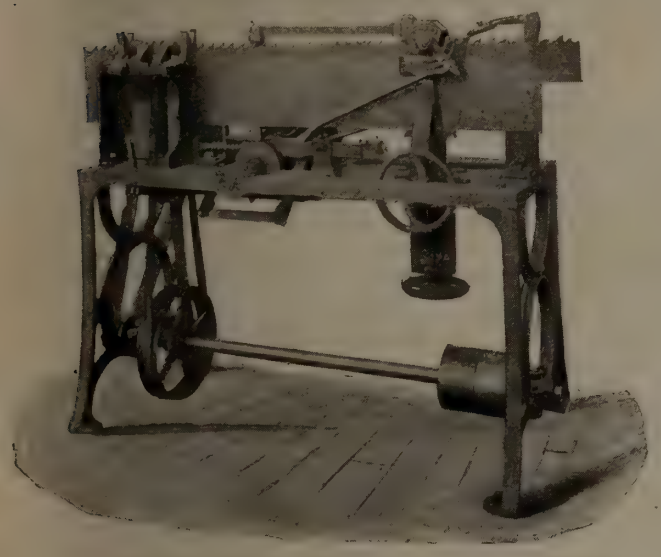
JONES' PERFECT SWAGING MACHINE.

THERE has recently been placed upon the Canadian market an improved machine for swaging band-saws, known as the Jones' Perfect Swaging Machine, illustrations of which are shown on this page. It is constructed on entirely new lines, adapting the hand swage exactly as it is to be worked by power. The swage and exact mode of operation are the same as if worked by hand, but with the accuracy and precision of a machine making every tooth alike. As a combined machine an emery wheel side dresser follows the swage, making each tooth exactly the counterpart of each other. The following points of merit are claimed for the machine:

To automatically swage and side-dress from 20 to 60 teeth per minute; by simply adjusting the saw in this machine and shifting the belt, it will itself, without further aid, swage a band saw in 8 to 12 minutes; it automatically adjusts each tooth, swages and side-dresses it accurately; it has an oscillating movement of ½ inch, enabling it to overcome any irregularity in space between teeth, and also plays up or down to accomodate either a high or low tooth; short teeth are not missed, as are likely to be in hand swaging, which necessitates extra time to fit the swage; each tooth is swaged and dressed perfectly even, (insuring uniform lumber) which by hand requires time, special care and skill; long or uneven teeth are equally brought into line, and under no circumstances will this machine break, bend or crush a tooth.

It is further claimed that by swaging and dressing the saw automatically, it cuts the lumber evenly, and that the life of a saw is greatly lengthened by its use. By being enabled to keep the saws well and evenly matched, a



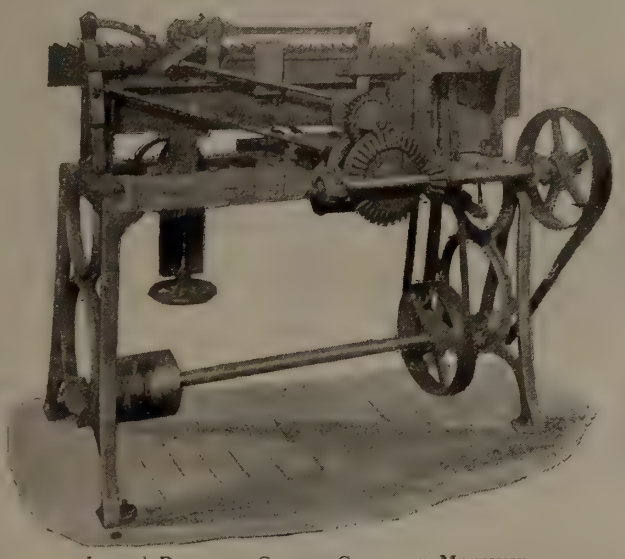
JONES' COMBINED SWAGING MACHINE, SIDE DRESSER AND JOINTER.

larger and better output can be accomplished. The machine is 36 inches long, 18 inches wide, 40 inches high and weighs 330 lbs.

The Canadian patent was taken out on the 1st of April, 1896, the manufacturers being the Waterous Engine Works Company, of Brantford, Ont., who will be pleased to supply any further information desired.

ADJUSTING TOLLS.

IN the year 1892 the Big East river in Muskoka was improved by a company known as the Big East River Improvement Company. It is now claimed by certain lumbermen using the improvements that the tolls charged are excessive, and the matter was recently brought before the attention of the Commissioner of Crown Lands. Dr.



JONES' PERFECT SINGLE SWAGING MACHINE.

Kennedy, law clerk, and Mr. Taylor, the accountant of the Timber Branch, were appointed as referees. The complainants were the Whaley Lumber Company, of Huntsville, and the Brennan Lumber Co., of Hamilton, while the Improvement Company were represented by Heath & Turnbull, of Huntsville. Among other interested persons present were Wm. Martin, John McGeary, Hugh Trainor, Philip Hinds and Harry Heath, all of Huntsville; James Campbell and Wm. Webster, of Bracebridge; Wm. Marshall, of Bethune, and James Johnston, of Sinclair.

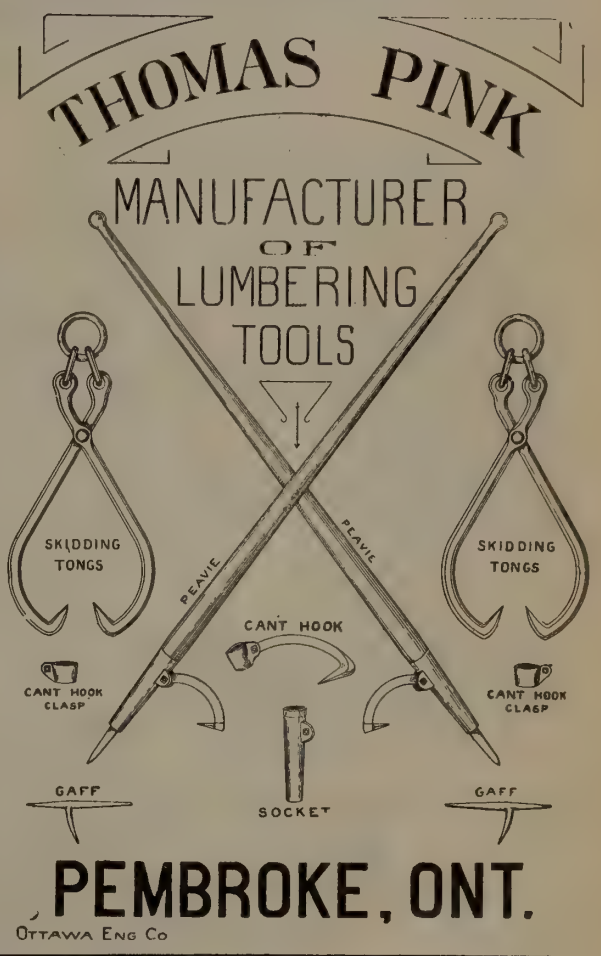
The first-named parties claimed that the tolls charged were in fair proportion to the alleged cost of the improvements, but asserted that the alleged cost was much greater than the actual.

An examination of the books of the East River Improvement Company will be made, after which the referees will arbitrate in the matter.

STRENGTH OF BELTING.

THERE is no more friction between a wide belt and a pulley than between a narrow belt and the same pulley, other things being equal, says a writer to an engineering paper. A wide belt will pull more than a narrow belt when, and only when, it is stretched tighter. For instance, take an engine properly designed to run a belt 12 inches wide; if it were possible to make from some new material a belt one inch wide that would be as strong as the 12-inch belt, the engine would furnish just as much power to the line shaft as if the 12-inch belt were used. When we once realize that the driving power of a belt is in its strength rather than in its width, it is easy to see why a round belt will often pull more than a flat one. For instance, a common size of belt on feed pulleys is 1 inch wide, and if ⅛-inch thick, which is about the average of 1 inch wide belt, the "area of cross-section" is evidently ⅛ of 1 square inch, or in decimals ·125, whereas the area of a round belt ½ inch diameter is ·196, or a little more than 1½ times as much as the 1 inch wide belt, and will pull a little more than 1½ times as much without stretching.

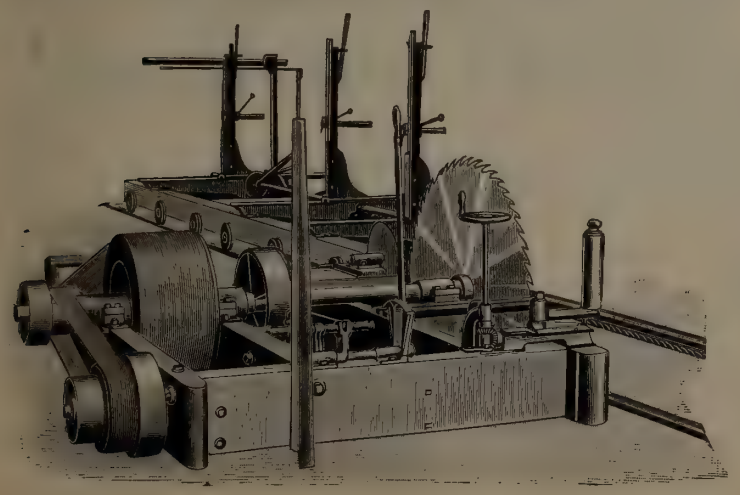
Do you think of adding to the equipment of your mill this winter so as to be in the best possible shape for business next spring? Then you should see what our advertisement pages offer in the way of machinery and supplies. You will oblige the advertiser and the publisher if in your correspondence you mention THE LUMBERMAN.



PEMBROKE, ONT.

OTTAWA ENG CO

BELL'S No. 2 SAW MILL



The accompanying cut shows our No. 2 mill with wood frame and feed works in the frame. We build this mill with either wood or iron frames as desired. The carriage has any desired number of head blocks, either ratchet or friction set works. We also put on an elevated scale, which is a great convenience to the sawyer, and a newly designed roller guage to set up to. Lumber cut on these carriages is uniform in thickness and can be made any desired thickness by adjusting roller, which is at the sawyer's hand.

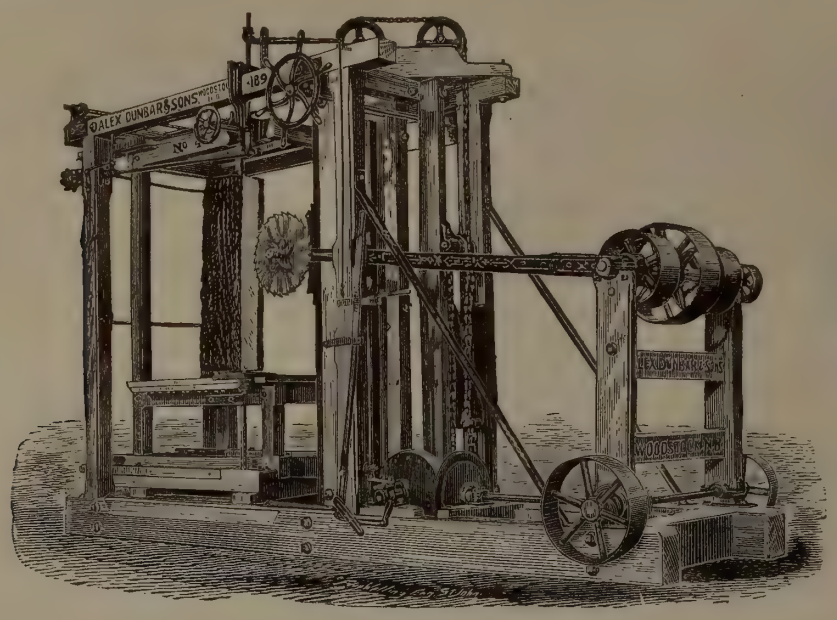
We also build a No. 0 mill for light portable work, and a No. 1 mill, which is a good general mill for either portable or stationary use. Also Edgers, Slab Slashers, Cut-off Saws, Log Haul-ups, Friction Niggers, Lath Trimmers, Lumber Trimmers, Bolting Saws, Saw Benches. Send for Prices and Description.

ADDRESS

ROBT. BELL, JR., Hensall Engine & Machine Works, HENSALL, ONTARIO, CAN.

DUNBAR'S CLAPBOARD MACHINE.

We illustrate on this page a new and original machine for sawing clapboards, invented and manufactured by Alex. Dunbar & Sons, of Woodstock, New Brunswick. The makers claim that this machine is entirely different from any other made for the same purpose, and as such was awarded a diploma at the St. John Exhibition. In this machine the block to be sawn is placed vertically on centers in a frame which can be conveniently moved to or from the saw when in motion, and is perfectly under control of the operator. The block is revolved and held securely in place when being sawn by a spur roll placed on its top end, and which is automatically turned by each revolution of the saw-carriage. The saw and sapping head is placed on the same arbor, which is attached to a cast iron carriage with adjustable boxes, which can be moved when in motion so as to bring it in perfect alignment with the cutter. The carriage is held in place and guided perfectly parallel by two heavy cast iron guide bars, which are perfectly planed and made adjustable. The carriage is driven up and down by a new device which gives it a uniform speed when in cut, and avoids all jar at the ends of the stroke. The sapping head is of new design, being made of brass, with five steel knives which will make a cut four inches deep without jar of block or arbour. These knives are placed so as to be made to cut on the outer edge of block, allowing of the greatest daimeter being left for boards.



DUNBAR'S CLAPBOARD MACHINE.

Amongst the principal advantages claimed for this machine are that it will cut into clapboards lumber that cannot be profitably manufactured in any other way, such as very large hollow-hearted pine of any style or shape, leaving only a centre of one-and-three-quarter inches diameter, and the bottom center can be raised so as to cut all short ends up to 24 inches long. It will be understood that the block being on end when being sawn, is very easily revolved and accurately set to give boards of exact thickness. This is one of the principal advantages, as it allows of very thin saws being used.

This machine is guaranteed to take from 15 to 20 per cent. more out of the same lumber and from 30 to 40 per cent. in the same time than the old style of machine. It will take in lumber up to five feet in diameter and four feet three inches long. Its capacity is from five to seven thousand per day, depending greatly on the quality of lumber.

This machine is not exactly new, as three of them were made four years ago, which have been in constant operation since, but owing to the builders having had their foundry and patterns burned in 1892 they have been unable to manufacture them.

Messrs. Dunbar also build a new design of clapboard planer, a large number of which have been sold to United States parties. They are also the inventors and patentees of the celebrated Dunbar shingle machine, of which there have been hundreds sold in Canada and the United States. They also build rotary saw mills with capacities of from ten to forty-five thousand feet per day, and steam engines and mill work of all kinds. Cuts and descriptions of clapboard planers, etc., will appear in following issues of this journal.

The Sault St. Marie Pulp and Paper Co. shipped a consignment of sixty-two cars of pulp recently. This is the largest shipment made by the mill at one time up to date.

LUMBERMEN'S CLOTHING

MANUFACTURERS OF THE

FAMOUS CARSS MACKINAW

In Jackets, Pants and Shirts

WOOL SOCKS and MITTS

VAN GOODS Specially for the Lumber Trade.

Write for Prices and Samples.

W. Carss & Co.

ORILLIA, ONT.

WORTHY OF INVESTIGATION

We would be glad to open correspondence with pulp, or paper manufacturers, with the view of establishing a pulp industry in connection with our saw mill We have a fine water power. surrounded by t mbered lands, chiefly hardwood, with pretty extensive tracts of second growth white birch, balsam, poplar, etc.

We would also be glad to negotiate with a respon ible person who has had experience in the manufacture of small articl s of woodenware, to place a plant here Our mill produces large quantities of cuttings, that now go up in smoke, which might be utilized to advantage. Power would be furnished at a ve y low rate.

SAUBLE FALLS LUMBER CO.,
Sauble Falls, Bruce Co., Ont.

MORTGAGE SALE OF VALUABLE STOCK OF LUMBER

Tenders will be received by the undersigned for the purchase of about 1,613,194 feet White Pine Lumber, and about 116,320 feet Red Pine Lumber, and 664,500 pieces Lath, at the Biscotasing mills, on the Canadian Pacific Railway, District of Algoma. This lumber is the cut of 1895, is well put up and in good shipping order ; 75 per cent. is 16-ft. lumber, and is all cut good and plump, suitable for the American market, and guaranteed first-class. Offers will be received for the same in lots of 1,000 feet and over.

Apply for particulars to JOHN McDONALD, or to
G. H. HOPKINS,
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A. McPHERSON
Manufacturer of
SHANKS AND CHISEL BITS
For Inserted Tooth Saws.
Warranted equal to any on the market.

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Locomotives and Trucks for the Pole System of Tramways for handling logs and lumber in the woods.

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JAS. H. BEATTY, President.

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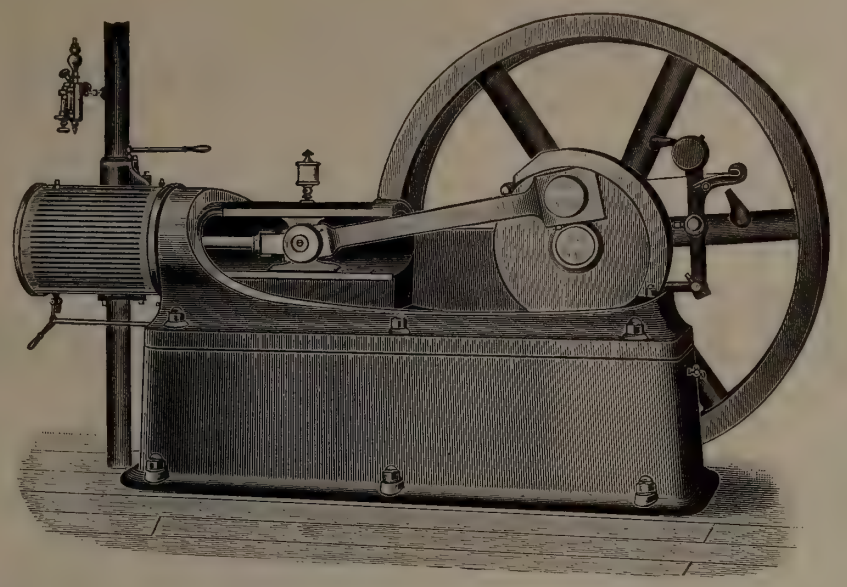
LEGAL DECISIONS.

COCKBURN & SONS VS. IMPERIAL LUMBER COMPANY.—This was an action brought by Cockburn & Sons, of Sturgeon Falls, against the Imperial Lumber Company, claiming damages for the detention of their logs. Messrs. Cockburn & Sons furnish us with the following particulars regarding the suit: Both parties to the dispute have for some years been putting their logs in Deer Creek, the Imperial Lumber Company driving their logs down after those of Cockburn & Sons to a pond which they formed on the creek. At this point they have a loading engine, and their logs are drawn out of the creek and taken by rail to the mill. The logs driven down by defendants during the summer of 1895 were left in the creek all winter. Consequently when the plaintiffs started to drive their logs in the spring of 1896, the pond and the creek for some distance were filled with logs, rendering it impossible for plaintiffs to carry on their operations successfully. It was further claimed by plaintiffs that they were compelled to work on the defendant's logs in order to make room for dumping, which resulted in largely increasing the cost of their season's driving. On June 1st it was endeavored to reach a settlement, but without avail, and an action was brought for damages. Judge Valin, the sole arbitrator, gave his decision in favor of Cockburn & Sons, awarding them the sum of $1,376 and full costs.

The LUMBERMAN is issued fifty-two times a year for $1.00. Can you afford to do without it?

To Capitalists

Advertiser, man of large experience and extensive connections in Canada and the United States, desires to correspond with party of means with view to engaging in the lumber business in an economical way. Only small amount of capital required; profits from 8 to 20%. Address, "X," care of CANADA LUMBERMAN, Confederation Life Building, Toronto, Ont.



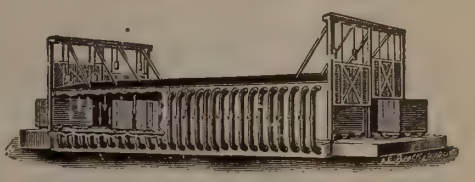
Robb - Armstrong Engines

CENTRE OR SIDE CRANK.
SIZES UP TO 700 H. P.

Stationary and Portable Boilers, Rotary Saw Mills, Shingles and Lath Machines, Edgers, Mill Supplies, Etc.

ROBB ENGINEERING CO., LTD. - AMHERST, N.S.

THE PARMENTER PATENT DRY KILN



For Drying **LUMBER**

Staves, Heading, Shingles, &c.

The Latest
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And Best

CHATHAM, ONT., June 19th, 1896.

JAS. S. PARMENTER, Flushing, N. Y.

DEAR SIR: We take very great pleasure in being able to say from nearly one year's use of your Patent Dry Kiln, we find it away ahead of anything we ever yet tried for thoroughly drying lumber without injuring it in the least. So far we have found exhaust steam alone sufficient for our purpose, so that it absolutely costs us nothing to run it. We thoroughly dry white oak, rock elm, balm and other hardwood lumber in less time than we ever did with a blast kiln, and especially find it a splendid kiln for drying white oak hubs It does its work so naturally that neither hubs nor lumber are injured by it.

CHATHAM MFG. CO., LTD.
D R VAN ALLEN, President.

J. S. PARMENTER
PATENTEE

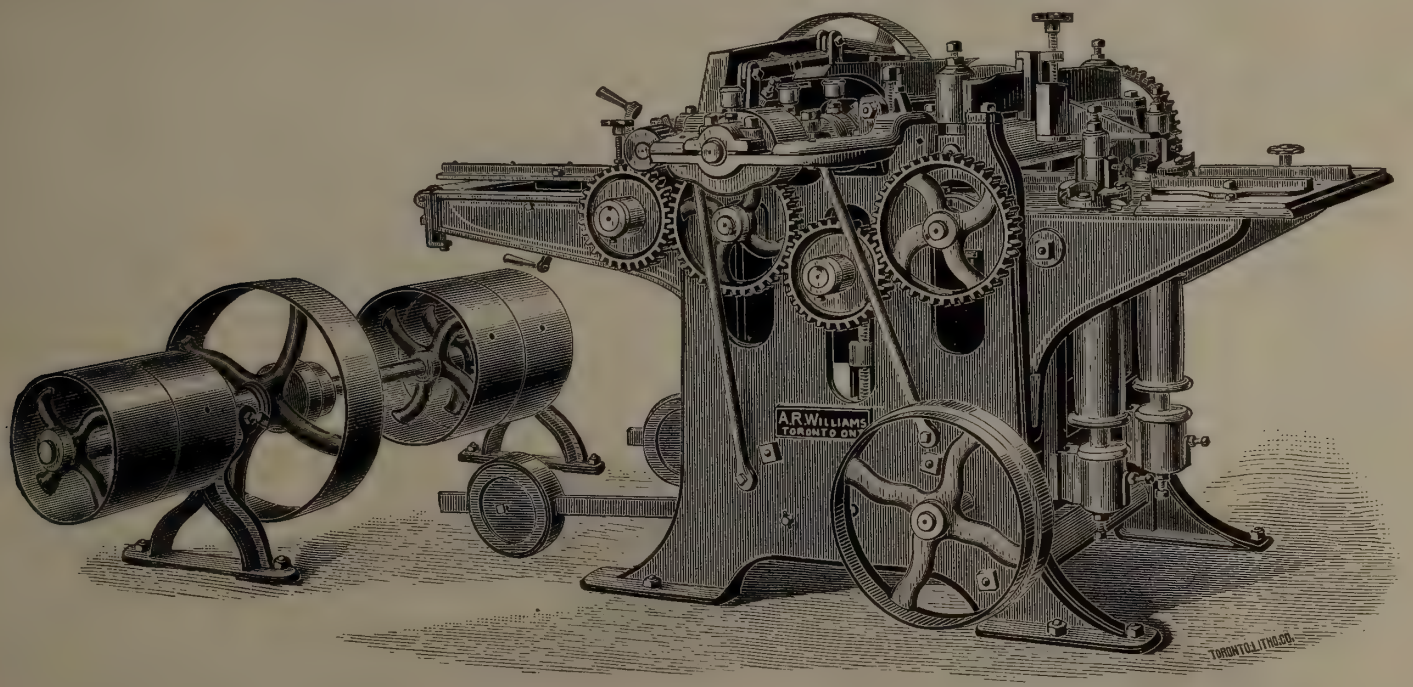
Canadian Office— WOODSTOCK, ONT. Head Office— FLUSHING, N.Y.

The A. R. WILLIAMS MACHINERY CO., Ltd.

HAVE FOR SALE THE FOLLOWING:

COMPLETE OUTFIT of Saw Mill, Shingle Mill, consisting of one Three Head Block Saw Mill, two Large Engines, one 65 h. p. Boiler, Shingle Machine, Jointer and Packer; and Chopping Mill with Three Acres of Land, Wet and Dry Yard, with lots of Timber near.

PLANING MILL OUTFIT, consisting of Engine and Boiler, Planer, Matcher and Moulder Combined, with a Full Set of Sash and Door Machinery, Shafting, Pulleys, Belting, Etc., in good town.



"ECLIPSE" PLANER, MATCHER AND MOULDER.—DOES GREAT VARIETY AND FINEST WORK.

Sole Canadian Agents for the Genuine Sturtevant Fans and Heaters for Dry Kilns, Shaving Fans, Blowers; S. J. Shimer, Sons & Co.'s Celebrated Shimer Matcher Heads, Door and Sash Heads; E. Harrington, Sons & Co.'s well-known Chain Hoists and Overhead Tramway.
We have a Large Assortment of Planer and Sticker Knives for Immediate Shipment.

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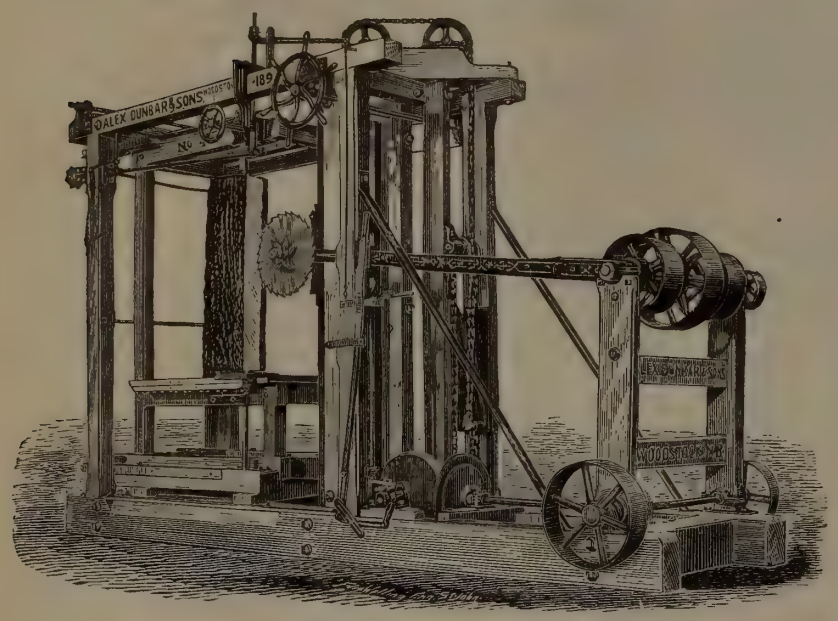
ALEX. DUNBAR & SONS

Woodstock, N. B.

MANUFACTURERS OF

Saw-Mill Machinery of all kinds



DUNBAR'S CLAPBOARD MACHINE.

Including Rotary Saw Mills (3 sizes), Clapboard Sawing Machines, Clapboard Planing and Finishing Machinery, Shingle Machines, Steam Engines, Etc.

WRITE FOR FURTHER PARTICULARS

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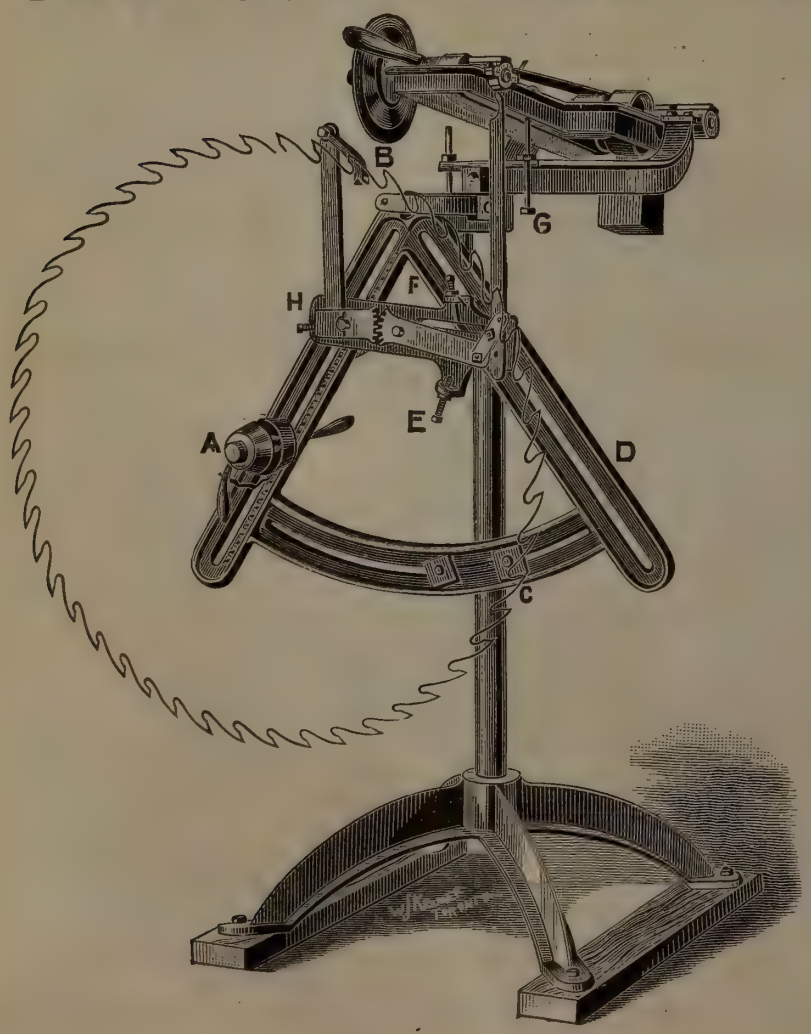
ALEX. DUNBAR & SONS - Woodstock, N. B.

The XXX Saw Gummer and Sharpener



Has No Rival

FOR VARIETY, CAPACITY OR QUALITY OF WORK

. . . OR FOR . . .

SIMPLICITY, DURABILITY, CHEAPNESS

Will take saws from 6 inches to 5 feet diameter; sets the saw forward one tooth at a time automatically; sharpens any saw (rip or cross-cut) perfectly, giving the teeth any desired pitch or bevel, and making all the teeth exactly alike. Will sharpen 20 teeth in an ordinary saw mill in one minute, or 100 teeth in a shingle saw in four or five minutes. The cut shows outline of mill saw 54-inch diameter.

PEMBROKE, ONT., Jan'y 28th, 1896.

MR. F. J. DRAKE, Kingston:

Dear Sir,—Re the conversation you had with our manager, I am instructed to inform you that the machine we purchased from you early last spring has proved to be a very useful piece of machinery. Our Mr. McCool, who uses it, is greatly pleased with it, and recommends it to any person who may require a Saw Filer. Wishing you much success with your Filer, we remain,

Yours truly,
(Signed) THE PEMBROKE LUMBER CO.
Per W. H. Bromley.

Send for Catalogue

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Canadian Locomotive & Engine Co.

KINGSTON, ONT.

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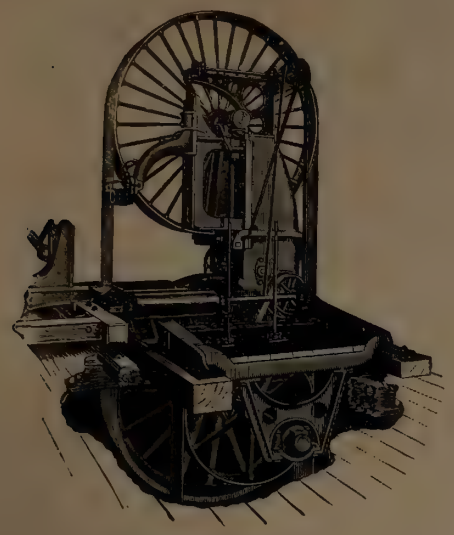
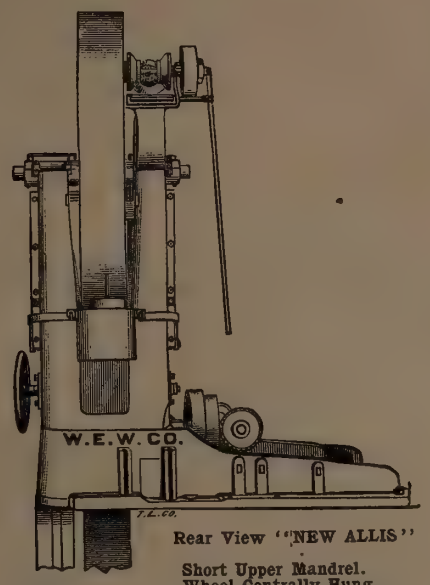
The Most Modern

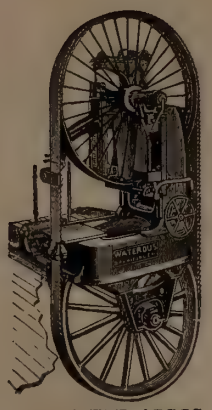


Right Hand—Front View.
"NEW ALLIS"
It surpasses all others in many points.



Rear View "NEW ALLIS"
Short Upper Mandrel.
Wheel Centrally Hung.
Lower Wheel Inside Frame.

NOTE . . . . .



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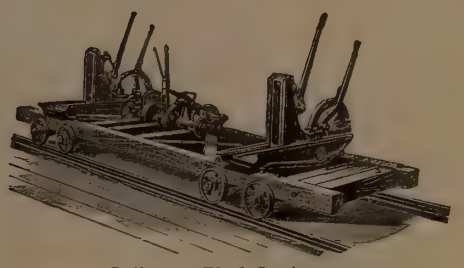
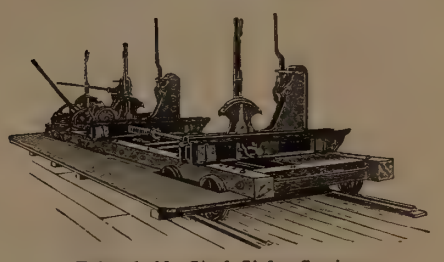
Sold in Canada since Jan., 1894.



Reliance 2-Block Carriage.



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Our Steam Nigger.

ESTABLISHED
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NEW WORKS OCCUPIED
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Best Quality of Work
Low Prices . . . . .

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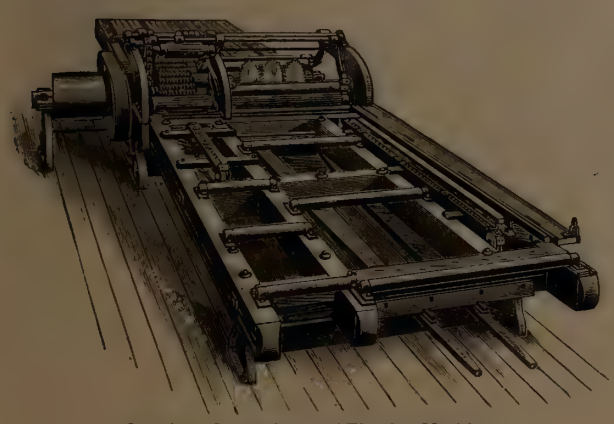

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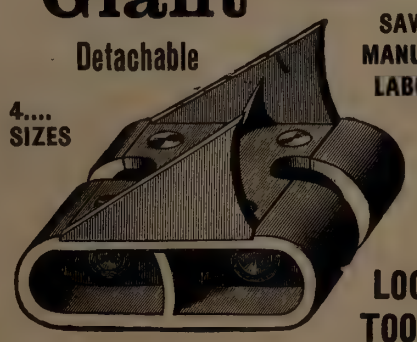
Giant CHAIN
Detachable
SAVE MANUAL LABOR
4.... SIZES



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A Most Satisfactory and Durable Chain for Log Haul-Up, Heavy Refuse Conveyors, etc.

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One of our Cheap Detachable Chains for Sawdust, Refuse, Etc.

Over 50 Sizes and Styles of Chains, varying from 75 to 20,000 lbs. Breaking Strain. Special Attachment Links for all purposes.

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SUPPLIES
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Chains, Ropes, Axes, Files,
Bar Iron, Horse Shoes,
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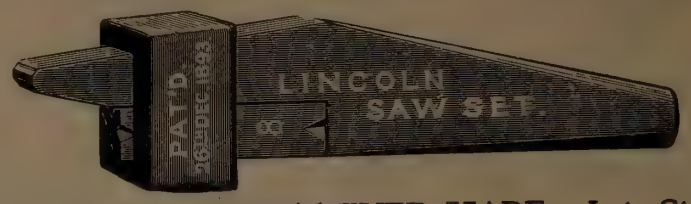
CELEBRATED NICKEL-STEEL CROSSCUT SAWS

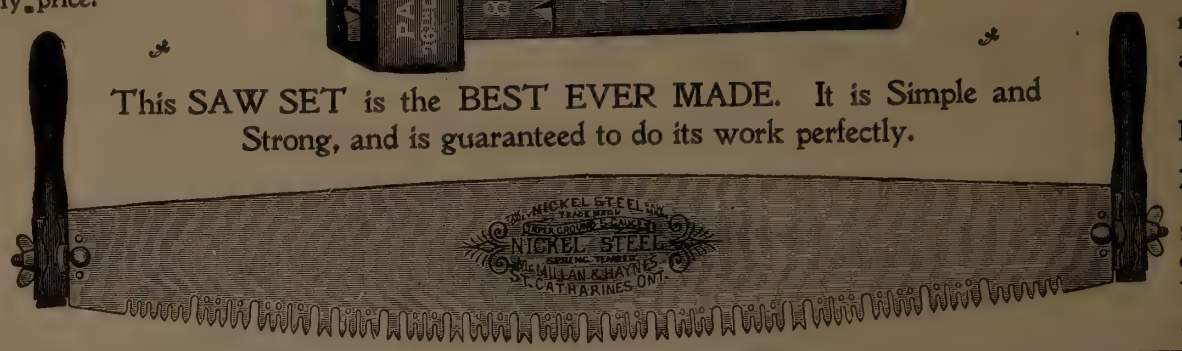
We lead all others in High-Grade Crosscuts and Saw Tools. A cheap, thick, clumsy saw is dear at any price.

The price of a good saw is soon saved in the extra work it will do.

Be sure you use McMILLAN & HAYNES SAWS; they are all warranted to give entire satisfaction.

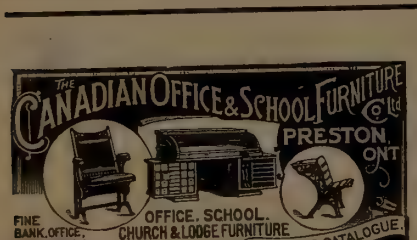


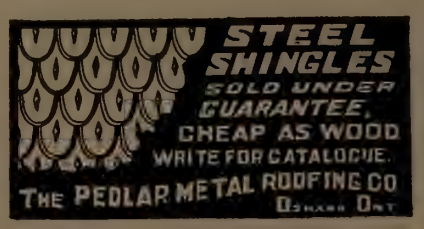
This SAW SET is the BEST EVER MADE. It is Simple and Strong, and is guaranteed to do its work perfectly.



We also manufacture Axes, Files, Saw Jointers, Cant Hooks, Steel and Brass Bedsteads. We have a cheap bed with wire mattrass attached suitable for shanties.

We handle the Famous KELLY AMERICAN AXES. Their Flint Edge is guaranteed to stand in cold, frosty weather, better than any other axe made.





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Duck Bill Peavies, Round Bill Peavies, Finest Duck Bill Winter Cant Hooks

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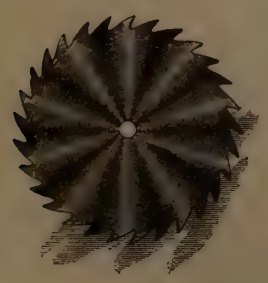

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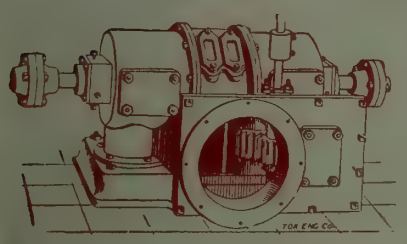

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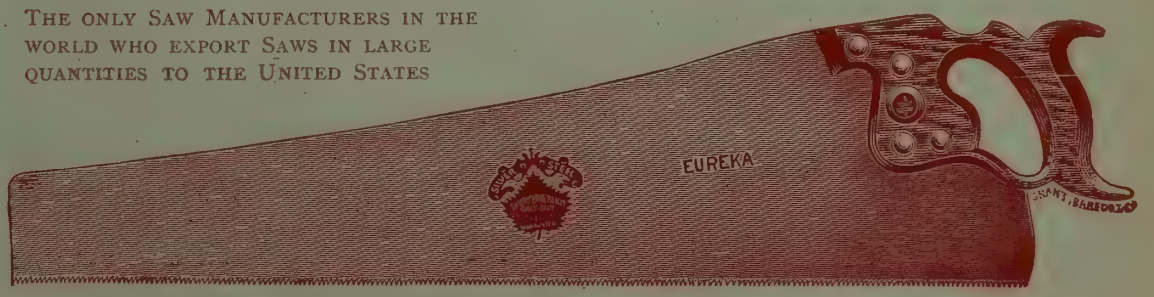

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THE CANADA LUMBERMAN

WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

VOLUME XVII. NUMBER 12. | TORONTO, ONT., DECEMBER, 1896 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

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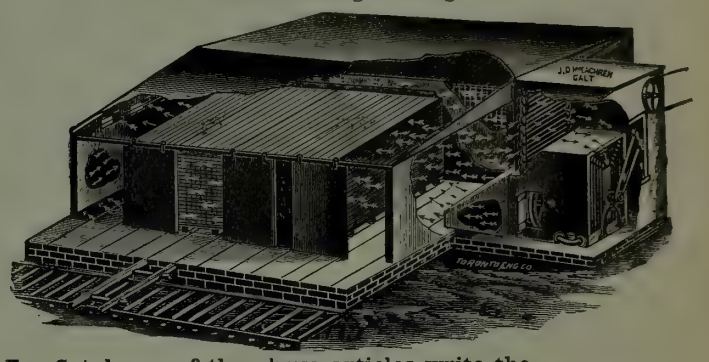

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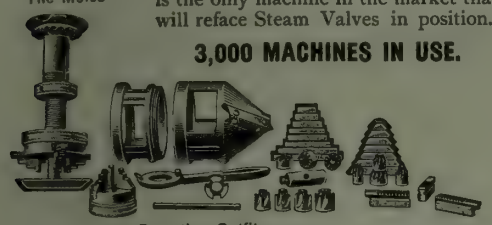

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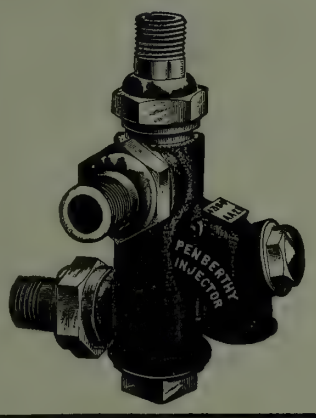

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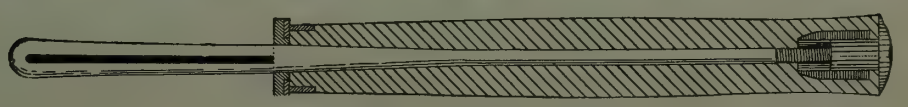

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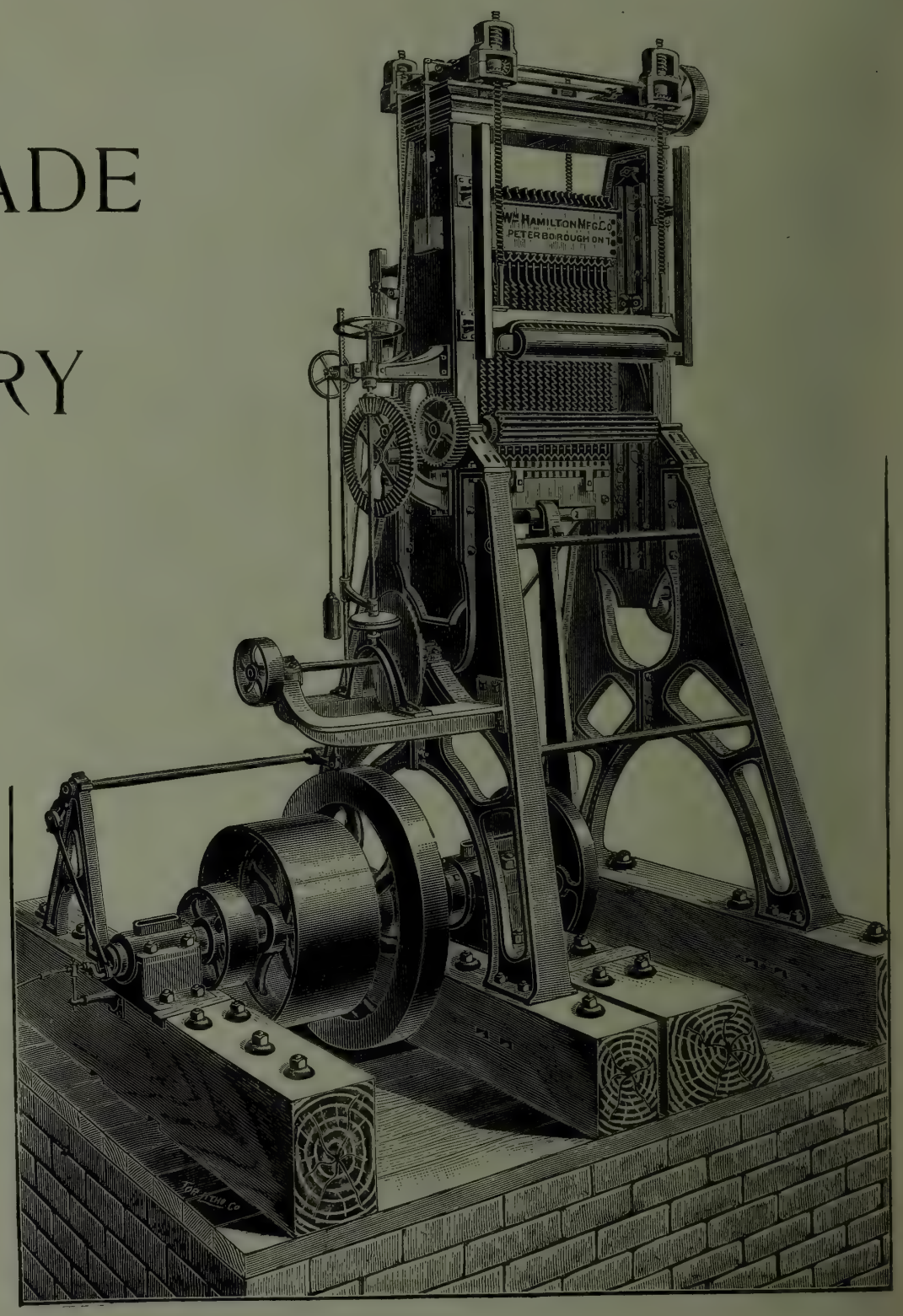

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THE CANADA LUMBERMAN

VOLUME XVII. NUMBER 12. | TORONTO, ONT., DECEMBER, 1896 | TERMS, $1.00 PER YEAR Single Copies, 10 Cents.

THE TAYLOR MILL COMPANY.

THE mill of the above company, which is herewith illustrated, is situated on Government street, in the city of Victoria, B. C., its location being such that it commands a large share of the building trade of the city. The output is largely comprised of finishing stock for offices, stores, bank buildings, etc.

The saw mill consists of a two-story building, fully equipped with the most modern machinery. The planing mill turns out all descriptions of lumber and wood-work generally used. The logs are taken from the harbour on one side of the mill, and delivered to the purchasers from Government street on the other side.

The firm also manufacture sashes, doors and blinds, and carry continually a large stock of glass. The logs are generally obtained by purchase, thereby saving their timber limits for future requirements. From forty to sixty hands are generally employed in and about this establishment, and it can be safely called one of the leading industrial features of the city of Victoria.

THE TAYLOR MILL, VICTORIA, B. C.

THE VALUE OF FORESTS.

AN address was recently delivered at Baie des Peres, Temiscamingue, Quebec, by the Hon. G. A. Nantel, Commissioner of Crown Lands for that province, dealing with the relations between settlers and lumbermen. After referring to the natural resources of the country the speaker concluded as follows :—

The proprietor of forest concessions should not be surprised or interfered with in the enjoyment of his rights. He should be given full time to withdraw from the domain he leases from the State, and for which he gives it the greater portion of the revenue he takes from it. I should here say also what I hear everywhere, that the colonist should not pose as the enemy of the explorer of the forest. I wish to preach here, as I shall preach everywhere, the necessity of thorough harmony with a friendly understanding between the colonist and the forest explorers. I have not always been able to regard the conduct of these explorers as being faultless. I have had occasion to denounce their squandering and the extravagances committed by them, at the expense of the Department of Crown Lands, and if the colonists have caused great destruction of forest by fires for clearing purposes, it must be taken in good part and remembered that at one time the owners of limits pillaged and ruined the property of the department in a manner which cannot be too severely condemned. But times are changed. The owners of limits have come to understand that our forest resources, which made their millions, are not inexhaustible, that they are growing deplorably less from year to year, and that they will disappear altogether unless they introduce into their operations a system characterized by method, reserve and moderation, one that will resemble the system of cutting which prevails in France, Austria, Germany, and in all other well regulated countries. If the lumbermen fail to plant young shoots, if they take no measure to renew the wood on the land, they at least take care of the young growth that is springing up, which they will be able to cut in twenty years, thus following a system of rotation which tends more and more to become, I hope, the base of all their operations. The reports in my possession show that enormous progress has been made in this particular. I congratulate them upon the fact. The department over which I preside cannot too strongly urge them to continue on in this excellent way. Besides, I may say, en passant, that I intend to devote myself to the reorganization of our Department of Forests that this may be promoted, and to assist with all our power every effort that may be put forth by the owners of limits to keep the annual return of woods and forests at least up to the present standard. Is it not a distressing spectacle to see spaces, which I may call infinite, devastated by fire?—huge tracks of public property which were formerly covered by immense forests, composed of every species of timber, representing millions, lost to commerce and to private enterprise as well as to the treasury of the province? These burnt districts are covered with a second growth of inferior wood, amongst which, however, are met many young pines. Could not superb pine trees be thus restored without serious cost to either the public treasury or to the owners of limits? This is another of those subjects which I can only touch upon to-day, but which I shall study thoroughly, consulting experts who will give care and attention to a subject so vitally important to our forest resources. I appear to have wandered from my subject ; it is no harm, however, for it is important to convince you of the imperative necessity of preserving the forest and keeping the field clear for the lumber manufacturer. For it is with them the colonist disposes of his farm products and it will continue to be so for a long time yet, if not forever. You are here, 300 miles from the Ottawa market, and yet you get better prices for your produce than the farmers who live alongside of the Capital ; better even than the farmers around Montreal. To what do you owe it? To the cultivator of the forest. You sell your hay at from $20 to $30 per ton, which is twice and three times as much as can be got for it in the older parishes; you are paid from sixty to seventy cents per bushel for your oats, a third more than we usually pay in Ottawa or Montreal, and all that is taken from you at your homes, at your barn doors. Is that not the principal source of your prosperity, and am I not justified in placing it before the fertility of your lands and the facility of clearing them? Do away with the great lumbering industry which is carried on here by the most successful men in Canada, the great lumber merchants, and I ask you what would you do with your abundant crops? You would be exactly in the same position as the farmers of the west, who, with the finest lands in the world, cannot dispose of their products, and are obliged to let them go at wretched prices. You see, therefore, that the presence of the lumberman is of vital importance to the existence of your colony. You see, too, that your lot depends upon the cultivation of the forest, and that I am right in telling you that the lumber manufacturers, far from being your enemies, are good and indispensable friends. I wish it was understood thus in every corner of the province, but above all in those places where the lumber trade furnishes, in good years and bad years, its half million to the treasury of the province, and where colonization seems capable of unlimited development. The Laurentian chain, extending from Temiscamingue to Lake St. John, should constitute an immense forest reserve, capable of feeding on the one hand the sources of our admirable irrigation system on the North St. Lawrence, and on the other hand of giving, through the means of forest industry to the new colonies founded in this second province of which I spoke just now, as advantageous a market as can be desired, inasmuch as these forests will be carefully guarded and worked.

LUMBERMEN EXPRESS THEIR VIEWS.

THE CONSENSUS OF OPINION DECIDEDLY HOPEFUL.—RECOVERY LIKELY TO BE GRADUAL.—SOME TIMELY SUGGESTIONS BY MR. J. T. SCHELL.

IN view of the fact that the commercial industries of the United States and Canada are not likely to again be disturbed by a national election for a few years to come, the CANADA LUMBERMAN solicited the opinion of several prominent lumber manufacturers and dealers regarding the prospects for the Canadian lumber trade. The views expressed indicate a decidedly hopeful feeling, and while the recovery is likely to be somewhat gradual, it is believed that the improvement will be maintained for some time to come. Below will be found some of the replies received :

J. W. MUNRO, Pembroke, Ont. :—"I think the outlook for local trade looks bright, as I have heard of several of our mills in this vicinity having sold all the stock in their yards, and in this town our largest mill is running until 9 o,clock every night to keep up with orders. The result of the Presidential election appears to have given confidence to dealers across the lines. But, however, if I had a million dollars to invest I would put it into white pine, provided I could buy at present rates, as it is bound to advance, and past experience shows that it is certain to rise to a fair price, as there is sure to be a demand for white pine at a paying figure, and if one can hold his pine he will ultimately reap the benefit."

J. E. MURPHY, Hepworth Station, Ont. :—"In my opinion the return of Mr. McKinley in the recent Presidential contest in the United States has already had its effect on lumber interests in this country. Lumber manufacturers are now holding for higher values, and none are disposed to accept the low prices that have been currently offered for several months back. It is early yet to say what will be the effect on the lumber trade in the United States. Inquiry from eastern points are on the increase, but mill men, as a rule, are pretty short of the good stock asked for at this time of the year. English buyers are gradually turning their attention more and more to Canadian points, in search of hardwoods, and this trade will undoubtedly increase in volume from year to year. Formerly this trade has been done through middlemen in New York, Boston, Albany and Buffalo. The local demand for hardwood has been no good to me for the past three years, but local trade in hemlock has been excellent, and my sales have been larger this year than for three years past."

MICKLE, DYMENT & SON, Barrie, Ont. :—"In reference to the outlook for the lumber business, we are looking for an improvement in the business, but do not expect much change before next spring, and then we think it almost impossible for cheap lumber to raise much in price, as there is such large quantities of low grade lumber at the mills in this country. If the present curtailment of cutting in the woods this winter is continued, there is no doubt that next year will see a decided change for the better. The trade at present requires careful handling, and the manufacturer must not manufacture large quantities, and if a reasonable curtailment is continued we may look for a more prosperous and paying business. We attribute the ruinous prices to the over-production."

A large manufacturer in the Ottawa Valley writes :—"In view of the depressed condition of business in the United States for the past three years, there is no doubt that the growing use of lumber was much curtailed, and the demand lessened ; and as a consequence a very considerable surplus has accumulated at the various manufacturing centres. With the improvement that is almost certain to follow the results of the general elections in the United States trade will assume a healthier tone, and in due course of time the accumulated surplus of lumber will be worked off and trade will again assume its normal condition. Just how soon this condition will be reached no one can tell—there are so many conditions that may affect the question one way or the other. Our own feeling is simply this, that bottom has been reached, and a turn for the better will soon take place. We expect that the improvement will be gradual ; we neither expect nor hope for any boom and consider steady, healthy trade better for all concerned."

MR. J. T. SCHELL, Alexandria, Ont :—"I have noticed in the press expressions of confidence for the future outlook for lumber on account of the election of McKinley. Instances of sales by Ottawa lumbermen are ntoed, also that the holding price for the Western States mills has been advanced ; the hopeful views of numerous dealers have been published, that the lumber trade will wear a brighter smile from this time forward. I agree with the hopeful ones. The advance in asking prices of the western men indicates hope also, but even an advance of 50 cents and $1.00 per thousand does not put them on the basis of two years ago, and for some time to come their profits will be reckoned on the pages of their ledgers marked "hopeful." The Ottawa sales are not out of the ordinary—the prices not above former years—and not in any way connected with the United States elections, as the buyers were British."

"The improvement hoped for in lumber matters will come in time, but I see no cause for large advances in price, or much increased demand from the United States at this season of the year. Owing to the fact that the depression has been severe and long continued, stocks have become depleted ; dealers and manufacturers have only filled their immediate and necessary requirements, and to a certain extent some stocking up may be done ; but when we consider that the buying of lumber has been going on all the time for the "necessities" of the country, we must look for the "great expansion"—as one writer has it—in the lumber demand to come from those who buy for the rise they expect, or wait until the "expansion" gets here in fact."

"There is a large amount of lumber on the piling grounds of the mills both in the States and Canada to-day—a larger amount than usual—and wisdom would be shown by our millers if the logs taken out in 1896-97 would be very much less than formerly. If to the surplus accumulations of stocks during the last two years we add a heavy stock in 1897, I do not see how the lumbermen can get much benefit from the good times coming, as there will still be too much stock for the demand and prices will remain low. By taking out about one-third or one-half of ordinary year's stocks of logs, and allowing the demand to overtake the production, we could expect to realize fair prices next year, and until the next depression shuts off demand. I shall not cut over one-third as much this winter as last season, and will expect to make the profit for the business on the increase in price of the 1896 stocks, which we have not tried to sell at less than cost, and which we have largely on hand at this writing. I would be pleased to know that the same action would be taken generally, as I think it would mean two to three dollars rise in value, while a large new stock on top of present supplies will mean no profits for another year or so."

MR. JAMES SHARPE, Burks Falls, Ont. :—"The result of the election in the United States is most satisfactory to Canadian lumbermen. The market is firmer, and that tendency set in as soon as the election was determined. There have been a large number of enquiries since then, especially about shingles, and a very good increase in the sales. The trade, I believe, will soon boom, whether a tariff is put on by the United States or not."

A BANKER'S VIEW.

Mr. George Hague, general manager of the Merchants' Bank of Canada, visited several United States business centres shortly after the Presidential election, and has expressed himself on the situation as follows : "There can be no doubt that the result of the Presidential election will be to inspire confidence in all business circles, and there will be a renewal of confidence and activity in manufacturing enterprises, especially those which have been dull for some time past. In fact, I noticed before I returned home that a large number of establishments in several of the states which had been running half time were soon going full time, while others which had been closed down altogether have resumed operations. I think that one probable effect upon Canada will be the better demand for that which has been manufactured for the American market and which can only be sent there. The increased activity in manufacturing will give rise to a greater demand for lumber and will enable Canadian stocks to be got forward at a profit. The lumber market of Michigan cannot fail to be benefitted, and as many of them seek their supply of logs in Canada a renewal may be looked for in that direction. It was understood some time ago that few logs would be manufactured in Canada for Michigan firms, but if such a demand springs up, as indicated, it is quite likely that operations in the woods may proceed almost on the usual scale. This, of course, will employ men in Canadian forests and the sending in of supplies will stimulate Canadian business. With regard to tariff legislation I did not hear much, but I fancy that owing to the large number of those who voted for Mr. McKinley being Democrats and free traders, it will be almost impossible to pass a tariff bill through Congress imposing higher duties than those at present prevailing."

CORRESPONDENCE

Letters are invited from our readers on matters of practical and timely interest to the lumber trades. To secure insertion all communications must be accompanied with name and address of writer, not necessarily for publication. The publisher will not hold himself responsible for opinions of correspondents.

A WORD FROM CHILI.

SANTIAGO DE CHILI, Oct. 12th, 1896.

DEAR SIR,—A copy of the CANADA LUMBERMAN is to hand, which I have found extremely interesting and desirable reading. I have been fortunate enough to promote considerable trade between Canada and Chili, and were it not for the fact that we are now passing through a severe financial crisis much more trade would result. Canadian goods in general compete advantageously here, in workmanship and price, with those of other countries, notwithstanding inconvenient and expensive shipping route. Nearly all Canadian goods are shipped from New York, and most always figure in Chilian commercial statistics as importations from United States. This fact in itself is detrimental to Canadian trade, and it should be the aim of Canadian ship owners and exporters to establish a line of vessels between Montreal and Pacific ports.

In normal times there is always a fairly good demand for fine lumber, such as walnut, oak, ash, hickory, clear white pine and rived oak staves. There is also a market for most all kinds of machinery for industrial and agricultural purposes. Steam engines, electrical apparatus generally, carriages and wind mills also sell fairly well. At present trade is altogether stagnated, owing to the recent Presidential election and also from uneasiness felt regarding stability of money laws which came into force last year.

Yours truly,
LEWIS E. THOMPSON,
Canadian Commercial Agent.

IT IS APPRECIATED.

Joseph S. Wallis, Port Carling, Ont., writes : "Your November issue is superb."

Mr. J. E. Murphy, Hepworth Station, Ont. : I like THE LUMBERMAN ; it is pithy and pointed in all its original matters.

Messrs. Williamson & Crombie, Kingsbury, Que., write : "Your special number for November just here. It is just splendid."

Mr. T. A. Thompson, Iroquois, Ont., writes : "I must say that I am very much pleased with THE LUMBERMAN. I could not well do without it.

Messrs. J. T. Lillicrap & Co., Lakefield, Ont., write : "We are much pleased with THE LUMBERMAN and notice a decided improvement during the year."

Mr. Geo. Cormack, Whitby, Ont., writes : "Your special number of the CANADA LUMBERMAN came duly to hand. I might say it does justice to the trade, and is worthy of the highest praise, and I trust that your circulation will ever be increasing."

Hickory promises to play an important part in the manufacture of bicycles in the way of handle-bars of 1897.

As indicating the wide range of the export lumber trade of New York, for the week ending October 27th shipments were made to the following points : Antwerp, Brazil, Argentine Republic, British West Indies, Bristol, British Guiana, Cuba, Danish West Indies, Dutch West Indies, Glasgow, Havre, Hull, Hayti, Liverpool, London, Port Rico, Santo Domingo, Southampton, Venezuala, Dunedin and Mexico.

J. R. BOOTH'S LOGGING RAILWAY.

To our readers the name of Mr. J. R. Booth, the great millionaire lumberman and railroad magnate, is quite familiar, but the system he uses in transporting logs from his timber limits to Ottawa will perhaps present some interesting and novel features.

There is no waterway between Lake Nipissing and the Ottawa river, or its tributaries, but back of Lake Nipissing is a small lake called Lake Nosbonsing, with an outlet by two small rivers and a lake into the Mattawa river, which empties into the Ottawa. The desired object, therefore, was to convey the logs from Lake Nipissing overland to Lake Nosbonsing, at the greatest speed and lowest possible cost, and twelve years ago Mr. Booth built a railroad connecting the two lakes for this purpose. The terminus at Lake Nipissing is Wisawasa, where the creek of the same name empties into the lake, but the bank is very steep, being 65 feet above the level of the lake. This creek was harnessed to draw the logs up to the top and load them onto the cars. A building was built into which the logs were carried to be loaded. The building is 220 feet long by 45 feet wide. The rear end is on a level with the ground, and the front end, supported by heavy framework, is 65 feet above the level of the lake. A jack ladder, 150 feet long, conveys the logs to the building by an endless chain, which is operated by a rope drive 500 feet long. A raised platform extends the full length of the building, and in the platform, or table, is an endless chain operated by another rope drive, 1,150 feet long. These rope drives derive their power from a water wheel 44 inches in diameter, under a heavy head of water passing down a flume 6 × 8 feet. The water wheel, by means of a friction clutch, drives a fire pump when required, by which the railroad engine is supplied with water. An annex, 30 × 50 feet, covers the wheel and pump. The shafting is 3⅞ inches in diameter, and on this shaft are two grooved wheels around which the ropes rotate.

Alongside of the platform are shunted four flat cars, with two birch stakes in each, against which the logs run from the table. Each car is 18 feet long, and is built of red oak lumber on tamarack bunks. As the jack ladder chain dumps eight logs per minute on the platform, the chain carries them along and they are dumped or slid onto the skids and then onto the cars. Seventeen men are required to do the loading.

When a car is loaded a fork chain attached at one side binds the load on, being tightened by a rachet wheel and dog. In the handling of the logs a great deal of bark is knocked off, which drops through the floor into a shute, and is carried down into the lake.

The road is five miles in length, with two miles of sidings and switches; one switch extending to the Grand Trunk railway. Twenty-two cars are taken each trip. Upon the return of the twenty-two empty cars, they are left on a siding. The engine then pulls out eleven cars already loaded to another siding, and eleven of the empty cars are run into the building, where they are quickly loaded. The engine then picks these up and with the other eleven the load is completed. At the terminus the track slightly declines towards the lake, the chains are let go and the logs glide off into the water. Two men are employed here to break up jambs. Here the screw tug "Nosbonsing" tows the logs down to the Mattawa river, from whence they float down to Ottawa.

The rolling stock consists of 35 flat cars, which carry an average load of 19 logs. Thirty-three of these cars are in constant use, two being kept in reserve. They are 18 feet long by 10 feet wide, and are mounted on standard wheels and axles. The locomotive engine has been in use twelve years, and was built by the Rhode Island Locomotive Works. A competent engineer and fireman are in charge, and four brakesmen are employed on the train. The road is level and everything runs smoothly. Four section men keep the road in good repair. The round trip has been made in one hour. It requires but two and a half minutes to dump the 22 car loads into Lake Nosbonsing. Ten trips a day are made, thus carrying over 4,000 logs.

The large steamer "Booth," of 100 tons, gathers up the logs around the shores, and a smaller tug does the booming, etc. There are two wharves at Wisawasa, and two men are constantly employed cutting up the flood wood which collects in the booms, for fuel for the boats. Six men feed the jack ladder chain.

Mr. Thomas Darling, the manager at Wisawasa, is a trustworthy man, and has been in Mr. Booth's employ for many years.

BRITISH COLUMBIA MILLS.

BELOW will be found descriptions of several saw-mill and wood-working establishments in British Columbia which were unavoidably crowded out of our November issue :—

BURRARD INLET RED CEDAR LUMBER COMPANY.

The mills of the Burrard Inlet Red Cedar Lumber Company are situated at Port Moody, B. C., near the head of Burrard Inlet and on the main line of the Canadian Pacific railway. The trade of the company is principally confined to the manufacture of high grade red cedar and spruce lumber, and all grades of cedar shingles. The capacity of the mill is about 50 thousand feet of lumber and 150 thousand shingles per day of ten hours.

The plant is operated by a 300 h. p. double engine, and the machinery throughout is of the latest improved designs, eminently suitable for the economical manufacturing of bevel and drop siding, ceiling, mouldings and finishing lumber of every description. In the shingle department the latest improved machines are placed in position to use all interior timber from the saw mill. Rough cants after leaving the double circulars are cut into shingle blocks by an automatic cut-off machine, thus relieving the yard from an accumulation of inferior and unsaleable lumber.

The dry-kilns have a capacity of 150 thousand shingles and 15 thousand feet of lumber per day, and are operated by a 9 ft. fan driven by a 14 h. p. horizontal engine. The mill, kilns and sheds are protected from fire by a water system owned by the company, having a pressure of 40 lbs. per square inch, with hydrants conveniently placed in the yard and mill, and Ball nozzle sprinklers on exposed roofs.

The timber limits, within sight of the mill, on the opposite side of the inlet, are admitted to be the best in the province, and it is estimated by competent judges that the supply of timber is ample for thirty years. There is a large quantity of thoroughly air-dried lumber on hand at present, and with the stock now being cut the orders accepted will be filled promptly. The company is now being re-organized, and when this is accomplished it is proposed to add a first-class sash and door plant to the present equipment.

VANCOUVER SASH & DOOR COMPANY, VANCOUVER.

Though this business was only established two years ago, it has met with such success as to cause several additions to be made to the plant. As the buildings now stand, they cover a large area, the main factory being 120 × 60 feet and two stories high. The office and warehouse is 80 × 40 feet, and is also two stories high.

A perfectly appointed mill throughout is fitted with the latest improved wood-working machinery and tools, and the equipment of this establishment is not surpassed by any in the province. A force of thirty skilled hands and twenty laborers are constantly employed. From one-and-a-half to one-and-three-quarter million feet of lumber are used annually. The range of productions embraces the manufacture of sashes, doors, blinds, mouldings, newels, brackets, scroll and band-sawing, and interior finishings of all descriptions, as well as planing surfacing, ripping, lathing, etc. The best seasoned lumber only is used.

The promptitude with which this company fills orders can be accounted for by the superiority of its plant. Though the business of the firm in this province is extensive, its manufactures of doors, etc., are largely shipped to Australia.

The president of the company is Mr. J. B. McLaren, of the McLaren-Ross Mills, New Westminster. Mr. H. DePencier, manager of the McLaren-Ross mills, is secretary and treasurer, while Mr. R. D. Featherstone is manager.

VICTORIA PLANING MILLS, VICTORIA.

Messrs. Muirhead & Mann are the proprietors of this, the largest and oldest industrial establishment in Victoria, located on Constance street. This enterprise was inaugurated in 1870, and has enjoyed a steady growth from the out-set. The plant covers a large area, and is of the most modern and perfect description. The planing mill is a substantial three-story building of 125 × 125 feet in dimensions. The first floor contains all the necessary machinery for the finishing of lumber, such as sashes, doors, staves, mouldings, mantels and other products of lumber. The second floor is reserved for bench work. The plant is operated by two powerful engines, so arranged that, in case of accident to one, the other can be utilized, thus preventing the possibility of delay.

The firm own three large store-houses in which their output is stored, as well as their importations of glass, which commodity the firm imports direct in large quantities from England and Belgium.

On an average, 250,000 feet of lumber is consumed per month. At present forty workmen are employed, but in busy times one hundred and over have frequently been at work. A specialty is made of ship-joiners' work, the firm having supplied materials for many of the largest vessels frequenting these waters. Anyone visiting the Court House at Nanaimo, the new Parliament buildings at Victoria, and other public buildings and residences whose interiors have been finished by this firm, will easily see that their output is of a superior character.

GEORGE CASSADY & CO., LIMITED, VANCOUVER.

This company are proprietors of two establishments, which were amalgamated on the 1st of January, 1895, under the above name. They were originally known as George Cassady & Co., founded eight years ago, and Leamy & Kyle, founded nine years ago. George Cassady is secretary and manager. They are manufacturers of rough and dressed lumber, doors, sashes, mouldings, shingles, laths, turning work, etc.

The property is situated on False Creek. At the foot of Cambie street are the door and sash factory, finishing shops, sheds and offices; while on the south side of False Creek is where the saw mill is located. The machinery in all of the above is of the most modern description. While enjoying a large local trade, the firm also make considerable shipments into the interior and as far east as Ontario. The quality of their shingles is well known and in this department their export trade is very large. The machinery is mostly furnished by the Goldie & McCulloch Co., Ltd., of Galt, Ont. Mr. Cassady came from New Brunswick eight years ago.

LUMBER AND LOG MEASUREMENT AT HOME AND ABROAD.

As is well known, Americans and Canadians sell lumber, logs and timber by the thousand feet superficial of one inch thickness. This is the universal rule in the United States and Canada, and is the simplest, easiest and best ever devised. By it anyone with the rudiments of a free school education can ascertain the number of feet in any piece of lumber or timber and compute its value in decimal money. In England the system is exceedingly complicated, and many lumber exporters, new to the business, get the idea that they are swindled in the return statements for their shipments, simply because they do not understand the methods of measurement and the nomenclature of the English trade.

We will try to make some of the principal points plain. In England lumber is classed as boards, battens, deals and planks, and is sold by the wholesale by the "standard" known as the "St. Petersburg standard." It contains 165 cubic feet. A standard deal is a piece six feet long, eleven inches wide and three inches thick, and contains 16½ feet board measure; 160 standard deals make a standard. If the deals are 1x12 inches by six feet, 330 make a standard. If 1x11 inches, 410 are required. The latter size contains 2,160 feet board measure, while the first two require only 1,980 feet to the standard. In Ireland a different standard prevails. It calls for 120 deals 3x9 inches by 12 feet long, or 3,240 feet. The retail dealers generally sell boards, battens, deals and planks by the square or superficial foot, without regard to thickness. Here we sell by same measurement, except that every piece is counted by the inch in thickness. For instance, a panel ⅜x10 inches by 12 feet counts with us just the same as though it was an inch thick, and the price is made as nearly as can be to cover the amount of timber in each thickness of board less than one inch. Thicknesses above one inch, whether in whole inches or fractions thereof, we add to the contents of the piece. Thus a board 3x10 inches by 12 feet contains just three times as much board measure as one of the same width and length one inch or less in thickness. It of course contains six times as much wood as the ⅜x10 inches 12 feet piece given in the example above.

To reduce a mixed lot of lumber to the standard in use in the English market, which is the St. Petersburg standard, is a complicated process, and is figured thus: Suppose we have a lot of twenty pieces 3x7 inches 16 feet, eighty pieces ¾x5½ inches 24 feet, and twenty pieces 1¼x9 inches 14 feet to reduce to standards. We multiply the number of pieces in each lot by the width, by the thickness in inches and by the length in feet. The results are in inches, and the lots added together and then divided successively by 11, 18, 30 and 4. These are standard divisors and never change. The result will be in standards, quarters, deals and parts. In the above three lots, if we have made no mistake, there are 0 standards, 2 quarters, 29 deals and 5/6 parts. To get at the cost of the three lots, say at £7 9s. 6d. per standard, is another complicated mathematical process too lengthy to explain here, but suffice it to say that the cost of the standard being given, the cost of the quarters, deals and parts are ascertained by a peculiar system of aliquot parts similar to that sometimes used in this country for computing interest for months and days, only the English dealers use a shorter method to get the value of the deals and parts. They double the price of the standard and call it pence, then multiply the pence by the number of deals and parts, and divide the product by 12, the number of pence in a shilling. If the remainder exceed 20 it is divided by the number of shillings in a pound, sterling money.

The foregoing is not intended as a guide to exporters of lumber to Great Britain, and is not in any way designed to discourage shipments. But the writer advises people not familiar with the wants, conditions and measurements of English markets not to ship anything on consignment. Not that the English wood merchants will take advantage of their ignorance of measurement and methods of computing prices, for they have never been accused of that sort of meanness (though it is not unknown in some of our home markets), but the English lumber dealer will insist upon getting just what he orders and will not accept anything else. The promiscuous shipments of timber and lumber on consignments by inexperienced American dealers demoralized prices and broke down a valuable trade of American woods in the English markets some years ago. A few years ago an association of American lumber exporters was formed which, during the past two years, has restored the tone of the English market, advanced prices on all standard forms of wood goods, and given an outlet for our congested markets. Great credit is due to a few of our hardwood and pine exporters, who make regular trips abroad and keep in close touch with the foreign demand, for the present satisfactory state of the export trade, and it is to be hoped that their labors will not again be nullified by those who are uninformed as to the conditions of foreign markets.

Lumber in the form of boards, strips, planks, squares, etc., in a more or less finished form do not constitute a very large proportion of our foreign wood exports. A much larger proportion goes to British markets in the form of timber, logs, sawed or hewn. The English people prefer to cut them into finished forms themselves. Until recent years hewed logs were preferred to those squared by the saw, but this preference is fast disappearing. Hardwood logs are usually hewn slightly on four sides, the bark removed from the corners. In this form they are known as waney timber. Yellow pine is shipped in the same form, and often of sixty feet and upwards in length. The English rule for measuring them differs greatly from ours. In the United States and Canada the almost universal rule of measurement used is that known as the Doyle log rule, as given in Scribner's Log Book, the owners of the copyright of that publication having substituted it for Mr. Scribner's rule many years ago.

The rule for obtaining the board measure contents of any size or length of log by Doyle's system is very simple, and, in the main, correct. It is briefly this: From the mean diameter of the log inside the bark subtract 4. Square one-fourth the remainder and multiply the product by the length of the log in feet. The result will be the number of feet, board measure, contained in the log. The exception to this rule is the measurement of mahogany and furniture woods of Constantine & Co., New York, and of cypress and large pine at Mobile and Pensacola. In England logs are usually sold by the cubic foot, or by the load, which is fifty cubic feet. There are two methods of measurement, viz.: String and calliper. Round timber is always sold by string measure, hewed timber by both, but the string measure is best for the buyer, because it takes into account the loss on waney logs. By string measure the average girth of a log is taken at three places, if it be a tapering log, by a tape line, and the girth measure is divided by 4, which gives one side of a square log. The length of the log in feet is multiplied by one of its sides in inches and the product divided by 12. This quotient is multiplied by the same side of the log, in inches, and divided by 12. The result is the contents in cubic feet. In practice the odd inches are not counted in the first product.

In the calliper measure, two sides of the log are measured, just as though it is perfectly square, taking no account of the wane edges. In the calliper measure the larger size, or face of the log, in inches, is multiplied by the length in feet, and the product divided by 12, which gives the superficial feet of that side. Then multiply the product by the width in inches of the other, or smaller side, and divide by 12. This gives the cubic feet contents of the log, but makes no allowance for the many corners. It is the rule generally in vogue for hewn hardwood and pine logs.

In view of the importance of our wood trade with England, and the lessened cost of freights to some of the midland markets by the opening of the great Manchester canal, manufacturers of southern hardwoods will do well to inform themselves fully upon the conditions and customs of foreign markets generally.—D. W. Baird, in The Tradesman.

POINTS ON BELTS.

RECENTLY at a meeting of engineers in Chicago an essay on belts was read. From this essay the following abstract of points is made: A 3-inch wide single leather belt, travelling at 500 feet per minute, will produce a force equal to one horse power. One 5 inches wide, at 4000 feet per minute, will transmit a force equal to 10 horse power, and the same belt travelling at the rate of 50 feet per minute will only equal the power of one man. A 6-inch belt travelling through 4000 feet of space per minute will run machinery equal to a 24-inch belt only running at the rate of 1000 feet per minute. Belts should never be geared too tight, for the belt will be hard upon itself. Friction maintains the motion that is produced between the pulley and the belt.

The angle of the belt should not exceed 45 degrees, and the belt should be made to move from the top of the driving pulley to the top of the pulley being driven. A single belt should not be subjected to a strain of more than 3000 pounds to the square inch of cross section, about 50 pounds for every square inch in width. When it is necessary to use cross belts, see that the laps will not tear up or joints sever. This may be done by keeping them separated at the point where they pass. No matter under what conditions a belt is being used, it should not be allowed to dry out, but should always be kept soft and pliable. A thorough application of suitable belt dressing will keep them in proper condition.

Belts should be run with a slight waving motion, which should show on their slack side;

it evidences slight tension and allows belts naturally to wear out. Swaying of belts is often caused by the pulleys not being in line, unevenness of leather in thickness along their edges, and want of balance. The edges of belts should be tight against the pulley while they are standing still. Tlghteners are placed on the slack side of the belts because there is more strain or tension on the working side, due to extra load, which causes loss of tension on the slack side. A self-adjusting tightener takes up this loss by keeping the tension almost constant. Any variation of load will cause the tightener to rise or fall and keep the belt from jumping. A tightener should never be rigid. Belts made too tight will cause friction to such an extent that it will consume all the power of the engine. Under a given load it is wonderful to see how much power of resistance is in a good belt. It can be strained for months, and after a short period of rest will return to its original strength and length.

Vertical-running belts should be drawn tight enough so that the belt will cling to the lower pulley. Laced belts often break where connected, on account of friction caused by slipping and movement between the lace and belt, which wears away the lace. The tension or degree with which it grips the pulley or hangs to its surface determines the amount of pull or driving power of the belt, hence the belts should touch every square inch of the surface of the pulley with which it comes in contact. In order to do this the belt should be very pliable and flexible.

Belts may be run up to to 6000 feet per minute with safety. They should be suitably long, so as not to strain the journals or be hard on the brasses. It is economy and good business foresight to use good belts. Poor belts are dear at any price. A belt's own weight causes it to sag; this helps to transmit more power. The proper amount of sag may be safely estimated as follows: When pulleys are 15 feet apart, allow 1½ to 2 inches; when pulleys are 20 to 25 feet apart, allow 2½ to 4 inches; when pulleys are 25 to 30 feet apart, allow 4 to 5 inches. A proper working belt will stretch one per cent. on its tight side, which is equivalent to one per cent. of creep; the loss by slipping will represent another one per cent.

An excessive amount of slip causes much expense and trouble. There are several combined causes which produce slipping. Considerable of this trouble can be lessened, such as journal friction, air resistance, friction of belt upon itself, crossed belts, for instance. When belts are badly oil-soaked and the pulleys have oil on them, it is well to sprinkle Fuller's earth or prepared chalk on the belt. This will absorb the oil. Scrape off the stuff with a flat piece of wood, slightly sharpened.

A solution of salt on pulleys roughens the leather and helps to overcome some of the slip. Anything that acts as a lubricant should be kept from a belt. If oil comes in contact with gum belts, it softens them. If water gets between the canvas and the seams and then freezes, it separates the layers. Even frosty pulleys in contact with gum belts tear them from the canvas. Boiled linseed oil lightly applied on the pulley side of a gum belt will help overcome slipping, caused by dust or otherwise. Gum belts are now used with success in damp or wet places in preference to leather ones, because the leather absorbs dampness. Gum belts are not used with success at half-cross or on cone-pulleys.

REVOLUTIONS OF A SAW.

THE following rule for finding the proper number of revolutions per minute of a saw of any diameter is given by an exchange:

Divide 36,000 by the diameter of the saw in inches; the quotient will be the right number of revolutions. About 9000 feet per minute for the rim of a circular saw to travel may be laid down as a good speed; a 12-inch saw, 36-inch rim, 3000 revolutions; 24-inch saw, 72-inch rim, 1500 revolutions, and so on.

The velocity and grip of belts running over pulleys are limited, according to their length, width, etc. Consequently, good results from circular saws or cutter-heads depend wholly upon the right proportion of the pulleys which drive them.

A good rule to follow is one-third the diameter of the saw for the width and diameter of the the pulley.

PROVINCE OF QUEBEC.

TABLE OF CONTENTS OF SAW LOGS, BOOM AND DIMENSION TIMBER IN FEET BOARD MEASURE.

LENGTH IN FEET.

Diameter in inches.	10 feet.	11 feet.	12 feet.	13 feet.	14 feet.	15 feet.	16 feet.	17 feet.	18 feet.	19 feet.	20 feet.	21 feet.	22 feet.	23 feet.	24 feet.	25 feet.	26 feet.	27 feet.	28 feet.	29 feet.	30 feet.	31 feet.	32 feet.	33 feet.	34 feet.	35 feet.	36 feet.	37 feet.	38 feet.	39 feet.	40 feet.	Diameter in inches.
6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	6
7	15	16	18	19	21	22	24	25	27	28	30	31	33	34	36	37	39	40	42	43	45	36	48	49	51	52	54	55	57	58	60	7
8	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	8
9	28	31	34	37	40	42	45	48	51	54	57	59	62	65	68	71	74	76	79	82	85	88	91	93	96	99	102	105	108	111	114	9
10	37	40	44	48	51	55	59	62	66	70	73	77	81	84	88	92	95	99	103	106	110	114	117	121	125	128	132	136	139	143	147	10
11	42	46	50	54	58	62	67	71	75	79	83	87	92	96	100	104	108	112	117	121	125	129	133	137	142	146	150	154	158	162	167	11
12	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	12
13	82	69	75	81	87	94	100	106	112	119	125	131	137	144	150	156	162	169	175	181	187	194	200	206	212	219	225	231	237	244	250	13
14	75	82	90	97	105	112	120	127	135	142	150	157	165	172	180	187	195	202	210	217	225	232	240	247	255	262	270	277	285	292	300	14
15	83	92	100	108	117	125	133	142	150	158	167	175	183	192	200	208	217	225	233	242	250	258	267	275	283	292	300	308	317	325	333	15
16	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	16
17	117	128	140	152	163	175	187	198	210	222	233	245	257	268	280	292	303	315	327	338	350	362	373	385	397	408	420	432	443	455	467	17
18	133	147	160	173	187	200	213	227	240	253	267	280	293	307	320	333	347	360	373	387	400	413	427	440	453	467	480	493	507	520	533	18
19	154	170	185	200	216	231	247	262	277	293	308	324	339	355	370	385	401	416	432	447	462	478	493	509	524	540	555	570	586	601	617	19
20	175	192	210	227	245	262	280	297	315	332	350	367	385	402	420	437	455	472	490	507	525	542	560	577	595	612	630	647	665	682	700	20
21	192	211	230	249	268	287	307	326	345	364	383	402	422	441	460	479	498	517	537	556	575	594	613	632	652	671	690	709	728	747	767	21
22	217	238	260	282	303	325	347	368	390	412	433	455	477	498	520	542	563	585	607	628	650	672	693	715	737	758	780	802	823	845	867	22
23	240	264	288	312	336	360	384	408	432	456	480	504	528	552	576	600	624	648	672	696	720	744	768	792	816	840	864	888	912	936	960	23
24	262	289	315	341	367	394	420	446	472	499	525	551	577	604	630	656	682	709	735	761	787	814	840	866	892	919	945	971	997	1024	1050	24
25	283	312	340	368	397	425	453	482	510	538	567	595	623	652	680	708	737	765	793	822	850	878	907	935	963	992	1020	1048	1077	1105	1133	25
26	317	348	380	412	443	475	507	538	570	602	633	665	697	728	760	792	823	855	787	918	950	982	1013	1045	1077	1108	1140	1172	1203	1235	1267	26
27	333	367	400	433	467	500	533	567	600	633	667	700	733	767	800	833	867	900	933	967	1000	1033	1067	1100	1133	1167	1200	1233	1267	1300	1333	27
28	362	399	435	471	507	544	580	616	652	689	725	761	797	834	870	906	942	979	1015	1051	1087	1124	1160	1196	1232	1269	1305	1341	1377	1414	1450	28
29	392	431	470	509	548	587	627	666	705	744	783	822	862	901	940	979	1018	1057	1097	1136	1175	1214	1253	1292	1332	1371	1410	1449	1488	1527	1567	29
30	421	463	505	547	589	631	673	715	757	800	842	884	926	968	1010	1052	1094	1136	1178	1220	1262	1305	1347	1389	1431	1473	1515	1557	1599	1641	1683	30
31	450	495	540	585	630	675	720	765	810	855	900	945	990	1035	1080	1125	1170	1215	1260	1305	1350	1395	1440	1485	1530	1575	1620	1665	1710	1755	1800	31
32	475	522	570	617	665	712	760	807	855	902	950	997	1045	1092	1140	1187	1235	1282	1330	1377	1425	1472	1520	1567	1615	1662	1710	1757	1805	1852	1900	32
33	525	577	630	682	735	787	840	892	945	997	1050	1102	1155	1207	1260	1312	1365	1417	1470	1522	1575	1627	1680	1732	1785	1837	1890	1942	1995	2047	2100	33
34	542	596	650	704	758	812	867	921	975	1029	1083	1137	1192	1246	1300	1354	1408	1462	1517	1571	1625	1679	1733	1787	1842	1896	1950	2004	2058	2112	2167	34
35	567	623	680	737	793	850	907	963	1020	1077	1133	1190	1247	1303	1360	1417	1473	1530	1587	1643	1700	1757	1813	1870	1927	1983	2040	2097	2153	2210	2267	35
36	592	651	710	769	828	887	947	1006	1065	1124	1183	1242	1302	1361	1420	1479	1538	1597	1657	1716	1775	1834	1893	1952	2012	2071	2130	2189	2248	2307	2367	36
37	617	678	740	802	863	925	987	1048	1110	1172	1233	1295	1357	1418	1480	1542	1603	1665	1727	1788	1850	1912	1973	2035	2097	2158	2220	2282	2343	2405	2467	37
38	655	715	780	845	910	975	1040	1105	1170	1235	1300	1365	1430	1495	1560	1625	1690	1755	1820	1885	1950	2015	2080	2145	2210	2275	2340	2405	2470	2535	2600	38
39	692	761	830	899	968	1037	1107	1176	1245	1314	1383	1452	1522	1591	1660	1729	1798	1867	1937	2006	2075	2144	2213	2282	2352	2421	2490	2559	2628	2697	2767	39
40	733	807	880	953	1022	1100	1173	1247	1320	1393	1467	1540	1613	1687	1760	1833	1907	1980	2053	2127	2200	2273	2347	2420	2493	2567	2640	2713	2787	2860	2933	40
41	758	834	910	986	1068	1137	1213	1289	1365	1414	1517	1592	1668	1744	1820	1896	1972	2047	2123	2199	2275	2351	2427	2502	2578	2654	2730	2806	2882	2957	3033	41
42	792	871	950	1029	1108	1187	1267	1346	1425	1504	1583	1662	1742	1821	1900	1979	2058	2137	2217	2296	2375	2454	2533	2612	2692	2771	2850	2929	3008	3087	3167	42
43	833	917	1000	1083	1177	1250	1333	1417	1500	1583	1667	1750	1833	1917	2000	2083	2167	2250	2333	2417	2500	2583	2667	2750	2833	2917	3000	3083	3167	3350	3333	43

THE CANADA LUMBERMAN
WOOD WORKERS' MANUFACTURERS' AND MILLERS' GAZETTE

MONTHLY AND WEEKLY EDITIONS

C. H. MORTIMER
PUBLISHER

CONFEDERATION LIFE BUILDING, TORONTO

BRANCH OFFICE:
NEW YORK LIFE INSURANCE BUILDING, MONTREAL

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ADVERTISING RATES FURNISHED ON APPLICATION

THE CANADA LUMBERMAN is published in the interests of the lumber trade and of allied industries throughout the Dominion, being the only representative in Canada of this foremost branch of the commerce of this country. It aims at giving full and timely information on all subjects touching these interests, discussing these topics editorially and inviting free discussion by others.

Especial pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information on which it can rely in its operations.

Special correspondents in localities of importance present an accurate report not only of prices and the condition of the market, but also of other matters specially interesting to our readers. But correspondence is not only welcome, but is invited from all who have any information to communicate or subjects to discuss relating to the trade or in any way affecting it. Even when we may not be able to agree with the writers we will give them a fair opportunity for free discussion as the best means of eliciting the truth. Any items of interest are particularly requested, for even if not of great importance individually they contribute to a fund of information from which general results are obtained.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 15 cents per line for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

Subscribers will find the small amount they pay for the CANADA LUMBERMAN quite insignificant as compared with its value to them. There is not an individual in the trade, or specially interested in it, who should not be on our list, thus obtaining the present benefit and aiding and encouraging us to render it even more complete.

TO VISITING LUMBERMEN.

Lumbermen visiting Toronto are invited to use the office of the CANADA LUMBERMAN as their own. We shall take pleasure in supplying them with every convenience for receiving and answering their correspondence, and hold ourselves at their service in any other way they may desire.

"MADE IN CANADA."

GERMANY of late has taken the front rank as a manufacturing nation. By means of her great industrial schools she has produced a type of educated artisan who, in addition to the highest manual skill, possesses a knowledge of scientific principles which enables him to choose the best means to a desired end. Great Britain is feeling severely the competition of Germany both in her home and foreign markets. It is not on this feature of German industrial development, however, that we desire to dwell, but on the German practice of labelling every package and shipment of goods with the words, "Made in Germany." The Toronto Globe recently made the wise suggestion that Canadian manufacturers in all lines should follow the German example by stamping "Made in Canada" upon their goods. Our contemporary truthfully says that no more effective or less expensive method of advertising Canada could be adopted. The foreigner who sees in his own market the highest grades of wheat, lumber, apples, cheese, butter, canned goods, etc., labelled "Made in Canada," or "Grown in Canada," will naturally conclude that Canada is a country of rich and diversified resources, desirable as a place of residence and as a source from which to purchase natural and manufactured products.

We learn from correspondence with British consular agents in South America, the West Indies, and other foreign countries, that large quantities of Canadian lumber and other manufactured products are imported into these countries via New York, and classed as United States imports. Thus the name of Canada is kept in the background, and our producers fail to get proper credit for the excellence of their goods. If the German system were adopted, this credit would come to us, and would be a most important factor in the promotion of our foreign trade. Let Canadian lumber manufacturers, to whom a foreign market is so important, be the first to adopt the nation and trade developing device, "Made in Canada."

FREIGHT RATES AND DISTRIBUTING POINTS.

EVERYONE closely in touch with lumber matters in Ontario must have observed that, in disposing of our product in the United States market, conditions of late have not been altogether favorable to the Canadian dealer. In the city of Toronto a few years ago were to be found a number of wholesale dealers, but to-day those conducting a purely wholesale business are very limited in number. Instead of the Canadian trade being distributed from a Canadian port, much of it has been diverted to Buffalo and Tonawanda and other American points, and as a natural result the middleman has discovered that his business can be conducted much more expeditiously from some location across the border. An instance of this was recently shown in the removal from Toronto of one of the oldest-established firms.

Having facilities for shipping by both rail and water, Toronto should be equally as important a shipping point as either Tonawanda, Buffalo, or Oswego, and, placed upon the same footing, we believe would attain to some proper position in this respect. In prospecting for the causes of this diversion of trade, we are led to believe that the Canadian dealer has been handicapped to some extent by discrimination in freight rates in favor of the dealer located on the American border.

To illustrate, the through freight rate from the Georgian Bay district, say Waubaushene or vicinity, to New York, is 19½ cents on either pine or hardwoods. The rate to Toronto on hardwoods is 7½ cents, and from Toronto to New York 16 cents, making a total of 23½ cents, or an advance over the through rate of 4 cents per 100 lbs. This amount the dealer who desires to ship to Toronto, and from thence to New York, is obliged to pay. In the case of United States points, take Tonawanda for example, the published rate from Waubaushene to that point is 8¾ cents, and from Tonawanda to New York about 13 cents, or a total of 21¾ cents, which is 1¾ cents less than the Toronto dealer is obliged to pay for reaching the same point in practically the same manner. This difference of 1¾ cents means a total on a car of 30,000 lbs. of $5.25, which reduces the profits on a carload of lumber just so much. But it is said to be possible to obtain a special rate from Tonawanda to New York as low as 10 cents, which would make a difference of 4¾ cents per 100 lbs. Particularly in the case of hardwoods is this injustice felt, in view of the wide distribution of that class of timber and the difficulty often experienced in securing a carload of the stock desired at one point. The only recourse for the Canadian dealer, in order to save this amount and successfully compete with the American dealer, is to ship direct from the mill on the through rate, which, as past experience has taught, is not always practicable.

Some of the effects of this discrimination on the Canadian trade may be enumerated. A dealer gets an order from New York for a carload of a certain class of lumber, and after looking around locates what he considers the necessary stock, but when he comes to load the car discovers that there is only about half the quantity of the grade required. He is then obliged to inform his customer to that effect, and ask for instructions regarding the stock for the balance of the car. He is advised that the class enumerated in the first order was all that was really required, but is reluctantly instructed, in view of the circumstances, to fill out the car with something else. In all probability when the next order is to be given the Canadian dealer will not be considered in the matter, but the trade will be diverted to some dealer on the other side who, by means of a supply yard and more equitable freight rates, will be enabled to fill the contract in accordance with the specifications. The Canadian mill man will be almost certain to lose the trade and the railway company the freight. Again, a customer orders a carload of lumber and gives instructions to ship by a car of a certain line. The railway authorities are advised to that effect, and the wholesale dealer sends his shipper to the point of shipment, but the latter is sometimes obliged to wait several days before the car arrives, thus considerably reducing the profits on the carload of lumber.

To overcome these difficulties it is necessary that Toronto should be made a central distributing point and placed on an equal footing with American ports with respect to freight rates. The establishment of lumber supply yards in Toronto would, we believe, mean more to the trade than appears on the surface. American buyers would make personal visits to inspect stocks, and as a result their relations with the Canadian dealer would be closer. Their opinion of the Canadian trade would be heightened, and, feeling satisfied that their orders would be promptly filled, more business would be likely to accrue. The present tendency of American buyers to deal direct with manufacturers would be removed, as the judiciousness of purchasing at a point where a selection of stocks and prompt shipment could be made would be self-evident. It would further assist in solving the vexed question of inspection. All lumber would be unloaded at Toronto and graded, thereby maintaining a uniform grade, while the inspection would be controlled in this market also. Another advantage which might also result to the manufacturer would be in the direction of realizing a greater sum for his lumber. We believe that much money is lost by mill men through improper grading. Upon being sorted at the supply yard, every grade and size of lumber would be disposed of in the market which would bring the highest returns, and much refuse which is now wasted would be profitably utilized.

Going back to the question of freight rates,

upon the adjustment of which the expediency of opening a yard in Toronto would seem to depend, it is not contended that the railway companies should reduce the present through rate to New York. It is simply asked that this rate be allowed to be paid in two portions, say the present local rate to Toronto, and 12 cents from Toronto to New York. It is possible now to obtain, as a special favor, a stop-over privilege for a day or two at a cost of one cent per hundred pounds, but this is as a rule unsatisfactory and does not serve the desired purpose. There cannot be any just reason why a carload of lumber should not be shipped from Georgian Bay points to Toronto and thence to New York at as low a rate as via Tonawanda or Buffalo, and we doubt not that a change in the policy of the railway companies in this direction would result beneficially to the railways as well as the Ontario lumber trade.

The LUMBERMAN would be pleased to have an expression of opinion from wholesale dealers and manufacturers regarding the expediency of establishing a supply yard in Toronto, as well as the mode of conducting the same.

EDITORIAL NOTES.

THE Australian kari wood pavement which was constructed a year ago on West 20th street, New York, as an experiment, is said to have proven unsatisfactory. It was supposed to be a suitable pavement for streets on which the traffic is not heavy, but it is claimed that when the blocks are wet horses are unable to secure a footing. To prevent accidents a coating of sand has been spread over the street.

IT is just possible that the development of the pulp industry in Canada may increase the profits of many saw mills, inasmuch as the waste product which formerly found its way to the burner may be utilized for the manufacture of pulp. In the state of Maine there are pulp mills which obtain a portion of their supply of raw material from the saw mills, but, of course, it is a small percentage of the total amount required. The spruce forests will continue to furnish the principal supply, and the competition for possession of timber limits will increase the revenue derived therefrom. An enthusiastic advocate has recently declared the superiority of wood pulp as a substitute for brick and stone as a building material.

SOME timely suggestions for manufacturers are contained in the letter which appears on another page from Mr. J. T. Schell, referring to the operations in the woods during the winter of 1896-97. Mr. Schell clearly points out the advantage to be gained by a curtailment in the log input, the effect of which would be to dispose of much of the lumber now at the mills at a more remunerative figure. To accomplish the desired end united effort is necessary. One manufacturer should not take the ground that as his neighbor is reducing his output he will be safe in operating his mill to its full capacity, as this action would be likely to become general, with the result that no reduction whatever in the output would be made. We believe we are safe in saying that there is little probability of any shortage in the log supply necessary to meet the demand for lumber during next season, and it is certainly more desirable to make a fair profit on one million feet than to be obliged to handle five million to secure the same returns. The lumber trade will be none the worse for a quiet logging season.

OF late years there has been a notable increase in the quantity of thin lumber shipped from Canada to Great Britain, a condition upon which Canadian lumber manufacturers have reason to congratulate themselves. It is possible that this trade is worthy of still greater expansion, but there are difficulties in the way which must first be overcome. The English saw miller is interested in having the timber shipped in the log or in deals, which of course brings to him trade in manufacturing for the many purposes for which the lumber is required. Opposition is therefore met in this direction. The conservatism of the English people is perhaps greater than is generally believed, and any new system of doing business meets with disapproval. The advantages of the new arrangement must be proven beyond a doubt before it receives the sanction of the Britisher. It is further necessary that the Canadian mill man should exercise greater care in the manufacture of his lumber. A visit to the English markets would enable the manufacturer to learn the requirements of the trade, and would prove of much assistance in preparing his stock. Unfortunately too many manufacturers do not realize the necessity of having their lumber cut to exact lengths and sizes. For twelve-foot stock, for instance, everything from twelve to thirteen feet is put in, although payment is only received for a 12-foot board. The freight rate in transportation to Europe on the surplus over the 12 feet reduces the profit by a considerable sum. Defects at the ends of boards should also be cut off, thereby raising the standard of the lumber. The variety of purposes for which lumber is required in Great Britain makes it imperative that the greatest precaution be taken in manufacture, and until this is done the development of the thin lumber trade is not likely to be rapid.

THE reference in these columns a few months ago to "excelsior," or wood wool, has brought to us numerous inquiries regarding the foreign demand for that article. There is no doubt that considerable quantities might be placed on the British market providing the rates of transportation were sufficiently low to permit of successful competition with the product of other countries, but the present carrying charges are somewhat excessive. As excelsior is put up in bales similar to hay, the freight rates thereon should be nearly the same, but we presume that owing to the small quantity shipped no equitable rates have been obtained. We were recently informed that a company in Scotland were prepared to take twenty tons a week if satisfactory prices could be arranged. The claim is made against the Canadian article that it is too coarse, but this defect should be easily overcome. In connection with this matter we observe that Messrs. Chapman & Co., of Deptford, S. E., who are large manufacturers and importers, are desirous of importing the raw material from which "excelsior" is made. They write as follows: "We want deal and batten ends (firewood, as it is termed in the trade) of about three inches thick and from one to six feet long, and between six and ten inches wide, of white fir or pine or other soft wood that has little smell. We could also do with any white round wood of any length up to ten feet and about six feet in diameter, the same as used by the American manufacturers of excelsior. If it can be done we would like to get small sections as samples, with specifications of dimensions and quotations c. i. f. London. We would buy whole cargoes, and it would greatly help us to know the approximate weight of a fathom (216 cubic feet) of the different qualities submitted." Here is an opportunity for lumber manufacturers in the maritime provinces to utilize their waste product to advantage.

CUTTING TIMBER.

There is a great deal said by the advocates of forest preservation about the good policy of selecting out and cutting for lumber the old matured trees, leaving the younger and more vigorous for future growth and supply. In theory this looks feasible. But in practice it is different. This is a windy country, and it is a well-known fact that whenever a forest is thinned out by the removal of the larger trees the winds make a slaughter of the residue. This is the reason why lumbermen prefer to cut their timber clean when they enter upon a tract for operations. In the older sections of the country, where openings have been made for the clearing of farm land, it is the common experience that the standing timber left for fire wood, sugar orchards of maple, or growths to be converted into saw logs later on, greatly suffer from the winds, and in some instances isolated tracts have to be cut to save loss of timber. This is a pity, but it is the truth, nevertheless. There seems to be but one way to manage hardwood timber, and that is to cut everything that is merchantable, leaving only the second growth, which adheres firmly to the soil and is tough enough to withstand the more powerful winds.

Hence the only way to successfully perpetuate forests seems to be to cut all the old growth, that is, the original forest, while the second growth is conserved. It is idle to talk to lumbermen about sparing timber that possibly can be cut into lumber. A man who has put his money into timber tracts well knows that if he leaves the smaller, younger and more vigorous trees, taking only those which have ceased growing, he will lose much of what he leaves. Besides, in this cutting over pine lands, the debris left on the ground, especially where no attempt is made to gather and burn it, remains as a menace to the standing timber, because it is food for forest fires. Another consideration also affects the profits of the operator. When a camp is once started it is desirable to finish the timber on the tract operated, for repeated going over the land adds to the cost of getting the timber into marketable shape. The lumberman realizes the desirability of preserving the forests, but there are difficulties in the way of a practical application of the theories which appear well on paper. Each owner of timber will have to shape his own course under the dictates of experience, and much as his financial exigencies shall dictate.—Northwestern Lumberman.

"Just tell them that you saw me," said the log as it slid against the circular saw.

"THERE is one characteristic of birch timber which, I believe, few have observed," remarked the manager of a planing mill not far from Toronto. "If you notice," he continued, "you will observe that birch checks both ways, while all other woods check only in one direction. This is one of the simplest ways of distinguishing birch timber when piled with other woods and only the ends of the logs are visible. Just watch in future and see if I am not correct."

* * *

A LUMBER paper tells a rather good story about the Hon. Philetus Sawyer, of Oshkosh, Wis., who has not only made a fortune out of white pine lumber, but is one of the best-known men in the northwestern lumber states. He recently attended the country fair at Omro, Wis., took in the fair and drank country fair lemonade. At one of the lemonade stands there was a boy about twelve years of age tending the lemonade barrel and he was not acquainted with the senator. The lemonade was good and Mr. Sawyer wanted a second glass, but the boy refused to give it to him until he had paid for the first glass. He paid for it and took the second. Some time afterwards the boy found out who it was to whom he had refused credit, and wrote Mr. Sawyer a letter of apology, in reply to which Mr. Sawyer said that he had done just right. The sequel of the affair is that Mr. Sawyer has sent for the boy and will educate him.

* * *

THERE is located on one of the islands near Great Manitoulin a saw mill which has an interesting history. The Mississippi Valley Lumberman tells us that the plant was originally located in Detour, Mich., and was the property of a firm of Frenchmen whose capital was limited, but who had been offered inducements to locate there. Everything went well for a time, but the other parties of the contract at length failed to carry out their part of the bargain and the firm saw ruin staring them in the face. They employed a desperate and very novel expedient, but it proved entirely successful. They selected a new site across the border on a large island having a bay so completely landlocked as to be entirely hidden from ordinary observation. Then, selecting their time, they cut the telegraph lines out of the town and began loading the mill on a large scow. Before they got away telegraph communication was restored and a tug hastened to the rescue and gave chase to the runaway tug and scow. As the island chain was being approached the pursuer almost overhauled the heavily loaded scow, when it was found that the Canadian line had been passed and the chase had to be abandoned. When the parties who claimed the mill returned to the search they had great difficulty in locating it. The only thing which could be done then was to seize the plant as contraband, which was done by the Canadian government. It was sold for duty at Ottawa and the runaway owners bid it in at a low figure and it has been busily at work in its new location for five or six years.

* * *

MR. W. B. Tindall, of the Parry Sound Lumber Company, is not altogether in favor of an export duty on logs; in fact, he conscientiously believes that the whole question of export duties is wrong. He says: "The Government sell their timber and get a good price for it, what more do they want? With regard to the claim that the manufacturing of our logs should be done in Canada, that is a matter which will eventually right itself, as shown by the fact that the Michigan people are now erecting mills on this side, where they can secure cheaper and better labor. Too many people apparently forget or are ignorant of the fact that as soon as an export duty is imposed upon saw-logs by the Canadian government, the same duty on lumber as existed under the McKinley bill comes in force. Apart from those who are directly interested in securing the imposition of an export duty on saw-logs, the persons who are advocating the measure are not conversant with the facts. We should remember that Canada is a long narrow country, and that the interests of other provinces besides Ontario must be considered. Then, again, the Americans are making unnecessary noise about the flooding of the United States market with Canadian lumber. Why, the importations from Canada are much less than the receipts at the city of Chicago alone." I observe that for the fiscal year ending June 30, 1896, according to the figures of the United States Treasury Department, 786,102,000 feet of lumber were exported from Canada to the United States, while the yearly receipts at Chicago are nearly double that amount.

* * *

MR. L. O. Armstrong, colonization agent of the Canadian Pacific Railway, returned early in November from a visit to the west. He was in the State of Michigan on election day. "Although the business men of Michigan rejoiced at Major McKinley's election," said Mr. Armstrong, "they appreciate the services rendered the Republican candidate by the sound money Democrats, and for this reason it is not thought probable that an extreme protective policy will be resorted to when the tariff comes to be framed."

"How is business in Michigan?" Mr. Armstrong was asked.

"Before the election," he replied, "business was in a terribly depressed state. In fact, it could hardly have been worse. The Chicago Lumber Company, one of the largest milling concerns in the State, had not paid a cent of money to their men for over a year, they being obliged to accept coupons, which were changed for goods at the company's stores. This was the deplorable state of affairs in Michigan, and, in fact, all over the country previous to the Presidential election."

"And are things any better now?"

"The feeling improved at once. The company I have just alluded to raised the price of lumber fifty cents per thousand feet all round, and merchants reported that orders began at once to come in."

Mr. Armstrong states that there is a strong feeling in Michigan in favor of putting a duty on Canadian lumber, but he thinks this influence will be counteracted by the New England States, where Canadian lumber is in such demand, and also by the knowledge that an export duty would be imposed on Canadian logs. Be this as it may, Mr. Armstrong added that Canadians should begin to look to Europe for a lumber market.

* * *

A LUMBER dealer who formerly resided in Toronto, but is now located in Georgia, recently paid a visit to his native city to renew acquaintances, and incidentally ran across a representative of one of the daily papers, when the following conversation ensued:

"Will you have something?" said he. The scribe never said a word, but over a pipe and a glass—or maybe two—a pleasant hour of the evening passed quickly away.

"How do you like Georgia?" asked the scribe.

"All right, except for the pigs," returned the lumberman.

"They have only one kind of pig down there, you know—the 'three-row' pig. They call him that because he can reach through a rail fence and dig up the third row of sweet potatoes." And the scribe laughed while the lumberman quietly pulled at his pipe.

"I went out one day to see about buying a timber limit," he continued. "Down there, you know, we cut logs all the year round, and the greatest bother we have is from water overflowing the ground so we can't cut during the rains. Well, I reached the place and went out to look over the ground."

"The owner of it solemnly assured me the water never came up near the timber at all. I could see water-marks about ten feet up from the ground on all the trees in one bottom, and I asked him what caused those funny marks up there."

"'Oh, just the hogs scratching their backs, was the answer."

"I never said a word until we went to his house and had dinner. In the evening we were smoking on the big verandah."

"'Waal, ah you goin' teh buy my timbah?'

"I thought a minute, and then I just said: 'No, but I'll take all the hogs you've got.'"

THE MOISTURE IN WOOD.

MICROSCOPICAL investigation is said to prove that the pores of wood invite the passage of moisture in the direction of the timber's growth, but repel it in the opposite direction, and this is supposed to account for the phenomenon which has been so often noticed and which is so commonly a mystery, namely, the fact of two pieces of timber sawn from the same section of a tree sometimes appearing to possess very variable degrees of durability. It is found that if the wood, say, of a gate post, is placed right end up the moisture in the soil will affect it, but the rain falling on the top will do little harm; if, on the other hand, the butt end of a tree is placed uppermost the top of the post will decay, because the moisture of the atmosphere will penetrate the pores of the wood more rapidly in such a position. The fact, so familiar, that the staves of a wooden tub appear to absorb moisture irregularly—some getting quite sodden while others are comparatively dry and seemingly almost impervious to moisture—is because the dry staves are in position as the tree grew, but the saturated ones are reversed.

CANADA LUMBERMAN

WEEKLY EDITION

The Lumberman Monthly Edition, 20 pages } $1.00 PER YEAR { The Lumberman Weekly Edition, every Wednesday

THIS PAPER REACHES REGULARLY THE PRINCIPAL LUMBER MANUFACTURERS AND DEALERS THROUGHOUT CANADA, AND WHOLESALE BUYERS IN THE AMERICAN AND FOREIGN MARKETS.

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CANADA LUMBERMAN

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C. H. MORTIMER

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Branch Office:
NEW YORK LIFE INSURANCE BUILDING,
MONTREAL.

Weekly Lumberman, published every Wednesday. Contains reliable and up-to-date market conditions and tendencies in the principal manufacturing districts and leading domestic and foreign wholesale markets. A weekly medium of information and communication between Canadian timber and lumber manufacturers and exporters and the purchasers of timber products at home and abroad.

Lumberman, Monthly. A 20-page journal, discussing fully and impartially subjects pertinent to the lumber and wood-working industries. Contains interviews with prominent members of the trade, and character sketches and portraits of leading lumbermen. Its special articles on technical and mechanical subjects are especially valuable to saw mill and planing mill men and manufacturers of lumber products.

☞ Subscription price for the two editions for one year, $1.00.

Lumbermen visiting Toronto are invited to call at the office of the CANADA LUMBERMAN. We shall have pleasure in giving them any information desired.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than 4 o'clock p.m. on Tuesday to insure insertion in the current week's issue.

WANTED.

ROCK ELM, 2½" AND 3" PLANK, AND Maple Octagons. Particulars furnished on application. Address Box No. 1,253, General P. O., New York City.

FOR SALE.

A MILLION X AND XX 18" CULL CEDAR Shingles, at your own price. No reasonable offer refused if sold atonce. NAPANEE PULP AND PAPER Co., Fenelon Falls, Ont.

WANTED.

FOR A SASH, DOOR, AND GENERAL JOBbing factory in British Columbia, a foreman and one or two hands. References required. Address, B. C. FACTORY, care of LUMBERMAN Office, Toronto.

WANTED.

ONE TO FIVE CARS OF 2½" COMMON AND No. 1 and 2 Soft Elm. Send list, with price delivered on cars at Buffalo. BUFFALO HARDWOOD LUMBER Co., 940 Elk St., Buffalo, N. Y.

Timber Limits For Sale

VALUABLE LIMITS—WELL TIMBERED—Pine, Spruce, &c.; advantageously situated for shipment by water and rail; especially adapted for pulp and saw-mill business.

JAS. M. MITCHELL,
58 St. Francois Xavier St., Montreal.
P. O. Box 774.

FOR SALE.

LARGE STEAM SAW MILL AND STAVE Mill at Essex, on M. C. R R Capacity per day, 25,000 ft. of lumber and 35,000 staves. Two spurs in mill yard of 15 acres; also barns, sheds and dwelling houses. A quantity of timber near by can be bought. Proprietor has invested on Pacific Coast and is closing out here. Must be sold. For particulars apply to

T. H. DECEW, Essex, Ont.

Wanted for Cash.

200,000 FEET 2 INCH FIRST AND SECond Dry Soft Elm.

S. I. WILSON & CO.,
26 King St. E., Toronto.

NOTICE

Under and by virtue of a warrant issued at the instance of the

Waterous Engine Works Co., Ltd.,
of Brantford, Ont.,

under a statutory lien, I have seized and am now in possession of certain machinery, viz.:—One 18 x 24 Steam Engine and Connections, one Steel Girder Carriage, Mandrel, Pulleys Boxes, Guide and Splitter, and one Prescott Steam Feed Cylinder, 36 feet in length, with Connections, which are in the mill belonging to McRae Bros. & Co., at Calabogie, in the county of Renfrew, and, pursuant to the said authority, I will on the

27th day of November, 1896,

proceed and sell the said machinery at the said mill.

All particulars relating to the said machinery may be had on application to the undersigned, or to the Waterous Engine Works Company, Limited, Brantford, Ont.

WALTER YUILL, Bailiff,
Calabogie, Ont.

CURRENT TRADE CONDITIONS.

ONTARIO

The lumber trade of Ontario, after a period of depression almost unprecedented, is gradually recovering from its inactivity, and on all sides a more promising outlook is reported. Within the past week many expressions of opinion have been heard that the business of the country is improving, and foreign capitalists are said to be looking to Canada as a desirable field for investment. Financiers are becoming interested in the probability of valuable gold mines being located in the northwestern part of Ontario, and money is circulating with more freedom. The advance in the price of farm products has in a measure been maintained — all of which will assist in the improvement of the lumber trade which has now commenced. Inquiries from the United States are more numerous, and prices of the best grades are higher than in the early fall. No. 1 cutting has advanced about $2 per thousand, and now sells at $32. In the Georgian Bay district there are large stocks, which will probably make it more difficult to advance prices, owing to extreme competition. In the Ottawa valley the market is in a healthy condition, and much of next season's production has been placed. Twelve-inch boards are very scarce, and it would be difficult at the present time to secure a suitable cargo for the South American market. The prospects for next season's trade are considered good, and only an overproduction of logs this winter is likely to prevent more remunerative prices. An improvement is also reported in hardwoods and hemlock.

QUEBEC AND NEW BRUNSWICK.

As navigation on the St. Lawrence has practically closed for the season, there is very little stock changing hands for the British market. During the past week a couple of steamers left Montreal with partial cargoes of lumber, which pretty well clears up the stock at this port. What remains will be held over until the spring. Stocks at Quebec are generally light, oak being in greater supply than other woods. The quantity of timber shipped from that port shows an increase over past years, and the general opinion is that next season will witness a brisk trade. The cut in the woods this winter will be an average one, and as many logs were hung up this season, there will doubtless be a sufficient supply for all requirements. In New Brunswick no particular activity exists. There are large quantities of lumber at the mills and on the wharves, much of which will be carried over the winter. Small lots are going forward to United States points, and freight rates have advanced 25 cents, making the rate now $2 to Boston and $2.25 to New York. Spruce is firmer and in more demand, and dealers are stocking up before prices advance. The cut in New Brunswick and Nova Scotia is likely to be larger than last year.

BRITISH COLUMBIA AND MANITOBA.

After a quiet period the saw mills of British Columbia are again in active operation, and large local orders are being placed. Indications point to the mills being kept busy and running full time all winter. The canneries continue to require large supplies of lumber, and shipments to the east are fairly active, but have been hindered by a scarcity of suitable cars. There is little doing in foreign trade. Manitoba trade is active, farmers purchasing freely for repair work.

UNITED STATES.

The feeling of confidence which followed the Presidential election in the United States has resulted in an expansion of trade in lumber, and a general advance in price of from 50 cents to $1 per thousand feet. The increase in volume of movement is not likely to be very marked during the winter season, but the requirement will increase with the first approach of spring trade. There has been a resumption of consuming industries, and most of these have very light stocks on hand, but do not feel disposed to stock heavily at the advanced prices until necessity compels them to do so. The fear of further advances may, however, tempt some buyers to lay in supplies for next season's wants. As trade in general increases, and money is more freely distributed, it is probable that lumber will not long remain at present quotations. Several good-sized transactions are reported in white pine, among which is the sale of 15,000,000 feet at Bay City and Saginaw. Shipping at Duluth has about closed for the season, and sales for eastern shipment are not large, but a fair demand is reported from the wheat-producing centres. Spruce and hemlock in the eastern markets are improving, and at Buffalo and Tonawanda an increase of sales is reported. The cut of pine this winter is likely to be smaller than last season, but more will be taken out than was anticipated before the election. The hardwood market is strengthening from an enlarged demand. Quarter-sawed red and white oak is inquired for, and some fair sales are announced. A Chicago dealer is said to have received an order last week for fifty cars of plain red oak finish. Birch, elm and maple is being purchased for furniture and other factories, and basswood is also moving a little better, although stocks are large. There is very little activity in the sash and door trade, as building operations are well over. Shingles are rather scarce, and are consequently firm. Many wholesale dealers are short in the supply of white cedars.

FOREIGN.

Apart from Great Britain the foreign lumber markets are not active. The South African and South American demand is likely to be good next season, but before the spring trade opens up there will be very little doing. The course of the British lumber market is towards a further hardening in prices of Canadian goods, which is accounted for by the light supplies and the active demand. Still more business might be done if shippers were willing to accept lower figures, but, realizing that the supplies are not likely to be greater than the requirements for the winter's trade, no underselling is being indulged in. Large quantities of pine sold at public sales have lessened the general demand, but the prices realized prove that the market is not weakening. The consumption of spruce continues unabated, and few distributing points contain any large supply. The probable early closing of the ports on the American side has had the effect of stiffening prices still further. General trade at London is only moderate, but an improvement is noted at Glasgow and West Hartlepool. At the latter port sawn wood is in exceptionally good request, and stocks are less than at the same time last year. Should the demand remain in the present healthy condition, it is quite probable that higher values will result. Mahogany is strong, and birch has improved. Oak is moving fairly well, while ash and elm are weak and little inquired for.

SHIPPING MATTERS.

Bark Launberga, from Manilla, loads deals at St. John, N. B., for the United Kingdom.

The following lumber charters are reported: Thos. Perry, Pensacola to London, sawn timber, 96s. 3d.; ship Annie M. Law, Mobile to Buenos Ayres, lumber, $11.50 net; bark Hornet, Mobile to Rosario, lumber, $13 net.

BUSINESS NOTES.

A. Mineau, lumber, etc., Louiseville, Que., is said to have assigned.

W. Williscraft, saw mill, Fort Simpson, B. C., is offering to sell out.

The B. B. Richards Lumber Company, of Duluth, Minn., have filed an assignment. The assets are estimated at $543,000, and are greatly in excess of liabilities.

STOCKS AND PRICES.

CANADA.

Chew Bros.' mill at Midland, Ont., has closed for the season. The cut was 12,000,000 feet.

The brig Darpa sailed from Dorchester, N. B., last week for Buenos Ayres with a cargo of lumber.

Harlow & Kempton, of Milton, N. S., will take out from five to six million feet of logs this season.

Johnson & Beveridge have put in a camp at Orrville, Ont., to take out logs for Toner & Gregory, of Collingwood.

According to the Northwestern Lumberman, a Saginaw syndicate is making estimates on the Howry limits near Peterboro', Ont.

An estimate of the timber on limit No. 151, Algoma, owned by John Charlton, M. P., places the amount at 100,000,000 feet of pine.

Wm. Cresswell, foreman for M. M. Boyd & Co., went north last week to the firm's limits in Monmouth to arrange for putting in a camp.

A timber berth on Barnaby river, Northumberland county, New Brunswick, was sold at the crown lands office last week to J. H. Barry, for $23 per mile.

Alfred Dickie, Stewiacke, N. S., has purchased the valuable timber lands of the Acadia Coal Co., Hopewell, N. S., and will operate extensively there this winter.

McArthur Bros. & Co., of Toronto, will operate quite extensively in the upper peninsula of Michigan and in Wisconsin this winter, taking out pine, oak and elm.

During October 947,000 feet long lumber, 2,218,000 laths and 2,727 pcs. piling were shipped from River Hebert to U. S. ports, in 13 vessels. From Northport went two deal cargoes for British ports.

The Central Lumber Company, of Saginaw, has started a lumber camp on Blind river, Ont., and will cut 5,000,000 feet, which will be rafted to the Saginaw river and converted into lumber at Zilwaukee.

Thos. A. Low, of Eganville, Ont., last week made a sale of 250,000 feet of lumber to an English firm to be shipped to Liverpool next season. The bulk of the lumber is to be shipped from Fourth Chute.

Mr. Fremont Crandell has a gang of 25 men at work at Squaw river, Harvey, cutting timber on a limit owned by the Sadler, Dundas & Flavelle Co., of Lindsay. He estimates the quantity to be cut at 1,000,000 feet.

The quantity of deals shipped from Parrsboro, N. S., this season is larger than last year, notwithstanding the fact that five or six million feet are held over. The quantity exported is 43,315,244 superficial feet of deals and ends, and the shippers were W. M. McKay and Geo. McKean, in about equal quantities.

FOREIGN.

The estimated input of logs in the Duluth district, with what is being carried over, is 450,000,000 feet.

The Southern Lumber Manufacturers' Association have advanced prices of yellow pine 50 cents per thousand feet.

S. O. Fisher, of Saginaw, is said to be negotiating for the sale of 250,000,000 feet of pine on the north shore of Lake Superior.

Robinson Bros., of Tonawanda, lately purchased considerable stock from Davis-Holmes Company, of Marinette, Wis. The consideration was about $50,000.

Yard pickings and fine common inch stock is likely to be scarce at Albany, N. Y. There is a big stock of 2 x 12 log run and box and 2 inch promiscuous box.

The Boom Company at Menominee, Mich., has handled 336,000,000 feet of logs this season. There are 35,000,000 feet held over for next season's sawing.

In the New York market spruce has advanced since the election $1.50 a thousand. Random cargoes have advanced to $13.50 for narrow and $16 for 10 x 12.

It has been estimated that the lumber requirements in the immediate vicinity of Delagoa Bay, South Africa, for the coming twelve months will be between 60,000,000 and 70,000,000 feet.

Eddy & Glynn will take out 10,000,000 feet of logs near Ashland, which will be taken to the Saginaw yard of C. K. Eddy & Sons. The latter firm will carry into the winter about 17,000,000 feet.

Barney Goodman, of Marquette, Mich., will take out board timber and logs for McCall & McBurney, of Simcoe, Ont. The scene of operations will be a tract of 3,000,000 feet on the Salmon Trout.

Bliss & Van Auken, of Saginaw, Mich., have started a number of logging camps on the Mackinaw division of the Michigan Central, and in the Georgian Bay district in Ontario. They have 20,000,000 feet now on hand.

Sales of lumber have been made at Saginaw, Mich., as follows: 1,000,000 feet log run at $15; 500,000 feet of box at $8; 300,000 feet at $8.50; 500,000 feet of wide hemlock at $7.50. Mill culls range from $6 to $8. Shingles are selling at $1.50 for clear butts and $2.50 for XXXX.

Sales of Canadian goods were made as follows at the last auction sale of Churchill & Sims, London, Eng.: Per steamer "Springwell," from Quebec—13 x 3 x 9 1st spruce, £9 15s.; 11x3x9 1st spruce, £9. Per steamer "Carham," from Montreal—12x3x11 3rd pine, £9 10s.; 12x3x11 3rd pine, £9 15s.; 13x3x11 3rd pine, £10. Per steamer "Montezuma," from Quebec—12x3x12/26 1st pine, £22 15s.; 12x3x12/26 1st pine, £22 10s. Per steamer "Montezuma," from Quebec—16 x 3 x 11 unsorted red pine, £7 15s.

THE AUSTRALIAN MARKET.

Fraser & Co., of Melbourne, Aus., in their last monthly timber report, say: A want of animation has been most noticeable in the timber market during the past few weeks, the demand having slackened considerably in comparison with the business concluded in late months, doubtless owing to the actual consumption having decreased in the country districts, from whence the principal amount of business has for some time been received. The uncertainty existing as to the prospects of our coming harvest has caused buyers to act cautiously for the present, but although it may probably be found that our wheat crop will not realise the expectations of a few months ago, still our butter output will be a large one, which will have the effect of stimulating trade generally, and more especially in the country area.

Outside of the local demand, some sales have been made for West Australia, chiefly in flooring, lining, weatherboards, and Oregon lumber, though enquiries from that quarter have not been so prevalent, but as one or two small sailing vessels are now loading here for Western ports, some supplies are likely to be directed there by these opportunities.

With the exception of Oregon, which is now selling at £5 5s. per 1,000 feet super., late values for other descriptions have been fairly well maintained, but there are no indications of advanced rates being shown just yet awhile.

SPRUCE AND BALTIC WHITE DEALS.—Imports: 1,294,144 feet super. Arrival: Sigurd, from Quebec. The greater portion of the above cargo of Canadian spruce deals has been placed. Baltic White Deals (9 x 3) have been quitted at 2¾d. per foot of 9 x 3.

NEW LUMBER TARIFF.

The following rates on lumber, furnished by Capt. J. H. Williams, of the William Line, came into effect November 9th:

JOINT LUMBER TARIFF U. S., NO. 332.

Carloads, minimums as specified herein, from Ottawa, Rockland and Hawkesbury, and Canada-Atlantic, and Ottawa, Arnprior and Parry Sound railway stations, to New York, Brooklyn, Jersey City, and points reached by water from Albany, N. Y.:

Rates on seasoned lumber and lath to New York and all points within the regular lighterage limits of New York harbor, and to points on the Hudson reached by water from Albany.

FROM OTTAWA, ROCKLAND, HAWKESBURY AND CANADA-ATLANTIC RAILWAY STATIONS.

Seasoned pine lumber, in lots of 50 M ft and over	$3 00 per M ft.
Seasoned pine lumber, in lots under 50 M ft., subject to extra towage	3 25 "
Seasoned pine lumber shorts, in lots of 50 M ft. and over	3 00 "
Seasoned pine lumber shorts, in lots under 50 M ft., subject to extra towage.	3 25 "
Seasoned lath, in lots of 250 M pcs. and over	55 per M pcs.
Seasoned hardwood lumber, in lots of 50 M ft. and over	4 00 per M ft.
Seasoned hardwood lumber, in lots under 50 M ft., subject to extra towage	4 25 "

FROM ARNPRIOR, GALETTA, KINBURN, CARP.

Seasoned pine lumber, in lots of 50 M ft. and over	$3 50 per M ft.
Seasoned pine lumber, in lots of under 50 M ft, subject to extra towage	3 75 "
Seasoned pine lumber shorts, in lots of 50 M ft. and over	3 50 "
Seasoned pine lumber shorts, in lots of under 50 M ft, subject to extra towage.	3 75 "
Seasoned lath, in lots of 250 M pcs. and over	65 per M pcs.
Seasoned hardwood lumber, in lots of 50 M ft and over	4 50 per M ft.
Seasoned hardwood lumber, in lots under 50 M ft., subject to extra towage.	4 75 "

FROM RENFREW, RENFREW JUNCTION, GLASGOW, GOSHEN.

Seasoned pine lumber, in lots of 50 M ft. and over	$3 75 per M ft.
Seasoned pine lumber, in lots under 50 M ft., subject to extra towage	4 00 "
Seasoned pine lumber shorts, in lots of 50 M ft. and over	3 75 "
Seasoned pine lumber shorts, in lots under 50 M ft., subject to extra towage.	4 00 "
Seasoned lath, in lots of 250 M pcs. and over	70 per M pcs.
Seasoned hardwood lumber, in lots of 50 M ft. and over	4 75 per M ft.
Seasoned hardwood lumber, in lots under 50 M ft., subject to extra towage.	5 00 "

SEASONED PINE LUMBER—CARLOADS.

Cargoes of not less than one hundred and sixty and not more than one hundred and eighty thousand feet.

FROM	TO PHILADELPHIA. Per M Feet.	TO BALTIMORE. Per M Feet.
Ottawa, Rockland, Hawkesbury and Canada-Atlantic Railway Stations	$4 00	$5 50
Carp, Kinburn, Galetta, Arnprior	4 50	6 00
Glasgow, Goshen, Renfrew, Renfrew Junction	4 75	6 25

Lumber and lath to be well seasoned and in good shipping order; and not to exceed 3,000 pounds per M feet pine umber, 4,000 pounds per M feet Hardwood, nor 600 pounds per 1,000 pieces lath.

Minimum car load lumber, 10,000 feet; lath, 50,000 pieces.

Any shipment of lumber delivered to more than one consignee, reducing minimum delivery under 50 M feet, will be raised to the rate applicable on lots less than 50 M feet.

LUMBER FREIGHT RATES.

Lumber freight rates on the Canada Atlantic Railway are as follows: Ottawa to Toronto, 10 cents per 100 lbs.; Ottawa to Oswego, $1.90 per M ft., (3,000 lbs' and under per M ft.); Ottava to Montreal, 5c. per 100 lbs.; Arnprior to Montreal, 7c. per 100 lbs; Ottawa to Buffalo, 12 cents per 100 lbs.: Ottawa to Port Huron and Detroit, 14 cents per 100 lbs. Ottawa to New York, track delivery 15 cents per 100 lbs., lightered 17 cents per 100 lbs. Arnprior to New York, track delivery 17 cts. per 100 lbs., lightered 9 cts. per 100 lbs. Ottawa to Boston, Portland and common points, local 15 cents; exports 13c. per 100 lbs.; Arnprior to Boston, Portland and common points, local 17 cents; export 15 cents per 100 lbs.; Ottawa to Burlington, 6 cents per 100 lbs.; Ottawa to Albany, 10 cents per 100 lbs.; Arnprior to Albany, 12 cents per 100 lbs.; Ottawa to St. John, N. B. and common points, 20 cents per 100 lbs.; Ottawa to Halifax, N. S. and common points, 22½ cents per 100 lbs Minimum carload weight for shipment of lumber, lath, shingles, etc., is 30,000 lbs., and rates quoted above are in cents per 100 lbs., except when quoted per M ft. the minimum carload charged is 10 M ft., lumber not exceeding 3,000 lbs. to the M feet. Ottawa rates apply on shipments from Rockland and Hawkesbury.

Lumber freight rates for pine on the Grand Trunk Railway have been made a fixture, as below. Of any intended change due notice will be given lumbermen.

General instructions in shipping by Grand Trunk are embodied in these words in the tariff schedule: On lumber in carloads, minimum weight, 30,000 lbs. per car, unless the marked capacity of the car be less, in which case the marked capacity (but not less than 24,000 lbs.) will be charged, and must not be exceeded. Should it be impracticable to load certain descriptions of light lumber up to 30,000 lbs. to the car, then the actual weight only will be charged for, but not less than 24,000 lbs. The rates on lumber in the tariff will not be higher from an intermediate point on the straight run than from the first named point beyond, to the same destination. For instance, the rates from Tara or Hepworth to Guelph, Brampton, Weston or Toronto, would not be higher than the specific rates named from Wiarton to the same points. The rates from Cargill and Southampton to points east of Listowel and south and west of Stratford will be the same as from Kincardine, but in no case are higher rates to be charged than as per mileage table published on page 9 of tariff.

Rates from leading lumber points on pine and other softwood lumber, shingles, etc., are as follows: From Glencairn, Creemore, Aurora, Barrie and other points in group B to Toronto, 6½c.; Collingwood, Penetang, Coldwater, Waubaushene, Sturgeon Bay, Victoria Harbor, Midland, Fenelon Falls, Longford, Gravenhurst and other points in group C, to Toronto, 6½c.; Brace, bridge to Toronto 7c.; Utterson, Huntsville, Navor-Emsdale, Katrine to Toronto, 7½c.; Burk's Falls, Berriedale and Sundridge, to Toronto, 8c.; South River, Powassen and Callender to Toronto, 9c.; Nipissing Junction and North Bay, 10c. Rate from Goderich, Kincardine and Wiarton to Toronto, 6½c. These rates are per 100 lbs. Rates from Toronto east to Belleville are 7½c. per 100 lbs.: to Deseronto, 9c.; to Brockville and Prescott, 10c.: to Montreal and Ottawa, 11c. The rates on hardwoods average about from 1c. to 2c. per 100 lbs. higher than on softwoods. For rates on railway ties, mahogany, rosewood, walnut, cherry, and other valuable woods, application must be made to the district freight agent.

On the Canadian Pacific the rates on pine and soft woods may be illustrated as follows: Cache Bay, North Bay, Sturgeon Falls and Warren, to Toronto, 9c; Algoma, Cook's Mills, Massey, Spanish River and Whitefish to Toronto, 12c.; Ottawa to Toronto, 10c From Ottawa, Hull, Aylmer and Duchesne Mills to station on the Lake Erie and Detroit River, Erie and Huron, Toronto, Hamilton and Buffalo, and Michigan Central Railways, the rate is 14½c. per 100 lbs. Regulations apply as to minimum size of carload of 30,000 lbs., and an advanced rate is charged for hardwoods.

MODIFICATION OF HARDWOOD RATES.

THE Grand Trunk Railway and Canadian Pacific have made the rates on hardwoods from certain points to Toronto and Hamilton as follows. The regulations are over the signature of Mr. John Earls, W.D.F.A., of the G. T. R., and given in reply to a letter from Toronto hardwood men:

"After careful consideration we have come to the conclusion that, on and after Jan. 1st, 1895, a modification will be made in the present arrangements for hardwood lumber, to the effect that the rate will be 7½c. per 100 lbs from our Northern and Northwestern branches to Toronto and Hamilton. This rate, however, will not apply from main line points and the straight run between Toronto, Sarnia and Windsor; also that so far as rates on common lumber to points like Guelph, Galt London, Woodstock, Ingersoll, etc., from all lumber shipping stations the rate will be the same on hardwood as on pine." On the old principle, we suppose, that half the loaf is better than none, hardwood men have something, possibly, to be thankful for, though there is no good reason why the rates generally on hardwood should not be as low as on pine. It is understood that the C. P. R. rate will be made uniform at 7½c from same points.

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ELECTRICAL APPARATUS

Royal Electric Co., Montreal.
Starr, John, Sons & Co., Halifax, N. S.

INJECTORS

Penberthy Injector Co., Detroit, Mich.
Williams Machinery Co., A. R., Toronto.

LUMBERMEN'S SUPPLIES

Eckardt, H. P. & Co., Toronto.
Rice Lewis & Son, Toronto.
Scully & Co., John, Toronto.

MACHINERY

Bell, Robt., Jr., Hensall, Ont.
Bertram, John & Sons, Dundas, Ont.
Canadian Locomotive and Engine Co., Kingston, Ont.
Dunbar, Alex., & Sons, Woodstock, N. B.
Darling Bros., Montreal.
Northey Mfg. Co., Toronto, Ont.
Payette, P. & Co., Penetanguishene, Ont.
Petrie, H. W., Toronto, Ont.,
Sawyer & Massey Co., Ltd., Hamilton, Ont.
The Wm. Hamilton Mfg. Co., Peterboro', Ont.
The Phelps Machine Co., Eastman, Que.
The Waterous Co., Brantford.
Williams Machinery Co., A. R., Toronto.

RAILWAYS

Flint & Pere Marquette Railroad.
Illinois Central R.R.

SAW MANUFACTURERS

Burns, E. R., Saw Co., Toronto, Ont.
Robertson & Co., James, Montreal, Toronto and St. John, N. B.
Shurly & Dietrich, Galt, Ont.
The McMillan & Haynes Co., Ltd., St. Catharines, Ont.

SPLIT PULLEYS

Dodge Wood Split Pulley Co., Toronto, Ont.

WHOLESALE LUMBER DEALERS

Shier, J. D., Bracebridge, Ont.
Wiggin, H. D., Boston, Mass.

MISCELLANEOUS

Axes, Campbell Bros., St. John, N. B.
Alligator Steam Warping Tugs, West & Peachey, Simcoe, Ont.
Contractors' Plant, John Scully & Co., Toronto.
Can. Office and School Furniture Co., Preston, Ont.
Lumbermen's Clothing, W. Carss & Co., Orillia, Ont.
Lumbering Tools, Thos. Pink, Pembroke, Ont.
Magnolia Metal Co., New York.
Machine Knives, Peter Hay, Galt, Ont.
Metal Roofing, Pedlar Metal Roofing Co., Oshawa, Ont.
Patent Medicines, Ripan's Chemical Co., New York, N.Y.
Rails, John Gartshore, Toronto.
Shanks and Chisel Bits, A. McPherson, Oxford, N. S.
Scribner's Lumber and Log Book, S.E.Fisher, Rochester, N.Y.
Turbines, J. C. Wilson & Co., Glenora, Ont.
Veterinary Medicines, J. C. & W. R. McMurtry, Arnprior, Ont.

WHOLESALE PRICES CURRENT.

TORONTO, ONT.

TORONTO, November 25, 1896.

CAR OR CARGO LOTS.

1¼, 1½ and 2 inch cut up and better	32 00	34 00
2 inch picks and uppers	34 00	36 00
1x12 dressing and better, 60% 16 ft	22 00	24 00
1x10 fine dressing and better	21 00	23 00
1x10 and 12 Canadian dressing and better	20 00	22 00
1 1-2 and thicker cutting up plank	24 00	26 00
1 1-4 in. cut up and better	33 00	35 00
1x10 and 12 mill run	16 00	18 00
1x10 and 12 common	12 00	14 00
1x10 and 12 mill culls	9 00	10 00
1 inch clear and picks	28 00	30 00
1 inch dressing and better	20 00	22 00
1 inch siding mill run	14 00	15 00
1 inch siding common	11 00	12 00
1 inch siding ship culls	10 50	11 50
1 inch siding mill culls	8 50	9 00
Cull scantling	8 00	9 00
1 inch strips 4 in. to 8 in. mill run	13 00	14 00
1 inch strips, common	11 00	12 00
1 1-4 inch flooring		16 00
1 1-2 inch flooring		16 00
XXX pine shingles, 16 inch		2 25
XX pine shingles 16inch		1 40
Lath, No. 1		1 60
Lath No. 2		1 30

HARDWOODS—PER M. FEET CAR LOTS.

Quality, 1s and 2s unless otherwise specified.

Ash, white,	1	to 2 in..	$26 00	$28 00	Cherry	1	to 1½	$50 00	$60 00
" "	2½	to 4..	30 00	32 00	"	2	" 4..	60 00	65 00
Ash, black, 1sts and 2nds,	1	to 1½ in....	17 00	19 00	Elm, soft	1	" 1½	14 00	15 00
					" "	2	" 3..	15 00	16 00
Ash, black, 1sts and 2nds,	2	to 4 in....	19 00	21 00	" rock	1	" 1¼	16 00	18 00
					" "	1½	" 3..	20 00	22 00
Ash, M. R.,	1	" 2..	15 00	18 00	Hickory	1½	" 2..	28 00	30 00
Birch,	1	..	18 00	20 00	Maple	1	" 1½	16 00	17 00
"	1½	" 2..	20 00	23 00	"	2	" 4..	17 00	18 00
" sqrs.	4x4	" 8 x8	24 00	26 00	Oak, red, p'n	1	" 1½	26 00	30 00
Basswood	1	" 1¼	16 00	18 00	"	2	" 4..	29 00	32 00
"	1½	" 2..	19 00	20 00	" white	1	" 1½	28 00	30 00
" m. r.	1	" 1¼	14 00	16 00	" "	2	" 4..	30 00	35 00
Butternut	1	" 1½	23 00	25 00	" quart'd	1	" 2..	46 00	50 00
"	2	" 3..	25 00	28 00	Walnut	1	" 3..	85 00	100 00
Chestnut	1	" 2..	24 00	26 00	Whitewood	1	" 2..	32 00	36 00

OTTAWA, ONT.

OTTAWA, November 25, 1896.

Pine, good sidings, per M feet, b.m	$29 00	35 00
Pine, good strips, " " "	24 00	30 00
Pine, good shorts, " " "	18 00	25 00
Pine, No. 1 dressing sidings, per M feet, b.m	17 00	20 00
Pine, " " strips, " " "	15 00	18 00
Pine, " " shorts, " " "	13 00	14 00
Pine, 10 s.c. and better stock, " " "	13 00	15 00
Pine, 8 s.c. " " " " " "	11 50	13 00
Pine, " sidings " " "	13 00	15 00
Pine, " strips " " "	9 00	12 00
Pine, " shorts " " "	7 00	9 00
Pine, box culls " " "	9 00	11 00
Pine mill culls " " "	7 00	10 00
Lath per M No. 1	90	1 25
Lath per M No.	80	1 15
1x10 No. 1 barn	18	20
1x10 No. 2 "	16	18
1x8 & 9 No. 1 "	16	18
1x8 & 9 No. 2 "	15	17

QUEBEC, QUE.

QUEBEC, November 25, 1896.

WHITE PINE—IN THE RAFT.

	cts.	cts.
Common and railroad, for interior and ordinary according to average, quality, etc., measured off	20 @	22
For 40 to 45 feet average, measured off	24	26
For good and good fair average, measured off	28	32
First class " "	34	36
In shipping order " "	36	42
First class Ottawa waney, 18 inch average	36	38
" " " 19 to 21 inch average	40	42
First class Michigan waney board, 18 inch average	40	42
" " " " 19 to 21 inch average	42	45

RED PINE—IN THE RAFT.

Measured off, according to average and quality	22	26
In shipping order, 35 to 45 feet "	38	40

OAK—MICHIGAN AND OHIO.

By the dram, according to average and quality	47	49

ELM.

By the dram, according to average and quality, 45 to 50 feet	28	30
" " " " 30 to 35 feet	25	28

ASH.

14 inches and up, according to average an quality	22	30
To average 16 inch	28	31

BIRCH.

14 inch average		18
16 " "		21
18 " "	24	25

TAMARAC.

Square, according to size and quality	17	19
Flatted, " " "	15	18

DEALS.

Bright spruce, according to mill specification, $42 to $44 for 1st, $28 to $30 for 2nd, $25 to $27 for 3rd, and $21 to $23 for 4th quality. F.O.B. batteau

SAGINAW AND BAY CITY, MICH.

SAGINAW, Mich., November 25, 1896.

UPPERS AND SELECTS.

Uppers, 1 in., 10 in. and up wide	$45 00	Selects, 1in., 8in. and up wide	$40 00
1¼, 1½ and 2 in.	45 00	1¼, 1½ and 2 in.	41 00
2½ and 3 in.	53 00	2½ and 3 in.	47 00
4 in.	56 00	4 in.	50 00

FINE COMMON.

1 in., 8 in. and up wide	33 50	2½ and 3in., 8in. and up wide	42 00
1¼, 1½ and 2 in.	35 00	4 in.	45 00

B FINE COMMON OR NO. 1 CUTTING.

1 in., 7 in. and up wide	23 50	2½ and 3in., 7in. and up wide	37 00
1¼, 1½ and 2 in.	31 00	4 in.	40 00

STRIPS. A AND B (CLEAR AND SELECTS).

1¼ in., 4, 5 and 7 in. wide	34 00	1 in., 4, 5 and 7 in. wide	32 00
6 in. wide	36 00	6 in. wide	36 00

FINE COMMON OR C.

1¼ in., 4, 5, 6 in. wide	30 00	1 in., 6 in. wide	30 00
1 in., 4, 5 in. wide	25 00		

SELECTED NO. 1 SHELVING OR FENCING STRIPS.

1¼ in., 4, 5, 6 in. wide	24 00	1 in., 4, 5, 6 in. wide	22 00

NO. 1 FENCING OR NO. 3 FLOORING.

1 in., 4, 5 and 7 in	16 00	1¼ in., 4, 5 and 7 in.	15 00
1 in., 6 in.	17 00	1¼ in., 6 in.	17 00

NO. 2 FENCING OR NO. 4 FLOORING.

1 in., 4, 5 and 7 inch	13 50	1¼ in., 4 to 7 inch	14 00
1 in., 6 inch	14 00	No. 3 Fencing, 1 in., 6 inch	12 00

SHELVING.

No. 1, 1 in., 10 in. stocks	25 00	No. 2, 1 in., 7 and 8in. stocks	19 00
1 in., 10 in. and up wide	26 00	1 in., 10 in. stocks	21 00
1 in., 12 in. stocks	29 00	1 in., 12 in. stocks	24 00
1 in., 12 in. and up wide	30 00	1 in., 10 in. and up wide	22 00
1¼in. 1½ and 2in., 8in. and up wide	29 00	1 in., 13 in. and up wide	25 00

BARN BOARDS OR STOCKS.

No. 1, 12 in.	21 00	No. 2, 9 in.	13 50
10 in.	16 50	8 and 7 in.	13 50
9 in.	16 00	No. 3, 12 in.	12 50
8 and 7 in.	16 00	10 in.	11 00
No. 2, 12 in.	16 00	9 in.	11 00
10 in.	14 00	8 in.	11 00

SHIPPING CULLS OR BOX.

1 in., 4 and 5 in. wide	$8 50	1 in., 13 in. and up wide	$11 00
1 in., 6 in. wide	9 50	1¼, 1½ and 2 in., 7 in. and up wide	10 50
1 in., 7 in. wide and up	9 50		

SHAKY CLEAR.

1 in., 3, 4, 5, 7, 8 and 9in. wide	17 00	1 in., 10 in. and up wide	18 00
1 in., 6 in. wide	18 00	1¼, 1½ and 2 in., 8in. and up wide	20 00

COFFIN BOARDS.

No. 1, 1 in., 13in. and up	20 00	No. 1, mill culls	8 00
No. 2	17 00	No. 2, or red horse	6 50

BEVELED SIDING—DRESSED.

Extra clear (perfect)	23 00	No. 2	18 00
No. 1 (nearly clear)	21 50	No. 3	14 00

TIMBER, JOIST AND SCANTLING.

Norway, 2x4 to 10, 12 to 16ft.	$8 50	Hemlock, 2x4 to 10, 12 to 16 feet	8 00
18 ft.	10 50	2x12	8 50
20 ft.	11 50	Add $1 to each additional 2ft. in length.	
22 and 24 ft.	12 50		

SHINGLES, 18-IN.

Fancy brands, XXXX	3 00	Standard brands, river made, XXXX	2 75
Clear Butts	1 90	Clear Butts	1 75

WHITE PINE LATH.

No. 1	1 50	No. 2	1 00
		Hemlock	1 00

BUFFALO AND TONAWANDA, N.Y.

TONAWANDA, N. Y., November 25, 1896.

WHITE PINE.

Up'rs, 1, 1¼, 1½ and 2 in.	$46 00	47 00		No. 3, 1¼ to 2 in.	17 00	18 00
2½ and 3 in.	50 00	54 00		Shelving, No. 1, 13 in and up, 1 in.	30 00@	33 00
4 in.	55 00	57 00		Dressing 1¼ in.	24 00	26 00
Selects, 1 in.	38 00	40 00		1¼x10 and 12		26 00
1¼ to 2 in.	40 00	42 00		1½ in.	24 00	25 00
2½ and 3 in.	47 00	50 00		2 in.	26 00	28 00
4 in.		52 00		Mold steps, 1 to 2 in.	32 00	34 00
Fine common, 1 in.	35 00	37 00		Barn, No. 1, 10 and 12 in.	18 00	21 00
1¼ and 1½ in.	35 00	38 00		6 and 8 in.	17 00	21 00
2 in.	34 00	36 00		No. 2, 10 and 12 in.	16 00	17 00
3 in.		45 00		No. 3, 10 and 12 in.	13 00	14 00
4 in.		45 00		6 and 8 in.	12 50	13 50
Cut'g up, No. 1, 1 in.	26 00	27 00		Common, 1 in.	16 00	18 00
1¼ to 2 in.	32 00	33 00		1¼ and 1½ in.	18 00	20 00
No. 2, 1 in.	16 00	17 00		2 in.	18 00	20 00
No. 2, 1¼ to 2 in.	22 00	23 00				

WHITE ASH.

1st & 2nd, 1 inch,	33 00	33 00	2½ to 4 in.	36 00	40 00
1¼ to 2 in.	33 00	35 00	Strips	17 00	18 00
			Culls	9 00	10 00

BLACK AND BROWN ASH.

1st & 2nd, 8 inch up,	20 00	22 00	Com. & good culls	10 00	12 00

BIRCH.

1st & 2nd, 6 inch & up, red	28 00	30 00	1st & 2nd, white, 6 in. & up,	18 00	
			Com. & good culls	10 00	12 00

ELM.

1st & 2d, rock, 8in. & up,	18 00	22 00	1st & 2d, soft, 8 in. & up,	16 00	18 00

MAPLE.

1st & 2d, hard, 6in. & up	18 00	20 00	1st & 2d, soft, 6in. & up,	17 00	19 00

WHITE OAK.

1st & 2nd, plain, 8 in. & up	26 00	28 00	Clear squares, 5x5 to 8x8		35 00
Good common	15 00	17 00	1st & 2nd quartered, 6 in. up	45 00	50 00
Good culls	10 00	12 00	Common quartered	25 00	30 00

RED OAK.

1st & 2nd	25 00	27 00	Quartered 1st & 2nd	42 00	44 00
Common	14 00	16 00	Common	22 00	26 00
Cull	9 00	10 00			

NEW YORK CITY.

NEW YORK, N. Y., November 25, 1896.

WHITE PINE LUMBER

Prices for white pine lumber are governed entirely by source of supply rendering it useless to give prices for local market.

WHITE PINE TIMBER.

Bridge timber	$28 00	@ 40 00	Building orders	$27 00	@ 37 00
Decking	44 00	50 00			

SPRUCE.

6 to 9 in.	14 00	14 50	10 to 12 in.	16 25	17 00
6 to 12 in.	14 50	15 75	Lath	1 85	1 95
9 to 12 in.	15 75	16 25			

HARDWOOD.

4/4 and thicker,	No. 1 and 2		Black Ash,	10 to 16			23 00
"	"	"	Soft Elm,	"			17 00
"	"	"	Hard Maple,	"			21 00
"	"	"	Basswood,	"			20 00
"	"	"	Birch,	"			23 00
"	"	Black Ash, Com. and Shipping Culls, M.C.O.					14 00
"	"	Soft Elm,	"	"	"		12 00
"	"	Hard Maple,	"	"	"		14 00
"	"	Basswood,	"	"	"		12 00
"	"	Birch,	"	"	"		14 00

ALBANY, N.Y.

ALBANY, N. Y., November 25, 1896.

PINE.

Uppers, 3 in. up	$52	$55	Dressing boards, narrow	$19	$21
2½ in.	52	55	West India shipping boards	15	17
1 to 2 in.	45	48	Box boards	10	12
4 inch uppers		55	10-in. dressing and better	26	34
Selects, 2½ in. up		45	10-in. common	14	15
1 to 2 in.		40	12-in. dressing and better	26	32
Fine common, 2½ in. and up	40	42	Common, 1x12	14	16
1 to 2 in.	36	40	No. 1 barn, 1x12		20
No. 1 cut, 1 to 2 inch	25	35	1x10	18	21
No. 2	18	25	1x8	16	18
No. 3	17	20	No. 2 barn, 1x12	16	17
No. 1 molding, 1 to 2 in.	33	36	1x10	15	16
No. 2 molding, 1 to 2 in.	25	28	1x8	13	15
Stained saps		20	Shaky or star clear, 1 to 2 in.	19	21
Bracket plank	30	35	Dressing	16	18
Shelving boards, 12-in. up	30	32	Common	11	15

LATH.

Pine	$2 25		Spruce	$2 00	

SHINGLES.

Sawed Pine, ex. XXXX	$4 25	$4 30	Bound butts, 6 x 18	$6 00	$6 15
Clear butts	3 25	3 35	Hemlock	2 15	2 30
Smooth, 6 x 18	5 40	5 50	Spruce	2 20	2 30

BOSTON, MASS.

BOSTON, November 25, 1896.

EASTERN PINE—CARGO OR CAR LOAD.

Ordinary planed boards	$11 50	12 00	¾ inch	$ 9 25	9 50
Coarse No. 5	15 00	15 50	11-16 inch	8 50	8 75
Refuse	13 00	13 25	⅝ inch	8 00	8 25
Outs		9 00	Clapboards, sap ext.	45 00	48 00
Boxboards, 1 inch	10 00	10 50	Sap clear	41 00	43 00
⅞ inch	9 00	9 50	Sap, 2nd clear	32 00	35 00
			No. 1	23 00	25 00

WESTERN PINE—BY CAR LOAD.

Uppers, 1 in.	$50 00	@52 00	Fine com., 3 and 4 in	46 00	52 00
1¼, 1½ and 2 in.	52 00	53 00	No. 2, 1 in. Fine com.	29 00	31 00
3 and 4 in.	58 00	62 00	1¼, 1½ and 2 in.	30 00	32 00
Selects, 1 in.	44 00	45 00	No. 1 strips, 4 to 6 in.	43 00	44 00
1¼, 1½ and 2 in.	45 00	47 00	No. 2	36 00	39 00
3 and 4 in.	52 00	55 00	No. 3	28 00	30 00
Moulding boards, 8 to 11 in. clear	37 00	39 00	Cut ups, 1 in.	20 00	32 00
60 per cent. clear	32 00	34 00	Cut ups, 1¼ to 2 in.	24 00	38 00
Fine common, 1 in.	40 00	41 00	Coffin boards	19 00	22 00
1¼, 1½ and 2 in.	40 00	42 00	Common all widths	22 00	26 00
			Shipping culls, 1 in.	14 50	15 50
			do 1¼ in.	15 50	16 50

SHINGLES.

Spruce	1 30	1 50	Second Clear	1 75	1
Cedar, extra	2 65	2 90	Extra No. 1	1 25	1
Clear	2 25	2 40			

HEMLOCK.

Boards, rough	11 00	@11 50	No. 2	9 00	@ 10 50
Planed	11 75	12 00			

LATH.

Spruce			By cargo	1 30	@
By car	1 80	@ 2 00			

OTTAWA LETTER.

[Regular Correspondence of the CANADA LUMBERMAN.

RECENT transactions in the Ottawa Valley have somewhat encouraged lumbermen, and operations in the woods may be conducted on a much larger scale than was generally supposed before the presidential election across the border. On one particular limit up the Madawaska river five extra crews have been started. Estimates of the winter's probable cut of logs point to the fact that it will vary very little from last season. The square timber output will probably be more than double that of last year, unless some who now contemplate taking out square timber turn their attention to saw logs.

Lumbermen, it would seem, are gradually becoming convinced of the advantages to be obtained by having their saw mills adjacent to their limits. The Gilmour Company and the St. Anthony Lumber Co. have lately constructed mills in the vicinity of Algonquin Park, and now we hear that Mr. J. R. Booth has in view a scheme to erect a large mill at Barry's Bay, for the purpose of sawing the timber from his Upper Ottawa limits.

Nearly all the large mills have closed down for the season. The cut will compare favorably with the season of 1895.

The Hull Lumber Co. have received letters patent of incorporation. The capital stock is $600,000.

Mr. R. M. Cox, the well-known Liverpool lumber merchant, who is well-known throughout the Ottawa Valley, is reported to have speculated very successfully in ocean freight chartering. Having secured a large amount of accommodation early in the season, he disposed of much of it to apple shippers at a substantial increase in rates.

OTTAWA, Ont., Nov. 23, 1896.

NEW BRUNSWICK LETTER.

[Regular Correspondence of the CANADA LUMBERMAN.]

THE lumbermen have suffered heavily from the recent rains. The Aroostook Lumber Co. lost upwards of 500,000 feet of logs by the breaking of a boom. About two million feet, believed to be the property of Kilburn & McIntosh and Stetson, Cutler & Co., hung up last year, are now floating in the St. John river. The crews in the woods have been working under difficulties, and in some cases the men have been obliged to cease work.

Bracketing at Maugerville was completed for the season early in November. Emery Sewell put up 53 rafts, containing 22,533 joints, for Tapley Bros.' tug boats; also about 1,500 joints of cedar, which was towed by his own tugs to Morrison's mill, making in all about 56,000,000 superficial feet. D. D. Glazier & Son very successfully handled and freighted 29,000 joints, containing 81,042,622 feet, making a total of upwards of 137,000,000 feet. The season has been more than ordinarily favorable for the work.

Purves & Murchie, of St. John, will during the winter add an improved double rotary, with edger, trimmer, lath and box machine, to the plant in their mill on the west side. This will add about one-third to the capacity of their mill, which will then have an annual capacity of about fourteen million feet.

Mr. C. T. White, who purchased the Point Wolfe lumber property last spring, has put a new water wheel in his mill at that place, and has made extensive repairs. During the past season he has cut 13,000,000 feet of lumber at Point Wolfe and Apple River, and will probably make an increase on this amount next season. His mill has a capacity of 60,000 feet per day.

Harry McLellan recently cut on Jones' Brook 300,000 feet of logs. The high freshet has enabled him to get them down stream. It is said to be the first drive of logs ever brought to St. John the same season in which they were cut.

BITS OF LUMBER.

Mr. Wm. Hanson, whose saw mill at Spruce Lake was destroyed by fire, will rebuild this winter.

Donald Fraser & Sons have closed down their rotary at Fredericton for the season. The mill will run all winter, cutting shingles and clapboards.

Mr. Redmond, of the firm of Stetson, Cutler & Redmond, lumber brokers of New York, was in the city recently interviewing the local shippers.

The exports of lumber from St. John for the month of October were as follows: Lumber of all kinds, $207,276; shingles, $18,763; piling, $1,255; shooks, $341; birch timber, $1,000.

The new mill of D. & J. Ritchie at Newcastle will be 124 x 44 feet, with 25 feet posts. The engine room will be separate and of brick and iron, and there will be eight boilers, 40 feet long.

The mills of A. E. Alexander and W. S. Gray at Campbellton have closed down for the season. Mr. Alexander will put a new rotary in his mill on the Tobique, and will cut spruce this winter.

ST. JOHN, November 20, 1896.

BRITISH COLUMBIA LETTER.

[Regular Correspondence of the CANADA LUMBERMAN.]

MR. J. S. LARKE, Canadian Commissioner of Australia, has sent a letter to the News-Advertiser embodying some valuable information relative to the extension of trade with that country. He states that some timber sent from Puget Sound was refused by the buyer, owing to defects, and was valued by two surveyors of the Chambers of Commerce, who upheld the buyer in his contention. The letter says: "A new complaint has been made in regard to this timber, that of being scant sawn. Pieces from 1½ to 2½ inches thick lack by a quarter to a half an inch. The widths, too, are not up to requirements. Objections on this score have not been taken note of hitherto, but there is no doubt that henceforth it will be considered and deductions made for any considerable deficiency. The cargoes from British Columbia have so far been of excellent quality. The only grumble is that one order was not filled exactly as specified, a larger quantity of a certain length and a less of another having been shipped. Of course an allowance is demanded, but if it goes to a survey no great sum will be allowed. Your mills should do more of the dressed timber trade than they are doing. Here lack of shipping is the trouble. The mail steamers could not take it and a whole cargo order could not now be had. One broker who has been taking orders for shelving has become discouraged over failure to receive his orders, and says that unless something can be done to ensure regularity of delivery he will have to give it up. This brings up the freight question. The third steamer of the Canadian-Australian line will be on at the first of the year. This will give thirteen trips instead of eleven, which latter is about the average per annum now, and, too, will ensure regular sailings. These vessels are now carrying rough timber in competition with sailing craft in many ports, and if the B. C. mill men will push the dressed timber trade here they could furnish full and regular freights. They could touch at Queensland ports where the mail ships now do not go, and so build up a trade where we now get but little. There is the practical difficulty of getting a return cargo, but this would be no worse than the sailing ships have to face, and would be solved very much as they now solve it."

The annual report of the British Columbia Board of Trade for 1896 says of the lumber trade: "There was a steady improvement in the lumber industry during the year 1895, the quantity cut being 112,884,640 feet, or about 40 per cent. more than in the previous year. The foreign demand was more widely distributed than for some years past, but prices were low. The foreign demand has continued to improve during the past six months at advanced prices. Attention is again called to the importance of grading all lumber for export. Such specific grading would protect our millmen and simplify the work of purchasers when placing orders. The saw mill being erected at Takush Harbor will be one of the best equipped in the province, and will be occupied mainly in cutting cypress. The cypress is one of our most valuable woods, and commands a price almost equal to mahogany."

NEW WESTMINSTER, B. C., Nov. 20, 1896.

MICHIGAN LETTER.

[Regular Correspondence of the CANADA LUMBERMAN.]

A LITTLE over two weeks has passed since the people of the United States pronounced themselves in favor of McKinley and the gold standard, yet the improvement which has come to the lumber business in Michigan in that short period is almost phenomenal. On every side the opinion is expressed that revival is assured. The past season has been one of the dullest for the past twenty-five years. Taking the shipments from the Saginaw river up to 1st November as an indication, in 1870 they were 427,000,000 feet. Ten years later, in 1880, they reached 711,000,000 feet, but in 1890 had fallen to 382,000,000 feet. Last year they were reduced to 113,000,000 feet, and this year they only reached 63,000,000 feet. From nearly every other point a like falling off is shown by a comparison of figures. Since the elections preparations have been made for conducting operations in the woods on a larger scale, and there is likely to be an average imput of logs. Col. Bliss, of Saginaw, started camps last week in Midland county, where he will take out several million feet. He also started two camps in the Georgian Bay district.

Messrs. Alger, Smith & Co. are operating quite extensively. In the vicinity of Valentine Lake, Montmorency county, their main operations are being carried on, some 500 men being employed. The intention is to clear the land of both pine and hardwoods, which will require about three years.

INDIFFERENT LENGTHS.

The season's cut of the Marinette mills is estimated at 171,000,000 feet.

The quantity of lumber shipped from Alpena up to October 31st was 76,608,075 feet.

Messrs. Smalleys & Woodworth, of Bay City, will rebuild their saw mill recently destroyed by fire.

Wm. Peter has started camps in the Georgian Bay district, and the logs will be rafted to his mill at Bay City.

SAGINAW, Mich., Nov. 21, 1896.

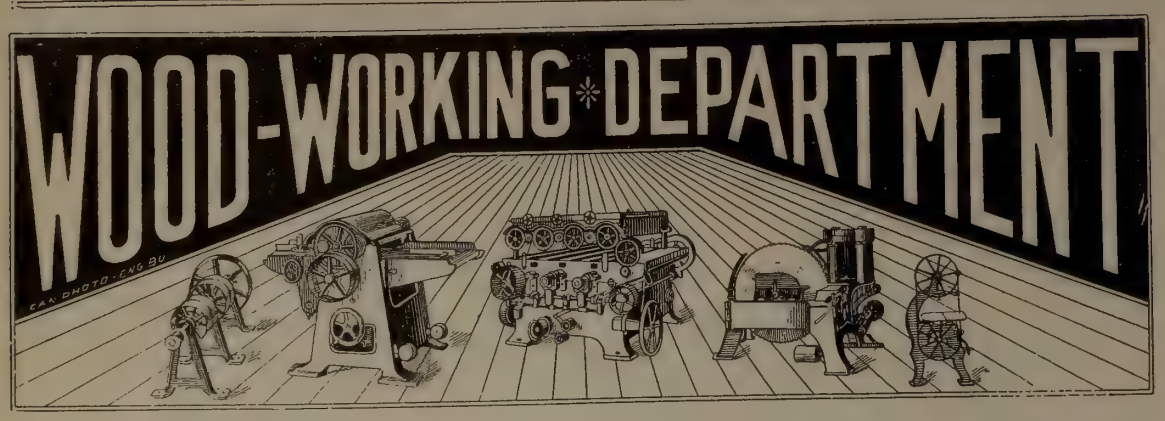
RIGHTS OF IMPROVEMENT COMPANIES.

BEFORE Chief Justice Meredith at Toronto recently the Hardy Lumber Company, of Alpena, Mich., sought to have it declared that the Pickerel Lumber Co. had no right to collect tolls in the Parry Sound district. Judgment was reserved.

A deputation waited upon the Ontario Cabinet in connection with a waterway to connect Lake Wahnapitae with Lake Matagamashing. A charter was granted for this work some years ago, the time for which is now nearly exhausted, and the deputation made application for another in conformity with the new Timber Slides Act. Among those interested are Mr. J. D. Moore, M. P. P., and Mr. Wm. Norton, of Wellesley. The Government promised consideration.

Hon. J. M. Gibson, Commissioner of Crown Lands, sat as judge a fortnight ago on an important arbitration case at Toronto. The Serpent River Slide and Boom Company made improvements on the Serpent River, in the Algoma district, for which tolls are charged under the provisions of the Timber Slide and Boom Act. These tolls were considered by some lumbermen to be excessive, and the Hale & Booth Lumber Company, of Ottawa, protested. Several witnesses were examined, among whom were such well-known lumbermen as J. Turner and S. O. Fisher, of Saginaw, J. L. Burton, of Barrie, and Mr. Horne, of Fort William. The Commissioner, after hearing the evidence, suggested a compromise between the parties interested, and this was finally agreed to. It is understood that the rates were fixed at about 40 per cent. less than the boom company at first wanted.

The Northwestern Lumberman says the crudest saw-mill in the Northwest is at Wagner on the Wisconsin & Michigan railway. It is owned by Frank Adams, a farmer. It consists of a circular saw, a carriage and a small engine to run the saw. The logs are hauled on to a carriage, and the horses pull the carriage backwards and forwards to make the feed. The mill has no roof, and the machinery is set on blocks of wood. The mill does custom work for the farmers in the vicinity.



KNIGHT BROTHERS.

IN 1877 the firm of Knight Bros., of Burk's Falls, Ont., launched in a moderate way into the manufacture of kiln-dried flooring and sheeting. Their premises and machinery at that time was modest, almost primitive, and their business necessarily limited. The year 1896 finds them occupying extensive and commodious premises, thoroughly equipped, and enjoying the patronage of a wide range of customers.

Their first motive power was a foot lathe, operated by a sewing machine treadle. A small boiler was added, which still does service in the blacksmith shop, and the fifth boiler is now in place, supplying steam to a 35 h. p. high speed engine, built by the A. R. Williams Machinery Co., who also supplied the other machinery. The boiler also heats the building and supplies steam to the Sturtevant dry kiln, which is in a building 18×85 feet, with a store-room above. The rear of the dry kiln opens out into the heavy machinery room, where the lumber is manufactured.

The ground floor of the building is divided into four rooms, two rooms being devoted to sawing, planing, etc., one to storage, and the other to a fireproof engine house. The engine roof is virtually an annex, having a fireproof iron roof protected by mortar, with fireproof shutters on the doors and windows. The premises are lighted by electricity, and all modern appliances are used. Upstairs are the carpenter shop, two sash and door rooms, and two store rooms. There are two other store sheds separate from the building, one of which is devoted to mouldings. A blacksmith shop in the rear does all the repairing, and is well equipped. The office is a model room, with floor and ceiling in birch, the furniture being of the same material.

The yards are heavily stocked with manufactured lumber and the store rooms are kept filled with kiln-dried flooring, sheeting and mouldings. Their special lines of matched goods differ from the ordinary planing mill product. They are thoroughly kiln-dried, well made and tied in bundles, the ends butted off and all knots taken out, ready to lay.

From twenty to thirty men are employed the year round. Their trade extends as far west as British Columbia.

IMPERFECT WORK IN PLANING MILLS.

WHILE it is the easiest thing in the world to discover when a planing machine or other piece of woodworking machinery is making wavy and imperfect work, it is not always so easy to discover the cause of the same. It is quite common for planing mill proprietors or their foremen when a machine is not doing good work to blame the operator. Now, the fact is, all machine operators have sins enough of their own to answer for, and it is not just to hold them responsible for the sins of others, which is too often done. We all know that imperfect journals and unbalanced cutters will produce that effect. If it is the unbalanced cutters, then it is the fault of the operator or the one who has charge of these matters, and there should be no time lost in applying the remedy, which is to balance them at once before using again. When the cause arises from imperfect journals (unless that condition is brought about by continuing to use unbalanced cutters until one side of the journal becomes flat or egg-shaped) it is not always so easy to determine.

Upon general principles, we should naturally suppose that all well-constructed machines from reputable manufacturers should do the same perfect work. Still, we know that such is not always the case. Even the machines of the same manufacturer and of the same size and design do not always perform the same perfect work. When a machine, as before stated, fails to perform good work, it is generally considered the fault of the operator, notwithstanding that he may do all that he can to correct the fault. The machine will persist in turning out poor work, and while there is a remote cause, it is frequently a very difficult matter to find it.

One of the causes over which the operator has no control is in imperfect journals, caused by imperfections in the steel of which they are composed. If the bar of steel constituting the cylinder shaft has hard and soft places in it, as is frequently the case, then it is out of the power of the operator to prevent the journals wearing out of round, which not only causes a vibration in the cylinder that will manifest itself upon the surface of the board, but also causes it to heat whenever the operator attempts to screw down the caps tight enough to stop the vibration. He may make trips to the machine shop and have the journal turned off, which may remedy the difficulty for a short time; but those visits must be frequently repeated until the journal becomes so light as to be worthless, and then imperfect work will continue until a new cylinder is provided. All crucible steel is liable to this peculiarity, from the fact that the stock as it comes from the converting furnace is not always uniform. Some bars are carbonized more than others, and are, in consequence, harder than those which do not contain so much carbon. Now when this stock is broken up preparatory to being melted in the crucible, if it is not carefully sorted so as to be uniform in grade, an imperfect ingot will be the result—that is to say, if some portions of the stock in the same charge should be harder than others in melting, it will not mix thoroughly with that of a softer or lower grade so as to become perfectly homogeneous in the ingot, and when drawn out into bars the same hard and soft places will be found. In some of the first cast-steel cylinders that were forged, the journals, being a part of the same ingot from which the cylinders were forged, were so imperfect in this respect that in many cases it was necessary to cut them off, bore the cylinder, and insert a shaft of a better and more uniform grade of steel. But this, as well as many other imperfections, has been remedied by a more careful selection of the stock before it is melted, so that the steel in the forged cylinders, as well as the journals that are manufactured at the present time, are by far superior to those sent out a few years ago. Competition also has had much to do with this business, as well as every other kind, and the firm that furnishes the best article for the same money is sure to secure the largest share of the trade.

The first cast-steel cylinders that were introduced were cast in sand after a pattern, and while they were considered much better than cast iron, the extra expense in boring and planing, besides the same liability for certain imperfections—such as blowholes — that are common with all castings made in this manner, was more than sufficient to balance any advantage that they possessed over cast iron, and their use was soon abandoned by all the principal manufacturers.

The demand for four-sided cylinders slotted for one head further increased the demand for cast-steel forgings, and, as before stated, the cast-steel forgings for that purpose that are now forged are as perfect and uniform as the average bar steel. Still there are a few cases to be met with where it is a difficult matter to run even the best that can be had for any great length of time, even with the best of care and attention, and keep the journals perfectly round, without an occasional visit to the machine shop. Sometimes imperfect gearing is the cause of imperfect work. Perhaps one of the cogs in a wheel may be swelled or otherwise imperfect in the casting, and if such a cog or tooth, as they are frequently called, isn't carefully filed to the proper shape, at every revolution when it comes in contact with the wheel working with it, a sudden shock is given which may not be noticed by the operator in the hum and noise of the planing mill, but its effects will be found upon the face of the board in the shape of a small corrugation. A smooth, steady and uniform feed is very essential to smooth work, and cannot be expected from imperfect and rattling gearing.

While it is necessary that all the gears pertaining to a planer should be sufficiently perfect to run smooth and without jarring, those which connect the rolls, and are termed extension gears, should be especially so, and if cast gearing is used for this purpose, it should in all cases be cast from iron patterns cut especially for that purpose. A pattern made of wood, no matter how perfect it may be in the first instance, after being used in the damp sand of the foundry, will absorb more or less dampness, causing it to swell and shrink, so that after a few times it will lose its shape and become imperfect, and perfect castings cannot be obtained. In my experience I have found that cut gears, especially the extension gears, are so much superior to cast ones that the machine runs lighter and the work is much smoother than with cast gears, no matter how perfect a pattern they may be cast from. It is true the first cost of a machine with all cut gearing may be a trifle more than cast, but the satisfaction of making more perfect work and less liability for breakdowns is more than sufficient to cover the difference in the first cost. Sometimes wavy work is caused by neglecting to properly adjust the pressure bars, but as this is a matter so easily detected and easily remedied, there is no excuse for the operator who makes rough and wavy work from this cause.

THE NEWS.

—It is said that James Young will rebuild his saw mill at Auburn, Ont.

—An addition has been built to the planing mill of J. M. Taylor, Portage la Prairie, Man.

—The M. & N. S. Company intend building a pulp mill at Webbwood Falls, on the Spanish river.

—A. McPherson & Co., of Longford Mills, are building a large saw mill on their limits at Bethune.

—The Small & Fisher Co., of Woodstock, N. B., are building an addition to their machine shop.

—F. Dillon, of Parry Sound, Ont., will erect a shingle and saw mill at Shebeshakong in the spring.

—It is stated that Ross Bros. propose erecting new saw mills at Buckingham, Que., to cost $50,000.

—The St. Anthony Lumber Co. lately purchased a steam fire engine to protect their mills at Whitney, Ont.

—I. Charbonneau & Co., sash and door factory, St. Louis du Mile End, Que., have dissolved partnership.

—Wm. Peter's mill at Parry Sound, Ont., closed down for the season last week. The cut has been an average one.

—A. D. Turcotte and Martin Bros., planing mill proprietors of Montreal, are each reported in financial difficulties.

—Two unsuccessful attempts have lately been made to burn A. S. Markle's saw mill on the fourth concession of Blenheim. The mill is a new one and cost $3,000.

—Mickle, Dyment & Co., of Barrie, Ont., have secured the London Planing Mill Company's premises at London, and will go into the manufacture of builders' supplies.

—William McKinnon, of South Finch, Ont., is searching for his brother, John P. McKinnon, a prominent lumberman who makes Cheboygan his headquarters in the winter.

—C. F. & F. R. Eaton, of Parrsboro, N. S., have been given a contract by McKay & Dix, of New York, to construct another bark for the kryolite trade, and are now taking out timber for the frame.

—The Danish Government is asking for information in regard to Canadian pulp wood. Denmark's supply has been drawn from Norway, but of late years it has been playing out, and prices have advanced to a high figure.

—Extensive improvements have been made to his saw mill by W. R. Thompson, of Teeswater, Ont., including a planer and matcher and a dry kiln. Machinery has also been added for making table tops for the New York market.

—Mr. H. de Puyjalon, who was appointed by the Commissioner of Crown Lands for Quebec to explore the vast western territory of the province, has returned after an absence of four months, and reports vast resources of forest wealth.

—A boiler exploded in Robinson Bros.' saw mill at Parkhill, Ont., on the 16th inst., killing the daughter of Mrs. J. H. Cunnington and injuring one of the proprietors, Mr. E. Robinson, and his father, Mr. Thomas Robinson. The building was completely wrecked.

—Mr. J. B. Coats, of Los Angelos, Cal., has purchased the milling and cooperage business of Watson Bros., Ridgetown, Ont. Mr. Coats carried on this line of business at Blenheim previous to going to California, and is a man of large experience and great energy.

—The imports of forest products from Canada into New South Wales, Australia, during the year 1895 were valued as follows: Dressed timber, £765; rough timber, £19,-112; laths, £1,240. The falling off in dressed timber is due to the failure of the spruce butter box trade.

—Messrs. Edmund A. King, Charles King and James King are applying for letters patent under the name of King Brothers, Ltd., to carry on a milling, lumbering and asbestos business. The capital stock will be $300,000. Mr. W. S. Thomas, of Quebec, is manager.

—Action was recently brought by Mr. Arch. Lindsay, of Aylmer, against Klock Bros., to obtain damages for the burning of Mr. Lindsay's saw mill last summer while being operated by Klock Bros. The firm in leasing the property promised to return the mill in as good condition as when they took charge of it.

—The Sackville, N. B., Post says: Lumber shipments from Cape Tormentine, Baie Verte, Shediac and Sackville are about over for this year. The season has been a busy one and a great deal of lumber has been handled. A larger amount was loaded at Cape Tormentine than ever before, while shipments at Point du Chene have been decidedly active. There was a slight falling off at Sackville. The shipments from Dorchester exceed those of last year very considerably. Reports indicate that this winter the cut will be fully as large as last year.

—A dispatch from St. Paul, Minn., says: The lumbermen from Duluth are complaining because Canadian lumber instead of the American product was used in the big bridge between Duluth and Superior. The Canadian lumber was used as a grillage between the head of the piling that was cut off under the water and the bottom of the masonry of the piers, and hemlock was specified by the bridge engineer. No hemlock grows in Northern Minnesota, although there is plenty in Northern Wisconsin and Michigan. The contractor, on discovering this, sent to Owen Sound, Canada, and purchased his lumber there, as he could buy it there cheaper than in the United States, and bring it in duty free. The timber was also shipped in cheap Canadian schooners to save freight, and they made the whole distance under sail, taking nearly a month for the trip.

TRADE NOTES.

Messrs. Campbell Bros., St. John, N. B., report a steadily increasing demand throughout Ontario and Quebec, as well as the lower provinces, for their hand-made frost-proof axes.

In the description of Messrs. Mickle, Dyment & Son's mills at Gravenhurst, Ont., which appeared in our November number, it should have been stated that each of the two shingle mills were equipped with four "Boss" shingle machines, manufactured by Messrs. B. R. Mowry & Sons, of that town. These machines are said to give perfect satisfaction to the proprietors.

Sectional catalogue No. 4 to hand from the McEachren Heating and Ventilating Co., of Galt, Ont., consists of upwards of 100 pages, enclosed in an attractive cover. The heating, drying and ventilating apparatus manufactured by the company are fully described and illustrated, and numerous testimonials from customers express the utmost satisfaction with the "Progressive" dry kiln for drying lumber.

LEGAL DECISIONS.

The Kentucky Court of Appeals held, in the recent case of The Asher Lumber Company vs. French, that under a contract between appellant and appellee by which appellant agreed to pay appellee certain prices for timber, to be paid "when titles are examined and found good and the timber branded," if appellee tendered to appellant trees of the kind mentioned in the contract within a reasonable time after its execution, and if he had good title to the same, it was appellant's duty to receive and pay for them, and if appellant refused to comply with the contract appellee was not required after that time to make an actual tender of timber, but he might cease to buy or procure any more under the contract, and sue and recover damages on account of appellant's failure to comply with the contract. The court further held that an oral contract for the purchase of standing trees to be speedily removed from the land is valid provided the trees are so marked or described as to be easily identified.

SHEPHERD VS. JOHNSON.—In this case, which was tried in the Non-Jury Court at Toronto, William J. Sheppard, manager of the Georgian Bay Lumber Company, and William Irwin, of Peterboro', sought to recover the sum of $60,000 from Edward E. Harvey, of Detroit, the price agreed to be paid for certain timber limits in the Rainy River district. In the alternative they asked for a return of the limits. A counter claim was presented by Harvey for $36,000 for damages for alleged misrepresentation of the quantity and quality of the timber, but this was withdrawn. A house and lot in Detroit figured in the suit, the defendant having conveyed it to the plaintiffs in part payment, which was all the plaintiffs had received. The defendant afterwards conveyed his interest in the limits to the Peninsular Savings Bank and the Detroit River Savings Bank, both of which were made defendants in the action. Judgment was given for plaintiffs for specific performance of agreement and for payment of purchase money now due by defendants, and in default for foreclosure, with full costs of action.

PERSONAL.

Mr. J. W. Todd, the well-known lumberman of Liverpool, Eng., is at present on a visit to Canada.

Mr. Wm. H. Murray, lumberman, of St. John, N. B., recently celebrated his 65th birthday. He has been connected with the lumber business nearly all his life time, and is one of the most successful and energetic lumbermen in the province.

Mr. Archibald Campbell, of Lakeport, Ont., an extensive grain and lumber merchant, was drowned by falling off a pier in his native town. Deceased was in his 55th year, was widely known, and was one of the most popular members of the Toronto Board of Trade.

Mr. W. C. B. Rathbun, brother of Mr. E. W. Rathbun, manager of the Rathbun Company, of Deseronto, was found dead in his bed on the 20th ultimo, death being due to heart failure. He was 30 years of age, and the youngest son of the late H. B. Rathbun. He married Miss Blaikie, daughter of Mr. J. L. Blaikie, of Toronto.

Mr. R. W. Southern, of the firm of Southern & Nephew, lumber merchants, Manchester, Eng., has spent the past month in Canada, acquainting himself with the leading lumber manufacturers with a view to opening up trade. His firm were the purchasers of the first cargo of lumber that went through the Manchester ship canal, and which was shipped from Parrsboro', N. S.

PUBLICATIONS.

Bulletin No. 13 of the United States Department of Agriculture, entitled "The Timber Pines of the Southern United States," is to hand. It is published by Mr. Filbert Roth, under the direction of Mr. B. E. Fernow, Chief of the Division of Forestry, and contains upwards of 150 pages illustrating and describing the characteristics of the various woods, making one of the most complete works of its kind yet issued.

The October number of "Business," published by the J. S. Robertson Co., of Toronto, is very bright and attractive. It is an anniversary number, containing 32 pages, enclosed within an appropriate cover. Its contents consist of interviews with leading advertisers on the art and practice of advertising, portraits of prominent business men, a department on practical accounting, and other equally interesting articles.

BIRCH SQUARES.

THE Timber Trades Journal, of London, Eng., in reviewing the market, says of birch squares:

"Some of the large Midland contracts are early in the market this year, and we hear that the various East Coast firms who deal therein have been busy looking up their customers during the last fortnight. Baltic birch would be preferred to any other, if a high class of manufacture and assortment could be depended upon, but lately there has been a downward tendency in the quality, which is to be regretted, especially as it is coupled with a rise in value. It appears that the American squares are in reality superior in make, but their price has been considerably higher than Baltic produce. We learn that a new company has been started to acquire and work a large and favorable tract of birch-grown forest-land in America, with a view of placing on the European market a reliable and good assortment of birch stuff. Samples have been received on this side and have been favorably criticized, but it remains to be seen if the quality, apart from samples, is maintained, and also if the price obtained compares favorably with European-grown birch."

Machines used in a saw-mill, made after a fixed pattern, and which are fastened to the floor only by bolts and screws and run by belts connected with the shafting and can be removed without injury to the building and used as well in another building, are not fixtures.

CLEANING DIRTY BELTS.

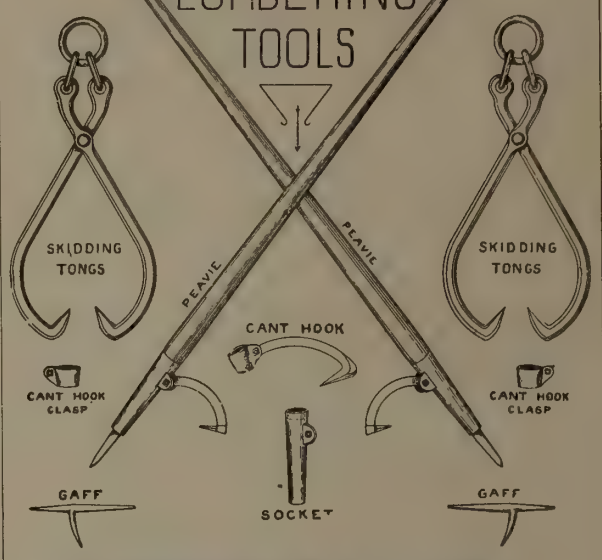
A CORRESPONDENT of the Centralblatt fur die Textil Industrie, who complains that several belts are dirty from drop oil and dust and desires to know how to clean them, is told by that journal to first wash the belts with warm water and soap, using a sharp, stiff brush, and while still moist, to rub them with a solution of sal-ammoniac, which saponifies the oil in them. Immediately thereafter the belts must be rinsed well with luke-warm water and then dried with sufficient tension. While they are still moist the belts are to be rubbed well on the inside and less on the outside, with the following: Two pounds three-quarter ounce of India rubber, heated to 122° F. and mixed with two pounds three-quarter ounce of rectified turpentine oil. After this solution is complete twenty-seven ounces of bright resin are added, and when it is dissolved twenty-six and one-half ounces of yellow wax are added. This mixture, by diligent stirring, is mixed with six pounds ten ounces of fish oil and two pounds twelve ounces of tallow, previously dissolved in the former. In the further treatment of the belt rub the inside only and the outside only at the the first time, as stated. The unguent also replaces the tannin extract from the leather, prevents the dragging of the belt and imparts elasticity to it.

CLEANING FILES.

A. GAWALOWSKI recommends the following treatment of files that have been in use for some time: Lead and tin are best removed by nitric acid; the files are then dried in coal dust or sawdust, after which they receive a good brushing. Iron grit is removed by dipping into copper sulphate; the precipitated copper does not adhere. Treatment with nitric acid follows, which is, as in the former case, continued until the brown vapors become unpleasant. Zinc is dissolved out by sulphuric acid. For copper, nitric acid is repeatedly applied. Rasps are cleaned in warm sulphuric acid, brushed, dipped into caustic soda, and dried and brushed.

THOMAS PINK

MANUFACTURER OF LUMBERING TOOLS



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C H. MORTIMER, Publisher
1895

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Y Hyson tea, good style and cup quality @	10c. "	Valencia raisins	4c. "
Congou tea, good style and cup quality @	11c. "	Evaporated apples (choice brights)	5½c. "
Choice medium beans	80c. bus.	Dried apples	3¾c. "
		Dried peaches	5½c. "
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		½ brls fine quality rich syrup	2c. "

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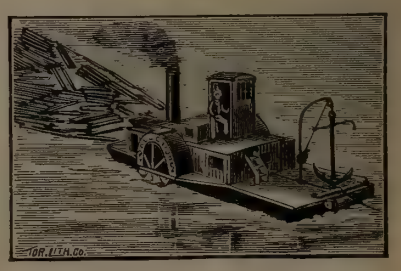

STEAM ROAD MAKER

ENGINES AND BOILERS FOR STEAM YACHTS

Saw Mill Machinery

SHAVINGS.

The value of forest products exported from the United States during the fiscal year ending June 30, 1896, according to figures furnished by the Agricultural Department, was $33,718,204, or 3.91 per cent. of the total exports, as against $28,576,235, or 3.61 per cent., for the fiscal year ending June 30, 1895.

Statistics show that the United States is consuming annually about 40,000,000,000 feet of lumber, valued at $450,000,000. At this rate of consumption the estimated standing supply of 2,300,000,000,000 feet, board measure, would not last many years, but there are revolutions taking place which point to the conclusion that timber will be moderately plentiful for some time to come. The growth of the lumber industry has been rapid. In 1870 the number of men engaged in lumbering was 149,997, and that their wages account footed up $32,007,322, while the product of the year was valued at $168,127,462. Twenty years later 286,197 men were employed, and they earned $87,784,433, their output being $403,667,675. The exports in 1892 amounted in value to $27,975,423.

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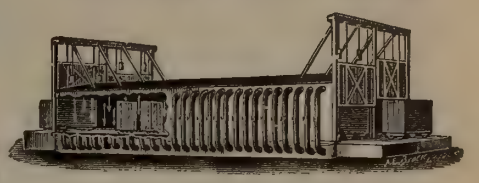

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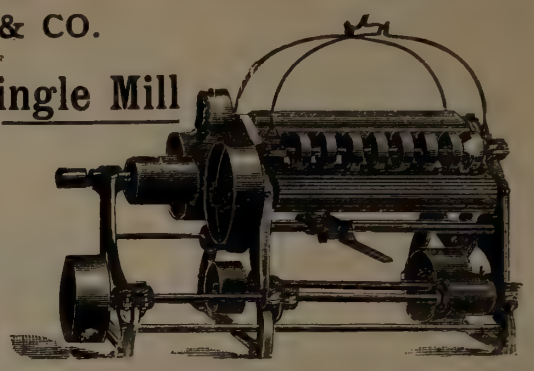

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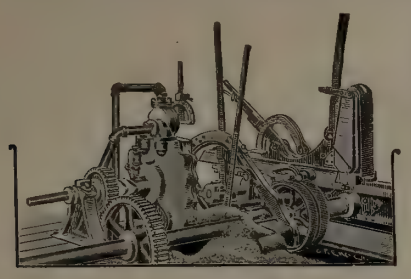
THE DAKE ENGINE

The accompanying cut shows the Dake Engine as attached to saw mill carriage set work. The engine, as shown, is reversible, advancing and receding head blocks at the will of the operator. Does away with coil springs used for receding head blocks, and is a practical assistant to a saw mill carriage, enabling the setter to handle the heaviest logs with ease. Steam is carried to engine by means of steam hose, or by swinging steam pipe with knuckle joints, taken from near the centre of carriage travel. As applied to carriage work, it has been in actual operation for over a year.



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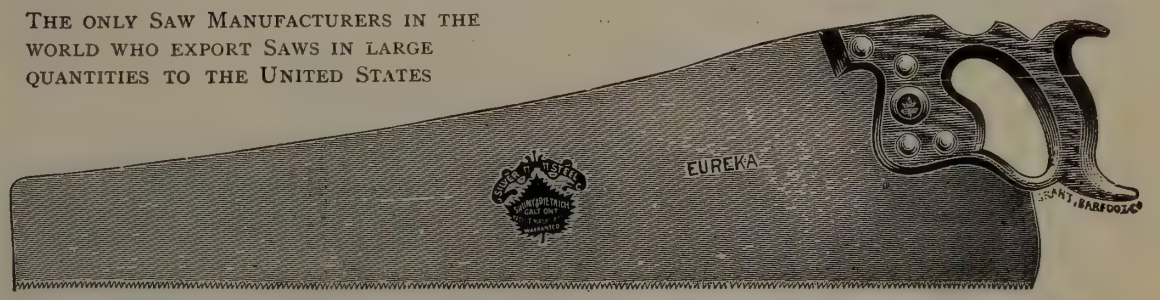

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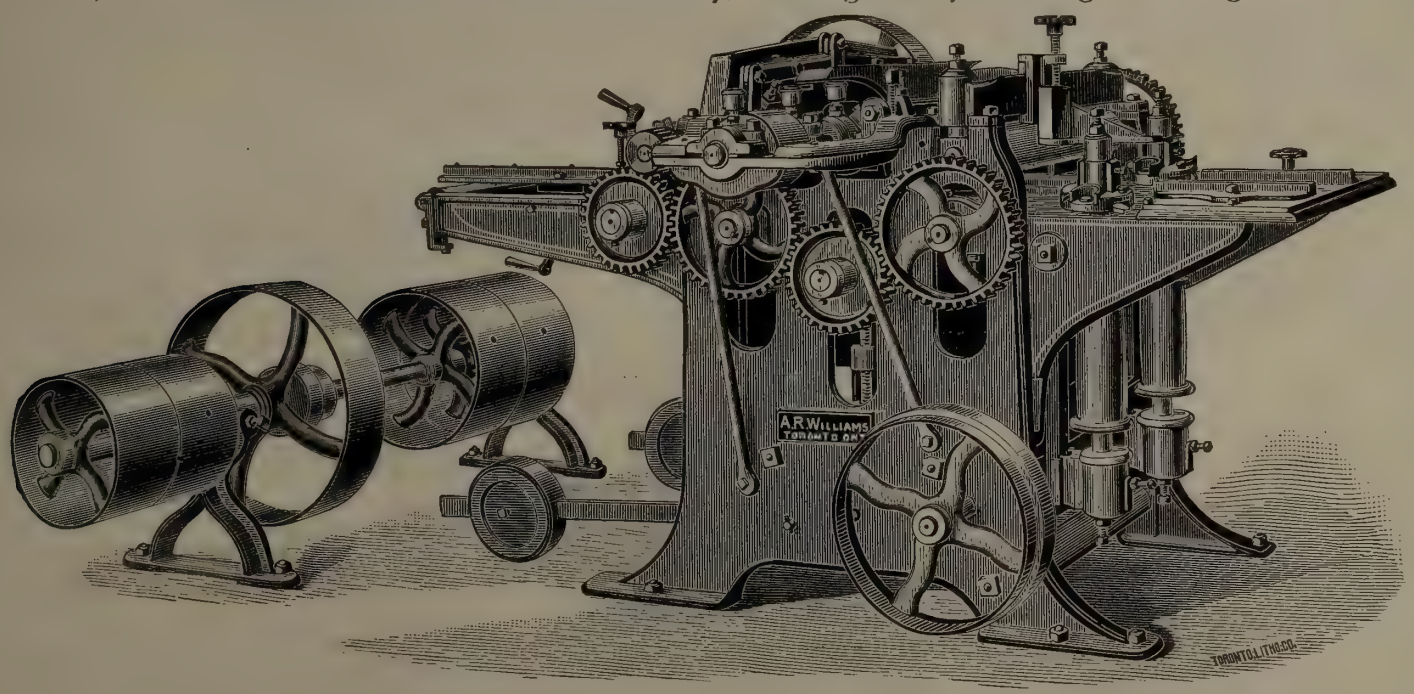

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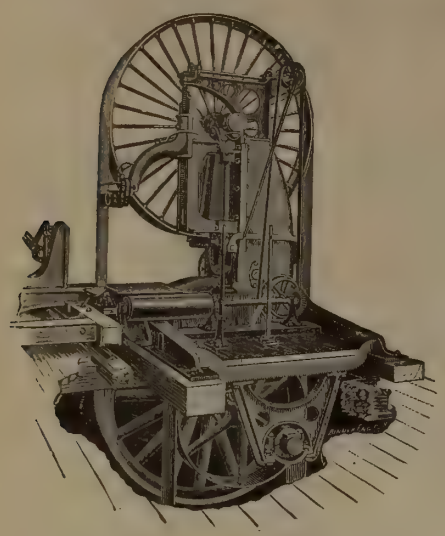

Right Hand—Front View.
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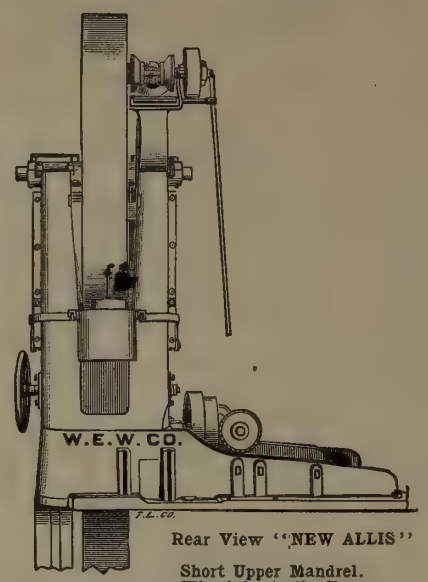
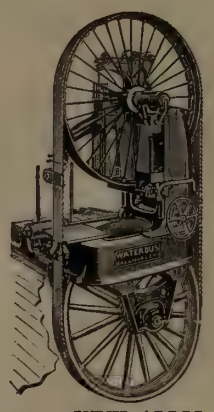
It surpasses all others in many points.



Rear View "NEW ALLIS"

NOTE . . . . . Short Upper Mandrel. Wheel Centrally Hung. Lower Wheel Inside Frame.



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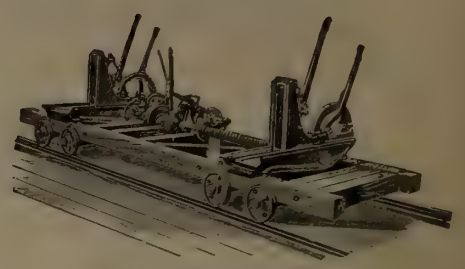
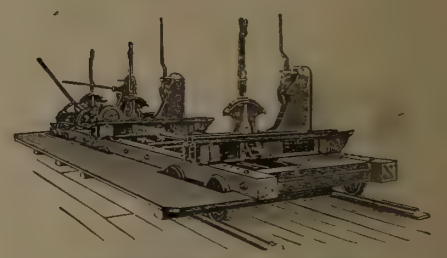


Reliance 2-Block Carriage.



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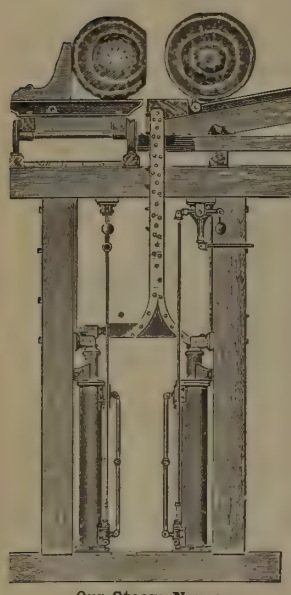

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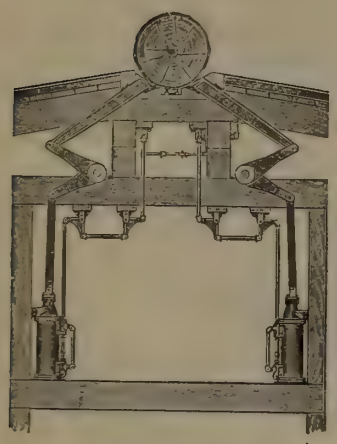

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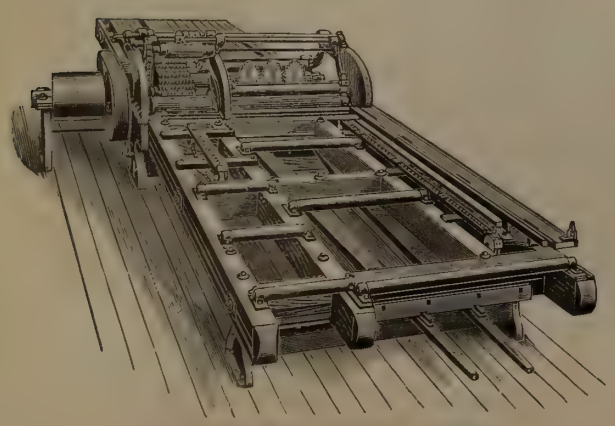

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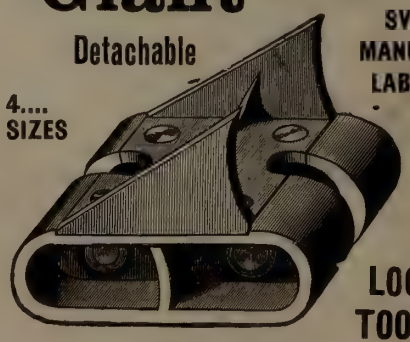

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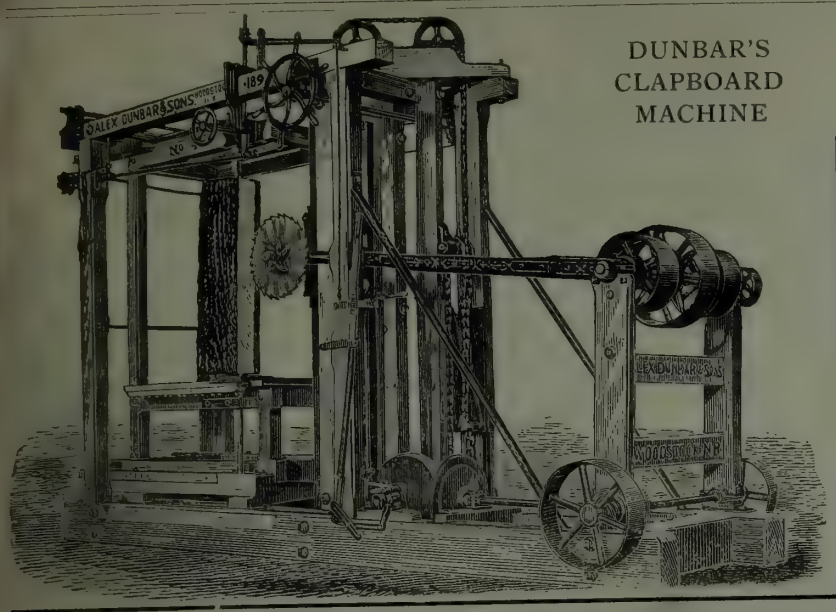
Over 50 Sizes and Styles of Chains, varying from 75 to 20,000 lbs. Breaking Strain. Special Attachment Links for all purposes.



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ALEX. DUNBAR & SONS

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OF ALL KINDS

Including ROTARY SAW MILLS (3 sizes), CLAPBOARD SAWING MACHINES, CLAPBOARD PLANING AND FINISHING MACHINERY, SHINGLE MACHINES, STEAM ENGINES, Etc.

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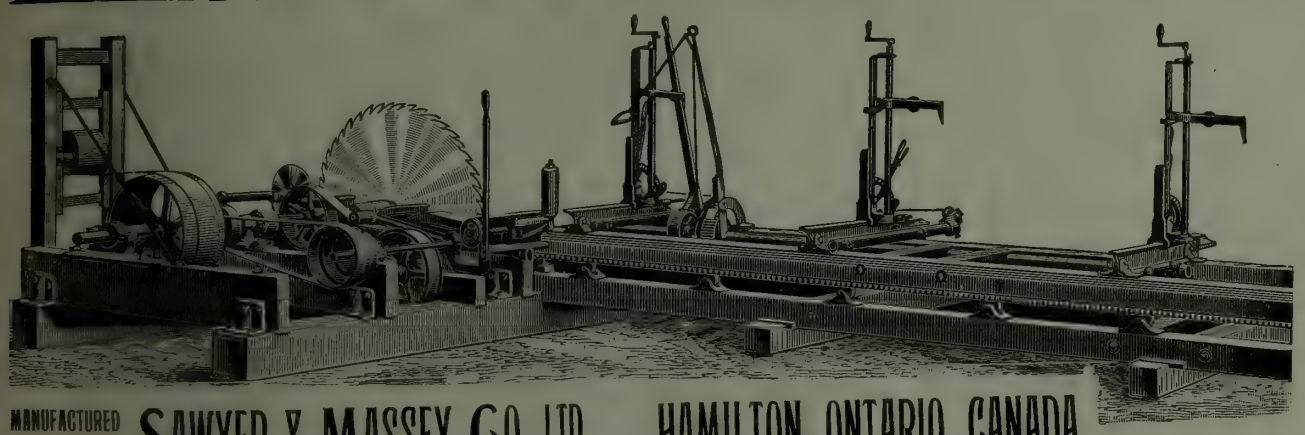

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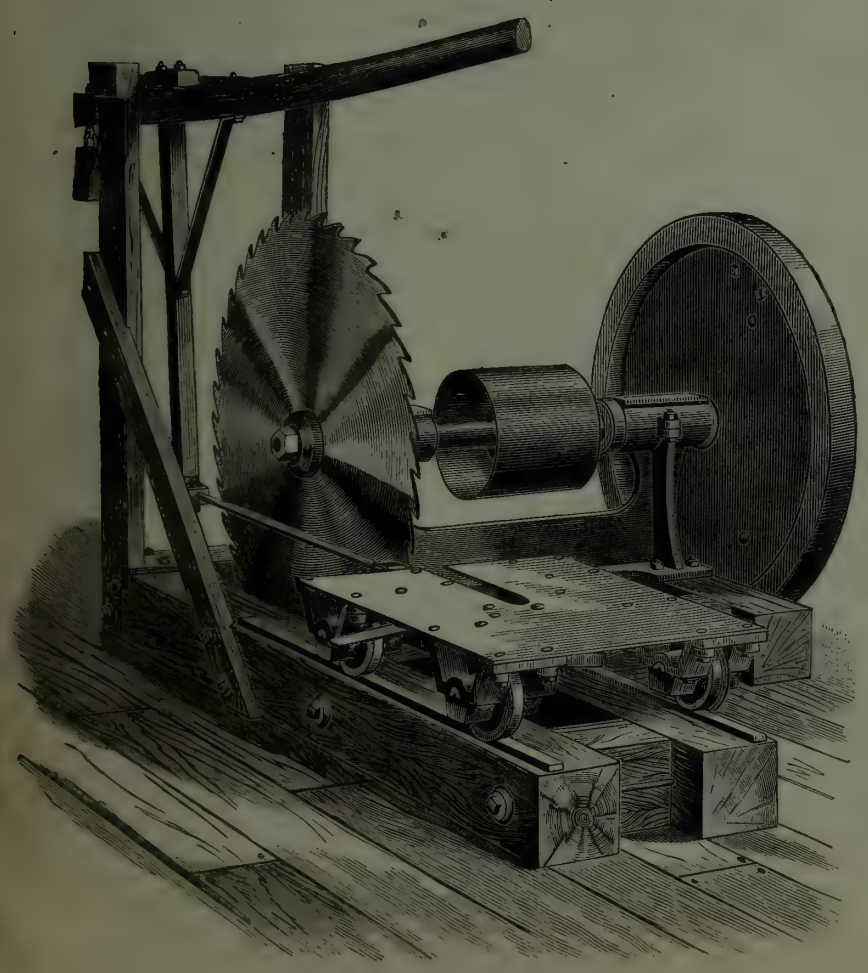
XXX SHINGLE BOLTER OR SPLITTER



HAVING had numerous enquiries for a First-Class, Self-Contained Bolter or Splitter, I have designed the accompanying illustrated machine expressly to fill that want, and guarantee it to be the best machine for the purpose in the market.

The frame is made of heavy timber, and bolted through and through; it occupies a floor space of 8 ft. long by 5 ft. wide.

Saw arbor is of 3 inch steel with solid forged collars 7 inches diameter. The driving pulley (unless otherwise ordered) is 14 inches diameter, 13 inches face.

The solid webbed balance wheel, shown in cut, is 48 inches diameter, weighs 1050 lbs., and with the pulley is turned true and accurately balanced.

As the boxes are in a solid cast iron yoke they can never get out of line. The bearings are full size of diameter of saw arbor, 12 inches long, and lined with finest quality of anti-friction metal.

The carriage is very strong and easily handled; the top is of steel boiler plate and is strengthened at the end of slot or centre of carriage by a heavy casting which carries a pivot and foot lever, used for the purpose of raising a heavy block and thus making it easier to turn. The carriage wheels are 8 inches diameter, with steel shafts running in self-oiling babbitted boxes. The carriage is operated by a hand lever, the front end of which is counter-balanced by an iron weight attached to back end of lever.

In operating this machine it is not necessary to "dog" the block on the carriage; that would be a waste of time. If the saw is in proper shape a piece of two inch plank can be stood on end on the carriage and split with the saw without "dogging" or holding it in any way.

Timber when split with an axe will invariably follow the grain of the wood, but when split with a saw it is of course perfectly straight, no matter how winding the timber may be, and the first cut then is a perfect shingle. On this account alone a splitter will not only save from 10 to 25 per cent. of the timber, but will add about 5,000 shingles to each day's cut.

Make more shingles in a day and more from the same quantity of timber, and you will save more money.

These machines made either Right or Left Hand; in ordering state which is required. The accompanying cut represents a Right Hand Machine. Speed of saw 700 revolutions per minute. Price, complete with 50 inch saw and heavy balance wheel as shown in cut, $225.00, F. O. B. here. Or to parties who prefer to build their own wooden frame, I would furnish the iron work complete with any desired size of pulley and balance wheel at corresponding prices.

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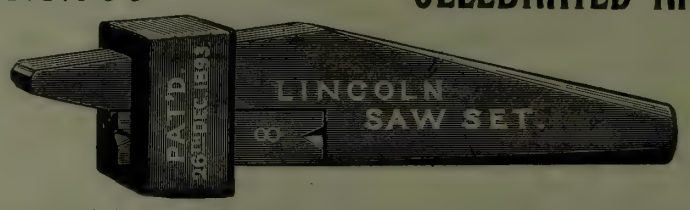
The price of a good saw is soon saved in the extra work it will do.

Be sure you use McMILLAN & HAYNES SAWS; they are all warranted to give entire satisfaction.

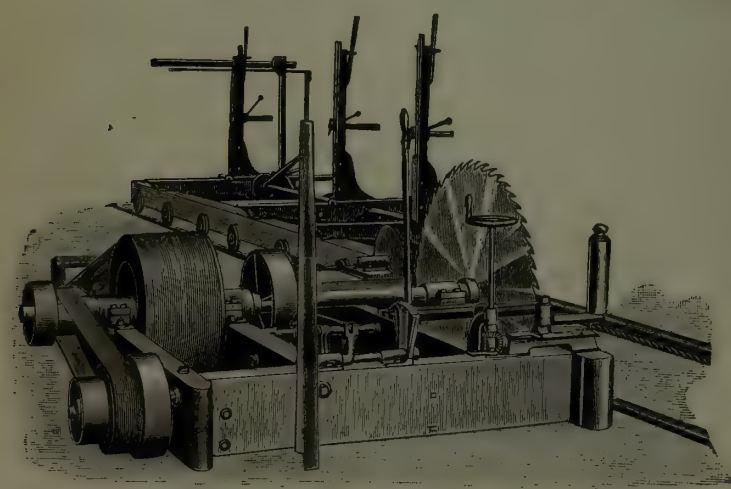


This SAW SET is the BEST EVER MADE. It is Simple and Strong, and is guaranteed to do its work perfectly.

We also manufacture Axes, Files, Saw Jointers, Cant Hooks, Steel and Brass Bedsteads. We have a cheap bed with wire mattrass attached suitable for shanties.

We handle the Famous KELLY AMERICAN AXES. Their Flint Edge is guaranteed to stand in cold, frosty weather, better than any other axe made.

BELL'S No. 2 SAW MILL



The accompanying cut shows our No. 2 mill with wood frame and feed works in the frame. We build this mill with either wood or iron frames as desired. The carriage has any desired number of head blocks, either ratchet or friction set works. We also put on an elevated scale, which is a great convenience to the sawyer, and a newly designed roller guage to set up to. Lumber cut on these carriages is uniform in thickness and can be made any desired thickness by adjusting roller, which is at the sawyer's hand.

We also build a No. 0 mill for light portable work, and a No. 1 mill, which is a good general mill for either portable or stationary use. Also Edgers, Slab Slashers, Cut-off Saws, Log Haul-ups, Friction Niggers, Lath Trimmers, Lumber Trimmers, Bolting Saws, Saw Benches. Send for Prices and Description.

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